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Coordination of Transportation by Human Service Agencies: An Interorganizational Perspective

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COORDINATION OF TRANSPORTATION BY HUMAN SERVICE AGENCIES: AN INTERORGANIZATIONAL PERSPECTIVE

Prepared by

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ABSTRACT

Coordination Of Transportation By Human Service Agencies:
An Interorganizational Perspective

by

Arthur Saltzman

During the past decade human service agencies have added a new dimension to their services: provision of transportation for their clients. Volunteer drivers and agency staff had been helping clients meet their mobility needs for many years but it was not until the occurrence of dramatic increases in social welfare and health programs in the late 1960's that agencies began to develop systematic techniques for transporting their clients. The motivation to develop systems came from agency directors who became aware of their clients' mobility problems.

This transportation function now uses a significant fraction of many agency budgets and there is considerable interest in ways to provide the transportation more efficiently. Since the usual arrangement is for each agency to have its own transportation system, a seemingly obvious approach to reducing transportation costs is to coordinate the separate transportation services. Unfortunately, this solution also has some obvious disadvantages, including the individual agency's loss of control over a vital part of its operation, and the problem of harmonizing the differing transportation needs of the separate client groups. Thus,

coordination is not embraced by all agencies.

Human service agency transportation represents the coalescing of two activities: public transit and human services. Coordination has long been a concern of the human service delivery system in the United States. The history of the development of social welfare programs emphasizes its fragmented nature. Especially at the local level, agencies have long been concerned with how they could avoid unnecessary duplication. The shift from private to public assistance and the increased involvement of multiple layers of government are also significant to understanding the process of coordination.

Likewise, public transportation has been concerned with coordination. Early street railway systems attempted to consolidate many separate horse-drawn omnibuses. More recent concern with coordination focuses on the federally mandated transportation planning process which must include all modes of transportation and be done cooperatively between municipal, state, and federal transportation agencies.

However, human service agency transportation operations developed outside of the conventional transit industry and therefore were excluded from consideration by transportation planners. No discernable policy at any level of government guided the early growth of these paratransit systems. Thus, in any municipality, and also in many rural areas, there are fragmented, overlapping and duplicated services.

In this research these human service agency transportation systems are studied, and the coordination phenomena are investigated in detail. A review of the literature of interorganizational behavior allowed a model of the coordination process to be developed. This model reviews the entire process, starting with the factors which influence an individual agency's willingness to coordinate. Also considered are characteristics of sets

of agencies which facilitate or impede coordination, and the external forces which may influence the coordination process.

The focus of the empirical part of this research is on the individual agencies and their willingness to coordinate. No coordination is likely to occur unless there is some willingness of agency directors to enter into cooperative arrangements with other agencies. A number of factors might influence whether an agency has a basic willingness to coordinate or is unlikely to enter into joint arrangements. It was found in this study that the most significant factor which affected an agency's willingness to coordinate was whether they perceived that the potential financial benefits were worth the loss of control which might result from coordinating with other units. This result underscores the need for more accurate information on the actual benefits and costs which results from coordination.

Agency directors also were sensitive to the fact that coordination requires some administrative effort. They were more willing to coordinate if they felt that they had the time available to enter into the negotiating process which is required to achieve coordination.

Another factor which was related to willingness to coordinate was the nature of the agencies' commitment to transportation. To enhance coordination they needed to legitimize their transportation function. This means that agencies which provide transportation to their clients through an identifiable sub-unit should be more willing to coordinate than those which provide transportation ad hoc.

Two factors which did not seem to affect willingness to coordinate were the agencies' perception of regulatory barriers to coordination and their financial security. Some agencies were concerned with how to over-

come regulatory barriers, and virtually all of them were seeking more financial stability. However, these factors were not good predictors of a basic willingness to coordinate their client transportation.

These results were based on extensive interviews conducted during field visits to five areas of California, and a mail survey of agency directors in each of these areas.

Chapter I

INTRODUCTION

This study follows a model of scientific research which is based on the following set of steps:

1. Theory and model construction
2. Derivation of theoretical hypotheses
3. Operationalizing of concepts
4. Collection of empirical data
5. Empirical testing of hypotheses

As Babbie (1973) points out, these steps are never done in a strictly serial fashion. Rather, there is continuous movement back and forth between the steps. Theoretical constructions are influenced by previously observed associations, and the empirical data often force a reevaluation of the theory.

While the theory in this research is derived from research on many different types of interorganizational contexts, the model and empirical effort focuses on a problem in the area of transportation: coordination of human service agency client transportation systems.

COORDINATION IN TWO PUBLIC SECTORS

Human service agency client transportation represents the coalescing of two streams of activity, both of which started as private endeavors but have now become part of the public sector. The merger of a fringe of the transit industry and the local delivery units of social welfare, health, and other social programs has resulted in many systems which provide human service agency client transportation. These are

part of the non-conventional special transportation services which are collectively known as paratransit.

Coordination in the conventional transit industry has been recognized as a problem area since the early advent of street railways. Private transit companies were fiercely competitive and had many overlapping service areas until municipalities, recognizing that transit systems were natural monopolies, started issuing exclusive franchises to operators (Smerk, 1979).

Even exclusive franchises did not eliminate the need for coordination. Urban areas often contained multiple franchises, each having the right to serve a certain area or specific route. Thus, there were many interfaces of separate operators. Coordination of routes and schedules and the availability of transfers between operators were often vexing problems to larger municipalities (Krzyczkowski, 1973).

More recently, regional or metropolitan organizations have been established to insure that planning for transportation agencies and other planning activities of local agencies are coordinated. Through the A-95 Federal-Air review and comment process, more than 200 programs are coordinated, including many transportation programs (McDowell, 1977).

Local agencies must show that they are not doing their transportation planning in a vacuum. A "3C" transportation planning process has been established which is mandated by law and regularly reviewed by the FHWA (Federal Highway Administration). To receive federal aid for highways or mass transit, urbanized areas are required to conduct a continuous process of transportation planning which is comprehensive in its

inclusion of all modes of transportation and is conducted cooperatively between municipal, state, and federal transportation agencies.

In another increasingly public sector of society, coordination has been of continual concern. The problem of coordination has confronted social welfare, health, and other human service agencies ever since the first social service units were established in the United States. In urban areas, agency staff found that at least two types of coordination were needed. Referrals to other agencies were the first need. Clients of one agency were often in need of services which were not offered by that unit. It therefore became necessary to refer them to the appropriate local agency. Coordination also was needed when there was overlap in the service offered by local agencies. Some method for allocation of clients among the competing units was needed.

Social Service Coordinating Councils were established in many cities to deal with these problems. Their membership consisted of representatives of every local social service agency, and their charge was to facilitate interagency referrals and establish mechanisms for resolving jurisdictional disputes.

These social, health, welfare, and other local human service agencies have found that their clients need better transportation. Responding to this need, they have initiated many small, uncoordinated paratransit systems. These systems usually receive public funds, but, because of the categorical nature of the human service programs in the United States, there are many different organizational hierarchies which oversee these local units.

EMPIRICAL AND THEORETICAL AREAS OF CONCERN

The empirical section of this study delves into the factors which predispose local agencies to coordinate their client transportation. Preceding this phase is the development of a model of interagency cooperation which includes a series of propositions and hypotheses, some of which were tested by the empirical work.

In order to construct the model of interorganizational cooperation, the growing body of organizational behavior literature which discusses interorganizational relations was synthesized. Much of this literature is either theoretical and abstract or is based on anecdotal illustrations of the phenomena being discussed. Some studies, however, have conducted empirical analyses of interorganizational cooperation, usually based on public sector units, such as community health organizations (Levine, White, and Paul, 1963), educational institutions (Clark, 1965), and community coordinating agencies (Turk, 1973). Conversely, the body of research in the area of paratransit and human service agency transportation is pragmatic and policy-oriented. Most of this research is performed for federal and state agencies who are interested in a description of the problem area and a review of the relevant policy issues. Few of the studies are conceptual, and none of them has a theoretical base.

The present research links the study of human service agency transportation to the theory in interorganizational relations. It is also a continuation and expansion of some of the empirically based interorganizational works. Following many of these previous studies, this research is based on part of the public sector; human service

agency transportation.

PROBLEM STATEMENT

Deriving a precise statement of the problem to be addressed in this research requires that the hypotheses and associated dependent and independent variables be named and that the relevant theoretical and empirical boundaries be defined.

Emerging from the field of organizational behavior is a body of theory called interorganizational relations. This theory focuses on the interdependencies between organizations: what is the impact when the behavior of one organization stems from the behavior of another organization (Schermerhorn, 1974)? Two or more interdependent organizations can enter into cooperative or competitive relations. From the interorganizational perspective, the willingness of organizations to concert their decision-making is treated as a variable.

A distinction must be made between the willingness-to-cooperate variable and the actual level of cooperative activity engaged in by organizations. A policy unit may be predisposed to cooperate, but other variables may have a mediating influence on whether any level of cooperation will be achieved. For the theoretical parts of this study, both the predisposition to cooperate and the actual level-of-cooperation phenomena are reviewed. The model which is developed considers the variables which affect the latter and the former aspects of interorganizational analysis.

In the empirical part of this study, the problem is respecified to concentrate on the willingness of organizations to enter into coordination activities. The organizations are local agencies which deliver

a variety of human services to clients. Because these agencies regularly overlap each others' organizational boundaries, cooperation is an issue which they frequently must confront. This is especially salient for the client transportation systems which many of these organizations have started.

Then the applied research question is:

Under what conditions are human service agency client transportation systems willing to enter into cooperative arrangements?

From this research question, an applied research proposition which names the variables can be derived as follows:

Proposition I

> The willingness of an organization to coordinate client transportation is influenced by its organizational security, the perceived regulatory barriers, the anticipated benefits and costs to the agency, and the availability of slack resources.

Hypotheses can then be stated which posit the nature of the expected relationships between the dependent variable willingness-to-coordinate and the independent variables.

Hypothesis 1

> An agency will be more willing to coordinate client transportation when it has a higher level of organizational security.

Hypothesis 2

> An agency will be less willing to coordinate client transportation if it perceives severe regulatory barriers.

Hypothesis 3

> An agency will be more willing to coordinate client transportation if it anticipates that its benefits from coordination will be significantly greater than its costs.

Hypothesis 4

> An agency will be more willing to coordinate client transportation if it has slack resources.

These hypotheses are the points of departure for the data-gathering and analysis of the study.

OUTLINE OF THE STUDY

Following this introductory chapter, Chapter II reviews the development of human service agency transportation. An historical perspective is used which discusses the reasons why these systems are uncoordinated and the future prospects for improvement of that situation.

The theoretical and conceptual part of the study is found in the first part of Chapter III, where the literature on interorganizational coordination is synthesized. Based on this synthesis, the remainder of Chapter III is devoted to the development of a model of interagency coordination. A series of propositions and accompanying testable hypotheses are stated which consider intraorganizational, interorganizational, and supraorganizational levels of analysis and develop independent and dependent variables within each of these levels.

Chapter IV begins the applied section of this study by giving the details of the research design and methodology. The reasoning behind the many project management decisions is discussed, and the methodological problems encountered during the study are presented.

In Chapter V, the research context discussion provides an exploration of the environment in which the agencies operate. Characteristics of the agencies in the sample are given in some statistical summaries, and three case studies are used to review the planning and coordination

activities which occurred between the agencies at some exemplary sites which were visited during the study.

The hypotheses which investigate the willingness-to-coordinate of human service agencies are analyzed in Chapter VI. Data from the mail survey are presented and are used to test the hypotheses, using appropriate statistical techniques.

In Chapter VII, a summary of the study results is given.

Chapter II

HUMAN SERVICE AGENCY TRANSPORTATION

In this chapter, the historical development and current dimensions of human service agency client transportation will be presented. This sector is a component of the social welfare system in the United States. To provide a better understanding of major characteristics of this component, a brief review of the origins of social welfare and its current structure will precede the section on human service agency client transportation.

THE DEVELOPMENT OF SOCIAL SERVICES IN THE UNITED STATES

The recognition of society's responsibility for providing assistance to disadvantaged persons did not always exist in Western culture. This review of the development of social services in the United States will follow changes in society's attitude toward disadvantaged groups as well as indicate how organizational arrangements to help disadvantaged persons have changed dramatically during the 20th century. The coordination theme appears frequently in this review. In addition to noting the growth of coordination as a part of efforts to provide human services, the shift from private to public assistance and the various levels of governmental involvement will also be reviewed.

EARLY SOCIAL WELFARE PROGRAMS

The earliest attempts to help disadvantaged persons, both in Europe and, later, in the United States, were through charities. These were usually private charities started by individuals who had compassion for disadvantaged groups and sought to provide a minimal level of assistance

for them. Charity usually provides direct financial assistance in the form of services to persons. The choice of who was to receive the assistance was largely left up to the charitable individuals to determine. This is the beginning of a concept of some certification of a person's need for assistance.

In European Medieval society, some concern for poor persons was evidenced by the Poor Houses. Perhaps these were as much a method of removing the poor from society as of helping them, but there was at least some recognition that society had some responsibility for helping disadvantaged persons. It was clearly felt that being poor was a stigma associated with a lack of desire or interest in working on the part of some persons, rather than there simply being some societal problems which caused persons to be poor.

The first social welfare programs, consisting of financial aid for the destitute, were initiated by England and some Western European countries during the sixteenth century. While the giving of alms to the poor had provided them with some relief, their numbers were swelling as a result of the shift from a feudal system to a capitalist society. As peasants were deprived of their land and found no other way to sustain themselves, the number of beggars in urban areas often was over 10% of the local population. Local and national government officials recognized that some relief for the destitute was needed to prevent disorders such as the food riots which erupted in 1529 in Lyons, France. Other civil disorders by peasants were frequent in England as the developing market economy caused frequent unemployment (Piven and Cloward, 1971).

National government in England was moving to replace alms-giving with a national system of relief. Starting in 1531, Parliament enacted various regulations to mitigate the unemployment, poverty, and begging which periodically threatened to result in revolt among the peasants. The Elizabethan Poor Laws, which were the most famous of these, established a local tax for financing the care of paupers and made Justices of the Peace the overseers of the poor (Piven and Cloward, 1971).

These Poor Laws recognized that it was the responsibility of the state to provide for destitute individuals. However, the key focus was on the "deserving" poor and the maintenance of a very low standard of service, less than the lowest paying job. Thus, poorhouses were often places where the lowest environmental quality and lowest remuneration were available. But these basic laws did go one step forward in recognizing that some of the poor were in circumstances beyond their control, and that there was little they could do about changing their poverty cycle.

In Great Britain, the Beverage Revolution went quite a bit further in recognizing the responsibility of the state to provide for the welfare of all of its citizens. It recognized that welfare services should not be punitive but rather more humane, providing some services for those who were in need.

Many aspects of modern social welfare programs found their beginnings in the relief system which was instituted in Lyons, France, in 1534. Lists of the needy were developed by a house-to-house survey. Tickets were given to those who were certified as deserving relief.

Standards for allotting bread and money were established, and begging was prohibited. Thus, a procedure of certification which would discriminate the worthy poor from the unworthy poor was established. Methods of allocation of resources and rehabilitation of the destitute were also present in Lyons' relief administration.

The Lyons program also illustrated an attempt at coordinating the disbursement of aid. All charitable donations were disbursed by a centralized administration which had been established by a group of churchmen, notables, and merchants (Piven and Cloward, 1971).

Further population growth and industrialization in Europe caused the poor tax, which financed the relief system, to grow dramatically during the late eighteenth and early nineteenth centuries. Workhouses were frequently established where the able poor were given jobs at pay which was usually below the prevailing lowest wage rate. This was the predecessor of public works programs designed to reduce unemployment during economic depressions.

SOCIAL SERVICES IN THE UNITED STATES

The relief system in the United States developed much more slowly than in Europe. American belief in economic individualism led to a doctrine of self-help through hard work. "The very notion of a relief system seemed blasphemous" (Piven and Cloward, 1971, p. 46). But in the early 1900's, many private charitable organizations were founded. By the time of the first world war, there were numerous such agencies in every city

Influential persons in these cities who were concerned with this proliferation of agencies often developed a social service registry or

other similar organization to aid in the coordination process. Coordination in this sense meant review of each agency's clients, boundaries, and services offered, to find areas of overlap and duplication as well as areas in which there were no services being offered. These social services coordinating councils were the earliest attempted coordination of agencies concerned with the delivery of social services.

It is important to note that these agencies were always privately funded. They often had the support of the most influential persons in the area which they served. Women from high society would often volunteer their time in the administrative activities to organize and maintain these charities and other social service organizations. The persons who were being served had little to do with the organization policy and planning which went into these agencies.

Settlement houses, which are usually attributed to the pioneering effort of Jane Addams (Dillick, 1953), were a major innovation in the delivery of social services. Starting near the beginning of the twentieth century, the settlement houses provided a way of helping disadvantaged persons in the community in a comprehensive manner that was meant to integrate them into the life of the community. They were started in major urban areas of the United States in response to the large influx of immigrants who needed some way of integrating into the existing society. Settlement houses provided this transition in society for many new arrivals to the United States. Each settlement house was a social welfare agency.

Community councils of social agencies also brought together various specialized agencies so they could act jointly (Dillick, 1953). A

clearinghouse function was emphasized so that the leaders of each organization could know what the others were doing. Duplication of efforts was to be discovered and avoided, and neglected areas could be discovered.

The development of councils of social agencies and, later, community welfare councils led to broader based efforts to coordinate. Schools were widely used as community centers. School centers and settlement houses became organized around city or sub-city groupings to coordinate their services. Interorganizational councils at city, district, and neighborhood levels helped agencies to better reach the people they sought to serve; but these were still private organizations.

In 1947, there were some sort of coordinating mechanisms for social services in approximately 350 cities in the U.S. (Dillick, 1953). These were each permanent city-wide planning units involved in health, welfare, and recreational activities. All cities over 500,000 and a large proportion of those over 100,000 had at least one coordinating council.

In larger cities, there may be as many as three levels of coordinating agencies: at the neighborhood, district, and municipal level, in varying degrees of interaction and control.

THE SHIFT TO PUBLIC SUPPORT AND CONTROL

Some government involvement was started by municipalities in the 1920's and 30's in the form of some support for coordinating councils. Some federal involvement had started during World War I when defense councils were set up in many communities. These had a social service function in that they were concerned with the assistance of returning

veterans as well as the mobilization of civilians to aid the war effort. However, this federal involvement was not continued after the end of the war.

Even in the early days of the Depression, the federal government remained aloof. In the face of steadily increasing unemployment, the Hoover Administration discouraged Congress from passing pending public works legislation in 1930, claiming that recovery was just around the corner.

But the local resources that Hoover told the unemployed to rely on were being pushed beyond their capacity. As unemployment went over the 12 million mark, the federal administration changed its posture and launched a massive emergency relief program. This was the first substantial federal involvement in social welfare.

Piven and Cloward (1971) believe it was not concern over unemployment which finally prompted federal relief. They cite both the early European experiences and those in the United States to suggest that it is not until mass disorders are caused by unemployment that government intervention occurs.

It may have been that widespread disruption by unemployed persons was effective in forcing increased relief from local agencies, but it took the dramatic electoral shift of 1932 to bring to office an administration which would provide relief for the unemployed.

With the New Deal of Franklin D. Roosevelt, the federal government of the United States started to follow more closely the British model of welfare reform. Direct relief was given to some of the unemployed, but this was rapidly replaced by a work relief program. The federal govern-

ment declared that it would provide work relief for the employable under its Works Progress Administration, while the aged, disabled, orphaned, and others who could not work were to become the responsibility of the states and localities. Prior to this time, some states had established pensions for the blind, aged, and widows, but these programs were infrequent and small.

Federal involvement in social welfare accelerated with the Social Security Act in 1935. It was a major recognition that the individual had a right to society's help (Dillick, 1953). Under this new act, the federal government would share some of the cost of the direct relief programs for employables, but the rates were locally determined. States also developed unemployment insurance programs which received support from the federal government, but again, the states set eligibility requirements and the relief rate. Old age insurance benefits of the Social Security Act for those covered were to become available in 1942. (Piven & Cloward, 1971).

Substantial federal budgets for social welfare programs did not occur until the 1960's. Concurrent with the slow growth in the advent of federal involvement in social welfare was the changing perception by society and government officials of the need for assisting disadvantaged persons. While previously it was thought that the disadvantaged could solve their own problems, it became an acceptable tenet that one of society's obligations was to provide assistance to those who were not capable of solving all of their financial and other problems. This change in public attitude was necessary before the Great Society programs initiated by President Johnson in the mid-60's could receive

the popular support of politicians and the public alike.

CURRENT SOCIAL WELFARE DELIVERY

The proliferation of social welfare programs by the federal government required that a complex system of administering these programs be established. The first important aspect of these programs is that federal, state, and local governments each play a role. Marris and Rein believe that the process of social reform which is the objective of these programs must be focused on the formation of local community action agencies. Deliberate attempts to manipulate social change are being accomplished by "local agencies, drawing on federal funds, which concert the resources of a community in a democratic coherent attack upon the handicaps of the poor" (Marris and Rein, 1967, p. 1)

Another important characteristic of these programs is that they are categorical. That is, each program is a separate one, specifically established to administer to one aspect of service to one type of client. For example, the elderly and the poor were the targets of federal legislation of the 1960's.

The federal and state bureaucracies which were established to administer these programs usually followed the categorical nature of the legislation. Thus, the Administration on Aging was established at the federal level, and corresponding agencies were implemented at state levels. At the local level, categorical service agencies were established which administered the delivery of services to clients. Thus, categorical programs are institutionalized at every level of government, permeating the delivery of services, starting at the federal level, with corresponding state and then local agencies.

The categorical nature of these programs makes for a fragmented delivery system. This has caused many local agencies to be possessive about their clients. Since the number of clients determines the effectiveness of the local agency delivery system, in-fighting for clients can result in a "head count syndrome". Local agencies are also likely to want to assume more responsibility for services rather than less, so as to get more clients. Likewise, each wants to increase its geographic spread. Concern about the number of clients served, the specific services offered to the clients, and the geographical purview lead to the description of local agencies as being very "turf oriented." "Turfism" is an important aspect of categorical grant orientation of the social welfare programs of the United States.

Concern at the federal level for overlap and duplication led to the Allied Services Act of 1973. It was the purpose of this act at the federal level to provide for a better integration of the delivery of services. One result of this was project SHARE, which provided a number of demonstrations of social service integration. These projects were evaluated by many consultants, but overall the success of integration projects was small. Some successes occurred at the local level and sometimes resulted in more coordination of agencies. But the general conclusion was that turfism dominated. The basic structure of categorical grant programs made them very difficult to coordinate.

Human service agency client transportation is part of and at the same time a facilitator of this local delivery system. It therefore has many of the same characteristics of this system. Many of these aspects have direct bearing on the coordination issue as will be seen in the

following sections.

DEVELOPMENT OF HUMAN SERVICE AGENCY CLIENT TRANSPORTATION

The development of human service agency transportation systems started less than a decade ago. Voluntary drivers and agency staff have helped clients meet their mobility needs for many more years, but it was not until the dramatic increase in publicly funded social welfare and health programs of the 1960's that agencies began to develop systematic techniques for transporting their clients. These subsidiary systems, as Perloff and Connell (1975) call them, are initiated to meet special demands of limited clientele at reasonable cost levels. The motivation to develop systems came from agency directors who became aware of their clients' mobility problems. Agencies found that they were able to serve only a fraction of their potential client group because of access problems. Their clients--especially elderly, handicapped, and poor persons--were often without access to an automobile or adequate public transportation.

A plethora of these human service agencies have responded to this lack of adequate transit for their clients by initiating one of the following types of transportation programs (ARI, 1977):

1. Agency vehicles--agency purchases vehicles and starts a new system;
2. Purchase of services--agency pays for its clients' riding on another organization's vehicles, including taxi and other private providers;
3. Volunteer/staff using own vehicles, usually being reimbursed for vehicle operating costs only;

4. Client reimbursement for full or partial costs of a variety of modes, including taxi, transit, and paratransit.

Most systems are providing a service which supports their primary services. The range of primary services includes health, education, employment training, recreation, welfare, vocational rehabilitation, food and nutrition, and housing (U.S. General Accounting Office, 1977).

Table 1 below shows the diversity of primary services for a sample of agencies which provide transportation services in the region covered by the Massachusetts Bay Transportation Authority (MBTA). The table also indicates that the primary client group of 64% of these agencies included the elderly or the handicapped (ARI, 1977).

Specialized transportation systems range in size from single vehicles that provide monthly trips, to large statewide coordinate systems such as the 300-vehicle Delaware Authority for Special Transportation (DAST), and the Older Adults Transportation Service (OATS) of Missouri.

These health and social service agencies have opted for non-conventional paratransit operations. These paratransit options are usually more demand-responsive than conventional fixed-route, fixed-schedule transit. Vehicles are dispatched only when some demand has been established. Operations are personalized, and frequently provided door-to-door service in small vehicles.

Transportation planners had no role in the development of these early operations. The persons who developed these systems usually had no prior technical expertise in transit planning. They simply recognized the problem and went at it the best way they knew how. Few

PRIMARY SERVICE PROVIDED

PRIMARY CLIENT GROUP	Health	Educational	Rehab. Voc. Training Employment	Social/ Recreation	Transport.	Multi-Service	Total	%
Elderly	1	0	0	0	1	19	21	33
Handicapped	4	0	8	1	1	4	18	28
Elderly & Handicapped	0	0	0	0	1	1	2	3
Children & Youth	0	4	0	0	0	3	7	11
General Population	2	0	0	1	0	7	10	16
Other	3	0	1	0	0	2	6	9
Total #	10	4	9	2	3	36	64	
Total %	16	6	14	3	5	56		

TABLE 1: MATRIX OF CHARACTERISTICS OF AGENCIES PROVIDING CLIENT TRANSPORTATION IN MBTA REGION: PRIMARY CLIENT GROUP BY PRIMARY SERVICE

Source: ARI, 1977.

of them were aware of the "urban transportation planning process" and did not use sophisticated models to develop their systems. Using a "seat of the pants" approach, they identified the location of their clients and tried to provide door-to-door service to meet their most critical transportation needs.

These systems have often been described as poorly planned and managed (Institute of Public Administration, 1976). Early systems often acquired government surplus vehicles and elderly or unemployed persons were hired to drive them. Sometimes repairs were done by local garages or county maintenance departments, and when social service agency vehicles did not have priority, vehicle availability was not assured. In most cases, a preventive maintenance schedule did not exist.

POLICY DEVELOPMENT

These human service agency transit systems developed outside of the conventional transit industry and therefore were excluded from consideration by transportation planners. No discernible policy at any level of government guided their early growth.

When the Federal Aid Highway Act of 1962 established the "3C" process, (continuing, comprehensive transportation planning carried on cooperatively by states and local communities) no transit planning of any type was included. The Urban Mass Transportation Act of 1964 and its amendments brought conventional transit into the process. Regional or metropolitan organizations have been established to ensure that transportation planning is coordinated. Regional coordination is mandated by the Urban Mass Transportation Administration and the Federal Highway Administration, but these coordination efforts have focused on

conventional transit and have had negligible impact on the development of special transit services.

Human service agency transportation projects were usually initiated using funds from agencies which were not primarily involved in transportation. In the late 1960's, some projects were started by local agencies which took advantage of the flexible funding provided to Model Cities agencies. At the request of agency directors, grants for transportation demonstration projects were also awarded by the Office of Economic Opportunity (OEO) and the Administration on Aging (AoA). By 1972 there had been over 50 special transporation projects in rural areas funded by OEO (Kaye, 1972) and in 1975 a research project conducted for the AoA enumerated 920 projects involving the provision of transportation for the elderly (Institute of Public Administration, 1975). All of this activity was taking place at the local and state government levels and a majority of the projects received funds under Titles III and VII of the Older Americans Act and Title VI of the Social Security Act.

Proliferation of these systems has continued and they now command substantial amounts of public funds. In 1976, it was estimated that in the United States, as much as $1 billion annually was expended in providing special transit services for all human services agencies and that an annual growth rate of 13-18% was expected until 1978 and an 8% annual growth thereafter (Saltzman, 1976). Inventories taken by many planning agencies have confirmed the large number of agencies that provide transportation for their clients. For example, among the 1900 human service agencies in the San Francisco Bay area enumerated by Crain

(1974), approximately half of them owned their own vehicles or purchased transportation services for their clients.

Because this rapid growth has taken place in a policy vacuum, these services often overlap each other and frequently duplicate services offered by conventional transit operators. Lack of coordination on transportation matters between human service agencies has been identified as an obstacle to the provision of a reasonable level of efficient client transportation. The remainder of this chapter will discuss these coordination problem areas. The reasons for the lack of coordination among agencies will be explored, including a review of costs and benefits. This issue is developed in the final section of this chapter.

COORDINATION ISSUES

Coordination is a multi-faceted concept. In its broadest sense, coordination occurs whenever any two organizations take each other into account in their decision-making. There are thus many areas in which coordination can be attempted and a variety of techniques that are feasible. One simple coordination activity in human service agency transit could involve the sharing of information about client trip needs. At the other extreme of the coordination spectrum could be the total consolidation of all vehicles under the control of a single provider who would contract for service with individual agencies. Revis (1977) indicates that joint action to provide transportation services can take place between any combination of federal, state, or local agencies, and in addition can include private groups. But the most critical coordination activities are those that occur among local agencies that

actually deliver services to clients. It is at this level that resources are expended and the potential for coordination is greatest.

Federal agencies which administer the programs which support client transportation have become concerned about coordination (Crain, 1976). Some examples of this concern are the working agreement between the Administration on Aging and UMTA which promises, but does not mandate, that these two agencies will coordinate (U.S. General Accounting Office, 1977), and a demonstration program of the Office of Human Development Services (OHDS) in the Department of Health, Education and Welfare (HEW) which has chosen five sites where coordinated transportation systems will be funded. The Section 147 Rural Highway Transporation Demonstration Program, which is the major federal program in rural transit, is also focusing on coordination as one technique for achieving better utilization of transportation resources.

Another major federal program has often been criticized for its uncoordinated nature. Under Section 16(b)2 of the Urban Mass Transportation Act, grants are made to private non-profit agencies to purchase vehicles. In 1975, the first year of the program, $21 million were expended on vehicles but no coordination occurred to insure that these vehicles did not further fragment and overlap existing services. In subsequent years, some coordination effort was required.

The same problem is found among various state-sponsored special transportation services: there are too many uncoordinated, restricted sources of funds for transportation programs. Suggested improvements for state governments, however, need not stop with better coordination. In addition to enacting better legislation and implementing coordinated

programs, states can establish umbrella agencies that are empowered to consolidate disparate sources of funds. Probably the best example of a state-created agency which was established to coordinate specialized transportation services was in Delaware. The Delaware Authority for Specialized Transportation (DAST) embodied a successful approach for funding and operating specialized transportation services on a statewide basis. In essence, the legislature created an authority that could provide transportation services to a wide range of client agencies under purchase-of-service contracts.

Local county governments, the United Fund of Delaware, and numerous private agencies contracted with DAST to provide transportation services for their clients. In almost every case, the cost to the agency was less than was previously the case. This may not be a feasible solution in every area, but it is certainly indicative of the strong role a state agency can play in coordinating specialized transportation services.

BENEFITS AND COSTS: THE EFFICIENCY ISSUE

Coordination is usually recommended for reasons of efficiency. This is the issue which usually has the attention of the public and politicians, who see low ridership on the many vehicles operated by a large number of agencies. It has been suggested that the cost reduction which might accrue due to coordination activities will be the result of efficiency gains. Two problems inherent in the above are that total cost reductions do not necessarily occur from coordination, and even if there are cost savings there are other potential benefits, and a series of non-economic costs usually perceived as barriers which must be con-

sidered in any assessment of the net payoff from coordination. These benefits and barriers are discussed below.

ECONOMIC AND NON-ECONOMIC BENEFITS

It is usually assumed that there are net benefits to coordination. The focus of most earlier statements on the benefit of coordination is on economic benefits. The Institute for Public Administration (1976), for example, suggests that it is axiomatic that coordination among transportation projects serving the elderly, handicapped and other disadvantaged persons will lead to cost savings.

It is in the fixed cost areas that reduction should be possible. If agencies coordinate, then the administrative and overhead expenses for a combined system should be less than the total for the two separate ones. As indicated in Table 2, which comes from the Institute for Public Administration (1976, p. 3), these fixed costs range from 11% to 48% of the total costs.

But total costs have not been reduced in actual demonstrations of transporation coordination. Burkhardt (1979), reporting on the Rural Public Highway Transportation Demonstration Program suggests that although on a cost-efficiency basis the systems may have improved, the total funds being spent on client transporation in an area do not go down. If there have been efficiency gains in the systems, then while the total funds spent in an area may remain the same there will be some gains in service levels or an expansion of service area.

Another problem is that agencies do not usually have an accurate view of their transportation costs. Poor accounting means that they may be unsure of their per-passenger expenditure. But even when their cost

Table 2

RELATIVE SHARE OF OPERATING AND FIXED COSTS
FOR NINE SPECIAL SERVICE TRANSPORTATION PROJECTS

PROJECT	EXPENSE CATEGORY (PERCENT)		
	Operating Costs (Labor, Fuel, Oil, Tires, Maintenance, Insurance, Depreciation)	Fixed Costs (Supervision, C & A, Rent, Taxes)	Total
Senior Citizens Transport Rhode Island	86	14	100
Human Services Transport Chattanooga, Tenn.	89	11	100
Lift Line Palm Beach County, Fla.	87	13	100
YMCA Seniors on the Move Chicago, Ill.	52	48	100
Valley Transit District Naugatuck Valley, Conn.	66	34	100
Supplemental Transport San Diego, Calif.	81	19	100
Whistlestop Wheels Marin County, Calif.	70	30	100
Older Adults Transportation Missouri	65	35	100
Rural Transportation Project Pennsylvania	76	24	100

Source: Institute of Public Administration. Transportation for Older Americans, A State-of-the-Art Report. April 1975. Technical Annex B, "Case Studies." as cited in Institute for Public Administration, Coordinating Transportation for the Elderly and Handicapped: A State of the Art Report, Washington, D.C., November, 1976.

data are accurate they will use perceived cost rather than actual costs in evaluating alternatives to providing service themselves. Rosenbloom and Cox (1978) suggest that some agencies do evaluate the cost-effectiveness of contracting with alternative providers. But in making these comparisons, external subsidies often lower the perceived cost to the agency below the cost of alternative service provision. Agencies tend to exclude two different expense categories from their perceived costs. First are those subsidized expenses which probably would not be subsidized if an alternative provider were secured. In this category are vehicles donated or purchased through certain grant programs, volunteer drivers, free garaging and free maintenance.

The other cost category excluded by agencies is administrative expenses. The salaries of agency employees who support the transportation system but do not work full time for it, such as secretaries, agency directors, and bookkeepers, are often not included as a system expense. Overhead expenses such as office space and direct costs like telephones, supplies and printing are also not part of the out-of-pocket expenses perceived by the agencies. Although accountants would consider it incorrect to exclude these costs, they are not included in the cost perceived by the agency director and the one used in making comparisons between alternatives. Revis (1977) expands upon the potential benefits of coordination to include some which are not financial. Data from a survey of state agencies on aging and 20 case studies are used to develop the following potential benefits of coordination which have some financial and non-financial implications (Revis, 1977):

1. Reduced overlap and duplication

2. Increased service capacity
3. Increased vehicle productivity and operating efficiency
4. Cost reductions on purchase

POTENTIAL COSTS OR BARRIERS TO COORDINATION

The context within which they operate gives rise to many of the barriers to coordination faced by agencies who will assess the potential costs before entering into a cooperative relationship. As previous sections indicated, local human service agencies are funded from many different categorical sources. They are turf oriented, they are heterogeneous, and for most of them transportation is not a primary service. For these reasons, there are many potential costs or barriers to coordination of client transportation. Cutler and Knapp compare the coordination to a journey. "When a barrier appears along the road, the traveler (planner or operator) must stop to determine whether he can remove it, go around it, or turn back and take another, smoother road" (Cutler and Knapp, 1979, p. 5). Burkhardt (1977) has categorized the following types of barriers to coordination:

FUNDING AND CONTINUITY

Many of these systems have very insecure funding. They receive budgets just before (or sometime after) they initiate operations and have continual financial crises. Coordinated systems are difficult to initiate under these conditions. Agencies are loath to commit resources that they cannot count on receiving. Especially when demonstration funds are used to support these systems, year-to-year continuity is not

assured. Agencies with secure, long term support have less of a barrier coordination than those which spend much of their time seeking financial security.

FRANCHISE AND LABOR BARRIERS

Few agencies actually apply for local franchises or state certification to operate. They are small projects providing services to their own clients and do not charge a fare. These characteristics usually exempt them from having to obtain a franchise or public utility certification. A larger consolidated system might have to obtain this permission to operate and certainly would be more likely to become unionized than the small single agency systems. A unionized system would then have to negotiate a labor agreement which might be subject to the provisions of Section 13C of the Urban Mass Transportation Act.

These franchise and labor-related barriers are usually not insurmountable but the administrative and overhead costs incurred in overcoming these barriers are substantial. They are simply not worth the effort for a small human service agency.

INSTITUTIONAL MISMATCHES

The institutions which have the potential to coordinate have "conflicting elibility requirements based on age, income, health and employment status, and geographic limitations" (Burkhardt, 1977, p. 53).

The mismatch becomes even more pronounced when a conventional transit operator and social service agencies try to coordinate (Kidder and Amedee, 1976). Their objectives are not complementary. While the transit operator has operational efficiency, high load factor, and minimum

subsidy as major goals, the human service agency wants to provide a social service delivery system which gives individualized services to a small number of clients.

INTERAGENCY PROBLEMS

This refers to the many manifestations of "turfism." Agencies fear loss of agency identity and loss of control over agency funds. Weaver (1979) cites the structural problems that inhibit coordination. Transportation is often so integrated into a program it may not be possible to separate them. Agencies frequently find it impossible to calculate their transport costs (Rosenbloom and Cox, 1978).

Attempts to commingle different client groups and funding sources face some real and some imagined accountability problems. The fear that federal audits could find irregularities because of coordination of activities has many agencies wary of cooperative ventures. Revis (1977) discusses an agency which had coordinated funding from two agencies and then had to go to court to settle differences in audit interpretations from the two different agencies.

The literature on interorganizational behavior cites loss of autonomy in decision-making as a major cost to organizations which coordinate. This desire to maintain institutional prerogatives is analagous to the "turf" issue in the human service agency literature.

Surprisingly, the turf issue was only infrequently mentioned by state agencies on aging as one of the barriers to coordination. Only three out of 41 reporting jurisdictions mentioned problems of turf in the survey conducted by the Institute of Public Administration (1976).

No other direct automony issue was mentioned in this survey. However, a number of other barriers which were categorized imply concern over the dependencies which result from coordination. System operating conflicts in scheduling and the incompatibility of clients are barriers mentioned which are related to autonomy. But among the states there was no mention of loss of control of the vehicles as a barrier to coordination (IPA, 1976). It is probable that this autonomy question is more salient at the local level. Some evidence for this exists in the responses of local agencies who reported their perceptions of barriers to coordination. Many more of these operators cited barriers such as suspicion of lost prerogatives, administrative resistance, and preference for their own vehicles than did the state agencies on aging (IPA, 1976). Of 20 local agencies contacted, nine mentioned barriers which were directly related to loss of autonomy or turf issues. Even this is likely to be understated because agencies are likely to find it easier to cite barriers which are externally imposed, such as lack of funds and restrictive eligibility requirements, than to publicize local conflicts on turf.

STATUTORY AND ADMINISTRATIVE BARRIERS TO COORDINATION

Unfortunately, these statutory and administrative impediments to coordination are found at every level of government, starting with laws enacted by Congress which must ultimately be implemented by local agencies.

Laws that affect agency transportation are developed by many different Congressional committees. These various pieces of legislation have not in the past been coordinated to see that they do not create

overlapping programs, or to ensure that they allow for sufficient flexibility so that some consolidation is possible. Of course this is not unique to the area of transportation. The interfacing of many categorical federal social service programs is made difficult by the uncoordinated nature of the Congressional committee structure.

An interagency task force of the Southeastern Federal Regional Council has studied human service agency transportation. Ms. Suanne Brooks of this task force has documented the administrative jungle created by the many separate sources of federal funds for providing transportation service. She indicated that

> The Departments of Health, Education and Welfare, Labor, Transportation, and the U.S. Office of Economic Opoprtunity fund no less than fifty (50) human service categorical and formula grant programs that authorize the provision of a payment for transportation services. One fact remains: the person must be "categorically" eligible for the program(s) to obtain the transportation service, and eligibility restrictions (Federal and State imposed) are tedious at best. Many needful people who are categorically ineligible go unserved as a result (Brooks, 1974).

A subsequent review which included additional federal programs found 114 programs administered by 11 Federal departments that provide transportation for people (U.S. General Accounting Office, 1977). This same report and others (Cutler, 1976; Revis, 1977; Burkhardt, 1977) suggest that the statutory and regulatory requirements in and of themselves do not constitute barriers. Rather it is the conflicting administrative requirements which interpret the legislation and the local perceptions of these barriers which inhibit coordination.

Whether these are perceptual or actual barriers, they are inhibiting many agencies from coordinating. As Burkhardt (1977, p. 55) puts it:

> When faced with any one (more than likely, a number) of the problems described above, most social service agencies choose the "easy" way to provide transportation to their clients. They purchase a minibus, a van or a modified school bus and transport their own clients to and from eligible destinations--even though they know they may be duplicating another agency's identical service. Or, they utilize costly professional staff time to transport individuals to and from eligible activities (the Title XIX and Title XX programs often provide individualized transportation to clients by caseworkers).

SUMMARY

An historical overview of the growth of human service agencies pointed to the aspects which might influence their willingness or ability to enter into cooperative arrangements. These agencies have shifted from private to public funding and have developed a categorical approach to clients. Numerous uncoordinated programs resulted in a large number of turf-oriented agencies delivering services at the local level.

The second half of this chapter reviewed the development of human service agency client transportation systems. These subsidiary transportation systems provide increased client mobility in support of primary service provided by the agencies. The cost, benefits and barriers to coordination of agency transportation were reviewed in the context of the categorical, fragmented nature of the programs which provide funds for their operation.

In the next chapter a theoretical perspective on coordination is taken. While the present chapter looks at pragmatic problems of a narrowly defined sector, the following chapter is much less confined. Its interorganizational focus is relevant to many institutional contexts where there is concerting of decision-making between two or more units.

CHAPTER III

THE THEORETICAL AND CONCEPTUAL BASIS OF A MODEL OF AGENCY COORDINATION

The theoretical and conceptual aspects of interorganizational coordination are reviewed in this chapter. A working model is developed which focuses attention on the levels of analysis needed to study the process of cooperation. The literature on interorganizational cooperation is then reviewed in the context of the levels of analysis specified in the working model. Using the concepts developed in the literature review a series of propositions and corresponding testable hypotheses are derived.

DEVELOPING A CONCEPTUAL MODEL

Understanding the phenomenon of coordination requires that the relationships between the relevant organizations can be specified. To conceptualize their relationships a model will be developed which is a simplified representation of the real world. The model will be describing the wide range of activities which constitute coordination. It will also provide an organized framework for developing hypotheses about the factors which influence coordination activities (Hoover, 1976; Lave and March, 1975). After identifying the influential factors which correlate with different types of cooperative behavior, these relationships can be empirically tested.

One way of differentiating among influential factors is by their level of aggregation. A disaggregated approach would be appropriate in the investigation of the individual agencies and their propensity to enter into coordinated ventures. A study of the level of

coordination that single agencies achieve or have the propensity to achieve would focus on a different set of factors than the more aggregate type of study. Factors which motivate agency decision makers are most important at this level. The availability of resources to initiate coordination and the perceived value of cooperative ventures, for example, are two disaggregate level factors which might influence coordination of individual agencies.

Consideration of a totally integrated system in a single geographic area would shift the focus of the investigation. The aggregated factors which represent the sum of the agencies which have decided to coordinate would be scrutinized to look for causal relationships. Independent variables which relate to all or most of the agencies would be relevant in this case. These would include the extent to which their goals are similar or complementary, or the existence of a local coordinating unit which is already active in coordinating other services provided by agencies.

Some distinction could also be drawn between the influential factors which are attributable to the agencies involved in the interaction, and those which are part of the outside environment such as government regulations. Although these environmental factors are not easily subject to manipulation by the coordinating organizations, they are often very influential in determining both the interest an agency has in cooperating and the degree to which it can implement this desire and achieve results.

A MODEL OF INTERAGENCY COOPERATION

The previous discussion suggests a simple model of cooperative activities among agencies. This model attempts to show the process of coordination as it proceeds through various levels of aggregation of organization. Links between the factors which influence cooperation and the actual level of cooperation which is achieved are also indicated. Some causality is reflected in these linkages. There are factors at each level which can be identified and correlated with the willingness to cooperate or with the actual occurences of cooperative activities.

This model is useful in dissecting the phenomenon of cooperation into its component parts. It also provides a scheme for organizing the literature review. Furthermore, the hypotheses on factors which influence cooperation will be organized by the levels of analysis depicted in the model.

A brief description of the model will be given below. Initially, no attempt will be made to develop hypotheses which predict the specific influential factors at each level and their effects. Hypotheses will be derived after a review of relevant literature. This will give some reasonable basis for the hypotheses.

As shown in Figure 1 the model starts with a consideration of factors which influence each individual agency to cooperate. It is assumed that there are identifiable aspects of each organization which will either constrain or enhance its willingness to cooperate. This is the intraorganizational level of analysis.

Consideration of the interactions among agencies is the next step in the model. For any set of agencies there will be interorganizational

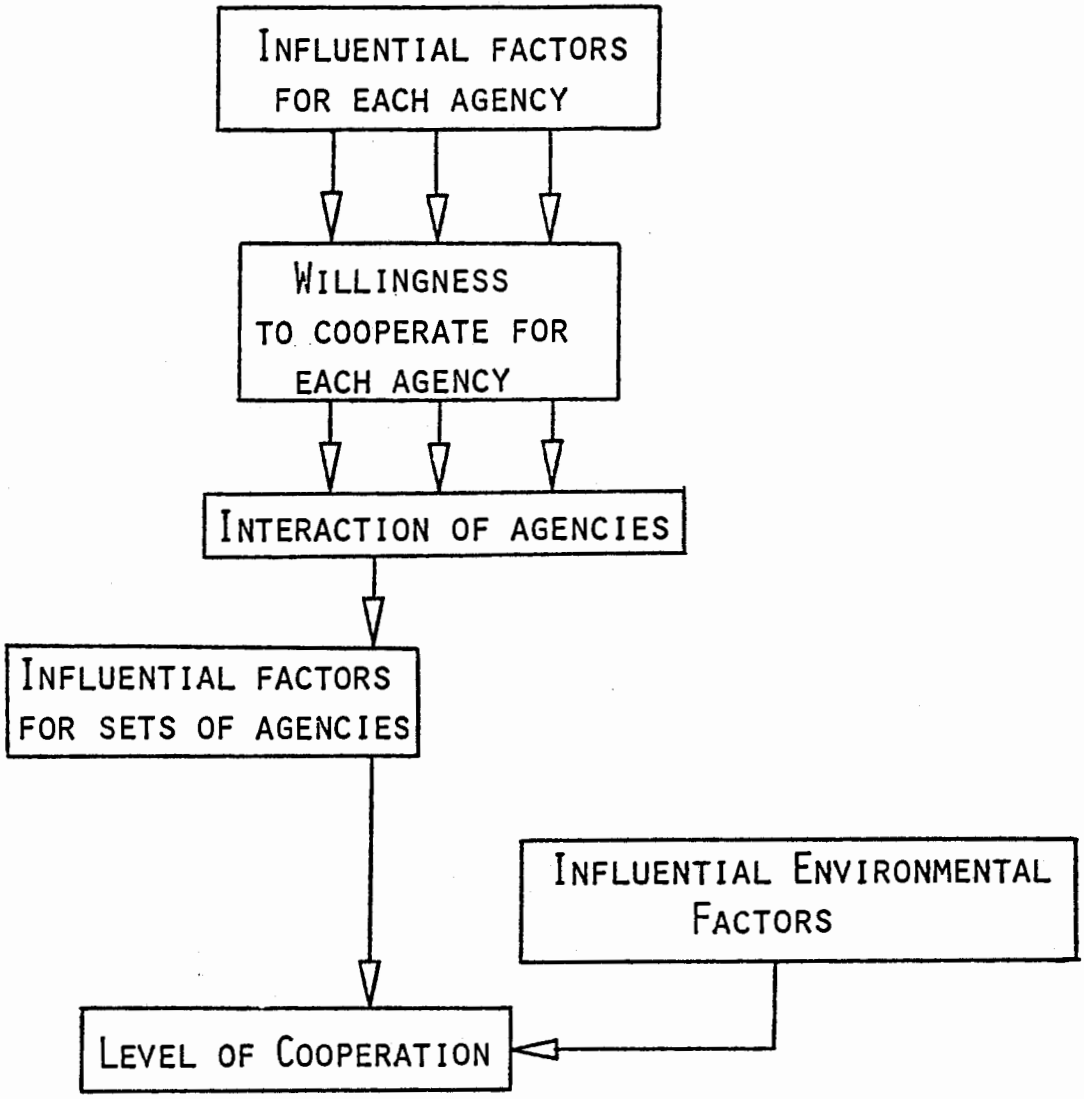


Figure 1.

Levels of Analysis of the Process of Interorganizational Cooperation.

factors which influence their coordination potential. The exchanges which take place between organizations and the process of coordination are proper subjects for review at this level of analysis. Comparative aspects of interacting agencies are also considered in this interorganizational category. This portion of the model suggests that there are factors associated with any set of organizations which influence their willingness to enter into cooperative relationship with each other.

When agencies interact, opportunities for cooperation will arise from this interaction. Furthermore, the characteristics of these opportunities will affect any cooperative activities which occur. These activities will also be a function of the willingness to cooperate of the set of agencies under consideration.

In addition to the intra- and interorganizational factors the model identifies a third category of environmental or supraorganizational factors. These are independent of the focal agencies but will still influence the cooperative activities which result from interorganizational interaction. It is thus posited that the level of cooperative activities achieved by one set of organizations will depend on characteristics of the units involved in the interaction and also on elements which are functions of the context within which they operate.

As stated earlier, this model of interorganizational coordination indicates the various relevant levels of analysis and posits the linkages between the components of the model. To develop testable hypotheses from the model, it is useful first to consider each of the influential factors which has been alluded to in the model. This is done in the following review of the literature.

REVIEW OF LITERATURE

The purpose of this literature review is to explore the theoretical and empirical contributions to the field of interorganizational cooperation. This review uses a scheme suggested by Marrett (1971). For categorizing the levels of analysis she identifies five principal interests in the field of interorganizational cooperation which incorporate the three levels previously identified. Her two additional categories come from further division of both the interorganizational and environmental levels of analysis.

These five levels of analysis start with one which focuses on intraorganizational issues. At the base of these issues is consideration of the structural facts about a single organization which determine how it eventually reacts in a situation where cooperation is possible. A more aggregate level of analysis suggested by Marrett focuses on comparative properties of organizations. This is an interorganizational concern as is Marrett's relational category of analysis which is concerned with the linkage between the parties. Moving beyond the focal organizations into the environment in which they operate, Marrett suggests the formal contextual level. Even broader supraorganizational concerns are specified in the fifth level which considers non-formal contextual properties such as social processes and conditions. A summary of these factors is given in Figure 2.

As in the initial working model of the process of interorganizational cooperation, these five levels of analysis can be arrayed by the number of units being considered. At the intraorganizational or structual level, properties of a single unit are being reviewed. Comparative

Figure 2

CLASSIFICATION OF FACTORS WHICH

INFLUENCE COORDINATION

Intraorganizational Level

- Resource Scarcity
- Costs
- Structural and behavioral factors
- Values

Interorganizational Level: Comparative Organization

- Domain consensus
- Comparison of goals
- Boundary Issues

Interorganizational Level: Relational

- Formalization
- Intensity
- Reciprocity
- Standardization

Supraorganizational or Environmental Level
(Formal Contextual)

- Coercion
- Reference Organizations
- Existing Organizational Setting

(Non-Formal Contextual)

- Social Processes
- Conditions of Society

and relational analysis are concerned with two or more organizations. For formal contextual and non-organized contextual analysis, more than the number of interacting entities are under consideration.

For each of the five levels of analysis some hypotheses about the major motivators of organizations can be developed. These correlates of cooperation as presented in the literature will be reviewed. The theoretical formulation and relevant empirical results will be included in each section. The information in this review is an independent synthesis of the articles cited; but special note is due the two authors (Schermerhorn, 1974, and Marrett, 1971) who skillfully reviewed and classified the literature on interorganizational behavior. The current review uses a modification of the classification scheme of Marrett and some of the synthesized conclusions developed by Schermerhorn.

INTRAORGANIZATIONAL LEVEL OF ANALYSIS

At this level the concern is with the characteristics of individual organizations which influence their propensity to cooperate. In general, the literature assumes that organizations make specific decisions on whether or not to cooperate and that they do so for a reason (Schermerhorn, 1974, p.55). This leads to consideration of how and why organizations make these decisions.

Studies of this type investigate the internal mechanisms which allow or force an agency to go beyond its organizational boundaries to accomplish its goals. Hypotheses at the intraorganizational level of analysis usually specify characteristics of the focal organizations as independent variables and coordination activities as dependent variables. Thus, methodologically, the research is not concerned with the characteristics of other than the focal organizations.

The four major areas of substantive intraorganizational investigation are resource scarcity, costs, structual and behavioral factors, and values. Each of these has been identified by researchers as a motivator of cooperative behavior. These areas of the literature will each be reviewed.

RESOURCE SCARCITY

Scarcity of resources needed by an organization to carry out its mission is the motivation which has received the most attention in the literature. Aiken and Hage (1968) say that organizations which need additional resources to carry out their mission will look to cooperative activities to alleviate these scarcities. Their empirical study of health and welfare agencies delves into the past history of

organizations and posits that some agencies use their resources to cause organizational change and innovation which result in resource scarcity. This scarcity is also conceptualized by Evan (1965) and Thompson and McEwen (1958) who view it as a shortage of resource inputs. A study of personnel from agencies in two separate communities by Levine, White and Paul (1963) found that the desire for exchange (cooperation) was related to lack of funds and lack of manpower. Levine and White (1961) had in a previous study argued that when an agency has access to all of its needed resources through independent sources it is less likely to cooperate. This was substantiated by data from their study of health and welfare organizations.

In an apparently opposing argument, Litwak and Rothman (1970) suggest that the availability of slack resources is necessary for establishing cooperative linkages. They think that joint programs will occur only if an organization utilizes some resources in establishing them. Persons must be assigned the responsibility of effecting the coordination. This seems to be in conflict with the scarcity of resources argument. However, if all the costs and benefits of a potential relation are considered, then it may be reasonable for an agency to need some discretionary resources at its disposal so it can establish a relationship which then results in net benefits. In this case resource scarcity is the motivator while slack resources are the initial instrument of inducing cooperation.

COSTS

Most researchers recognize that joint programs will result in some costs to an organization. It is usually considered axiomatic that

before an organization enters into concerted decision-making it will assess the benefits and costs involved and see if there will be a net gain (Warren, 1972; Warren et.al., 1975). But what are these costs?

Warren (1967) hypothesizes that coordination may lead to a loss of innovativeness and product quality, but does not provide any empirical substantiation of his theory. The focus shifts to autonomy in the decision-making process in an article by Aiken and Hage (1968) which cites the loss-of-autonomy argment made earlier by Thompson and McEwen (1958). When an organization has lost some autonomy it may not be able to make decisions which are in its best interest. Another type of costs are those which come with the loss of identity in any coalitions which occur. Guetzkow (1966) says that organizations are aware of potential losses of prestige and strategic power which occur. Interorganizational involvement which threatens to commingle the identities of participating units is cited by Schermerhorn (1974) as a cost of the relationship. The image or identity of an organization is especially important to publicly supported enterprises such as health and social service agencies, and they are cautious about their preferred image. Thus, Walton (1972) distinguishes between the expressive stakes, which are concerned with the desired image or status of an organization, and the instrumental stakes, which are reflected in operational concerns about the product produced or services rendered. Both instrumental and expressive benefits and costs are considered by an organization when it decides on cooperative behaviors. Walton suggests that it is difficult to achieve interagency cooperation in the federal government because there are few penalties to units that do not cooperate with each other.

STRUCTURAL AND BEHAVIORAL FACTORS

Attention to structual and behavioral characteristics of organizations suggests that particular organizational traits influence the propensity of an organization to cooperate. Three authors cited these as significant factors. The Aiken and Hage (1968) study of health and welfare agencies reviewed joint programs as a measure of interorganizational cooperation. They were able to find positive correlation between joint programs and particular structural organizational traits such as complexity, internal communication and centralization.

Similar assertions of behavioral influences are found in work by Guetzkow (1966) who on the intraorganizational level thinks studying the actions and perceptions of organizational decision-makers will divulge the roots of interdependency. His assertion is that vertical integration places an organization in control over its resources and therefore affects its propensity to form linkages to other organizations.

Finally, Levine and White (1961) discussed the influence of organizational attributes. They found that the functions of health-related agencies were useful predictors of their interaction. Non-direct-service agencies, for example, were less likely to seek linkages than those which provided direct services such as treatment of clients.

VALUES

Organizations sometimes seem to exhibit cooperative behavior when they each have available or internally accessible all the resources they need to accomplish their goals. This would suggest that scarcity of means is not the sole motivator of cooperation.

A number of authors have discussed this value-induced motivator of cooperation and other aspects of values which effect cooperation. Reid (1972) suggests that organizations are not totally motivated by self-interest. Agencies may have values which will cause them to share resources under certain conditions. Skeptics of an altruistic desire to cooperate can look upon this value-induced cooperation as the supporting of organizational goals. For example Reid (1972) questions why a welfare organization should cooperate with a research center in need of data. If the goals of the organization include maintaining a good relationship with local universities, thus, creating a desirable public image, then cooperation with scientific research institutions will be in support of those goals.

Another example of value-induced cooperation is when human service agencies collaborate "to reduce overlap in functions because of a shared commitment to work toward a rational system of community services"(Reid, 1972,p.96). But Levine, White and Paul (1963) are not willing to take at face value professions on the value of cooperation from agencies. They ask who would "admit opposing cooperation when the welfare of a patient might be involved?" (p. 1186). Cooperation and coordination are embedded in powerful social values and especially so for non-profit agencies where the welfare of the client is paramount. According to these authors, any study of interaction among these agencies must look beyond "generic comments about the desirability of greater coordination and cooperation to the specific types of cooperation sought ..." by the decision makers (p. 1187).

For certain organizations coordination not only has internal value but reflects a major goal of the organizations. In many urban areas coordinating agencies are found whose explicit objective is to effect greater interagency coordination. Levine, White, and Paul (1963, p. 1188) suggest that these planning councils represent those agencies who, in stating the need for greater coordination, are indicating their avowed organizational goal.

The matter of goals receives significant additional attention in the literature but it is in the context of the complimentary or competitive nature of organizational objectives. The discussion of this important topic is thus relegated to a future section on interorganizational analysis.

INTERORGANIZATIONAL LEVEL OF ANALYSIS: COMPARATIVE ORGANIZATIONAL FACTORS

Many authors have looked to the comparisons of attributes of interacting units as critical to the type and level of cooperation which occurs. Three aspects of this category of interorganizational factors are prevalent in the literature: consensus about domain, comparisons of goals, and boundary issues.

DOMAIN CONSENSUS

Domain is an important concept in discussing interorganizational interaction. In order to specify the areas of potential joint decision-making, some notion of an organization's purview is necessary. Domain as used by Warren (1967) describes an organization's access to the necessary resources it needs to perform its task functions and remain

viable as an actor in a given geographic area. In its interaction with other organizations Warren considers it axiomatic that a unit will act to preserve or expand its domain.

This hypothesis has been used to define the behavior of a wide range of bureaucracies and is especially important in considering public agencies which do not operate in a competitive market. Since there are no profits in a public endeavor, profitability cannot be used as a measure of success. The bureaucrat can only be more successful if he increases his agency's size and budget (Niskanen, 1971). All other things being equal, we should then expect government agencies to be more concerned than private agencies with "turf" issues, such as domain. Returning to the general case, according to Warren (1967) organizations will enter into concerted decision-making voluntarily only when they believe that the process will preserve or expand their respective domains.

When the above conditions are not met, outside intervention involving coercion or inducement of some sort is needed. This intervention phenomenon is of concern at the environmental level of analysis and will be discussed under that topic.

When two organizations interact each will have an opinion of its own and its counterpart's domain. Their relative agreement on this factor is referred to as "domain consensus" by Levine and White (1961), who suggest that agreement over goals and functions is important to the emergence of cooperative solutions. Without this agreement, organizations will not move into joint decisions. Expanding on this earlier study, Levine, White and Paul (1963) suggest that a major component of

domain consensus is the mutual acceptance of the legitimacy of each organization involved in cooperation. Operationally, for human service agencies, domain refers to the problems or diseases covered, the client population, and the services offered. When agencies do not accept each other's claims in these three areas, competition rather than cooperation is likely to occur.

COMPARISON OF GOALS

A key interorganizational issue is whether complementary goals or common goals will facilitate interaction. Evan (1965), Aiken and Hage (1968), and Guetzkow (1966) suggest that similarity of goals and functions between interacting organizations will result in competitive behavior. Agencies with complementary goals will not compete for clients and resources and therefore will find it easier to cooperate. Baker and O'Brien (1971) hypothesize that not only complementary goals but complementary role expectations will provide for more interagency cooperation. Thus, they link the previously discussed domain consensus with complementary goals. Baker and O'Brien suggest that when "interorganizational role ambiguity exists, conflicts and gaps in intersystem relationships will occur" (1971, p. 133).

An argument contradictory to Evan's basic hypothesis that similarity of goals leads to competition is proposed by Litwak and Rothman (1970). Thompson and McEwen (1958) and Warren (1972) also state that common goals or common interests are a prerequisite to cooperation between organizations. A clarification which may explain the seeming contradiction is found in Reid's (1972) identification of shared goals and complementary resources as elements necessary to cooperation. The

shared goals or purposes of Reid refer more to the philosophical goals that are likely shared by agencies serving similar clients. Warren (1972) refers to this as convergent issue-outcome interests. For example, all health agencies want to improve the medical services which are delivered to their clients, and thus share similar goals. If the operational goals of two separate health agencies specified that they each attack the same health problems in the same area then these similar goals would be in conflict. If they complemented each other by addressing different but related problems, or by needing complementary resources, then they would be more likely to cooperate. As Schermerhorn (1975) concludes, the contradiction in the literature over the influence of complementary or similar goals may be more apparent than real.

BOUNDARY ISSUES

Two general areas are specified as concerned with boundary issues. First, at the contextual level, is the effect of facilitating persons or agencies. These will be discussed in the section on the relational level of analysis. At the comparative level of analysis is the issue of overlapping memberships discussed by Evan (1965). He hypothesizes that more cooperation will occur when organizations share employees or board members.

Guetzkow (1966) emphasizes the role of persons in boundary-spanning roles: those who actually negotiate and implement the cooperation. There is some question about whether the level of cooperation is affected by the level of the organization at which the coordinated decision-making takes place. March and Simon's (1958) comments on interagency conflict are useful in this argument. They say that there

is more goal conflict at higher organizational levels because there is less operationality of goals among top executives of an organization. Less operationality of goals is associated with goal conflict which is therefore least at the lowest level of hierarchical organizations (March and Simon, 1958). By this line of reasoning interorganizational interaction will be most cooperative when conducted by boundary or liasion personnel (Evan, 1965), at the lowest level of organizations. Unfortunately, as a practical matter, coordination by lower-echelon personnel is often subject to the approval of their supervisors.

INTERORGANIZATIONAL LEVEL OF ANALYSIS: RELATIONAL FACTORS

Also operating at an interorganizational level are concerns about the nature of the linkages between cooperating organizations. This is termed "relational" by Marrett (1971). She reviews the attributes of the interactions and the characteristics of the connections between the parties. The categorization scheme she uses to describe the dimensions of the relations proves useful in developing a taxonomy of coordination activities. This technique for describing and ranking the level of coordination will be important when any correlations of the motivators and their effects on coordination are attempted.

The dimensions given by Marrett are formalization, intensity, reciprocity, and standardization. These descriptors can be used to analyze and order cooperative activities.

FORMALIZATION

Policies of organization are either based on formal, usually written, statements or are less explicitly delineated. The degree of for-

malization of a cooperative relationship is usually positively correlated with the mutual benefits derived from the linkages. Thus, more formalization enhances cooperation. Aiken and Hage (1968) conclude that formalized joint programs are more enduring, although they also note the concomitant increased loss of autonomy and flexibility in making decisions.

Among social welfare organizations there is a wide range of degrees of formalization that accompany cooperative endeavors. Marrett (1971) suggests that one measure of formalization is the extent to which arrangements are given official recognition. Tacit agreements to make case referrals between complementary organizations are frequent. Virtually every human service agency has some knowledge of the functions of other agencies in the geographic area and over time a pattern of referrals between agencies often occurs. Much less frequently there are formal written agreements between agencies. As previously stated, these tend to limit the options of the participating units and thus the official statements are less likely to occur than the flexible, unwritten agreements.

A second measure of formalization suggested by Marrett is the extent to which the cooperative effort is coordinated by an intermediary. If agencies are willing to invest the resources to have an intermediary, then the cooperative efforts are likely to be enhanced.

DEGREE OF INTENSITY

Directly related to the formalization factors will be measurements of the level of involvement of the participating agencies. Reid's (1964) discussion of extensiveness directs attention to the level of

resources which are expended in the relationship. Thus, Marrett (1971) concludes that the size of the resource investment is a measure of the intensity of the cooperation.

The notion of resource investment is supplemented by a measure of the frequency of interaction. In some cases, intense interaction may occur frequently but involve few participants or resources. In other situations there are relatively infrequent interactions but each involves large resource investments. Thus, both frequency and size measurements are needed to assess the intensity of the interaction.

DEGREE OF RECIPROCITY

In her review of the literature Marrett finds that a "critical dimension of interorganizational relations among autonomous groups is the degree of reciprocity, or the neutrality of the relationship" (1971, p.93). Of prime concern is the extent to which the flow of elements between organizations is mutual. Included in this measure of reciprocity are abstract items such as prestige and power as well as the more easily measured flow of personnel, funds, equipment, and clients.

An analysis of reciprocity should also include a measure of the mutuality of the processes by which the cooperation occurs. One organization may stipulate terms to others, or there may be a negotiating element to the process. In deciding on whether to participate, an organization will be concerned with whether it will be able to influence the terms of the agreement. Even if the distribution of benefits and costs mentioned in the first measure of reciprocity is satisfactory, an organization is likely to be wary of a larger, more powerful unit which has stipulated the terms of a non-negotiable relationship.

DEGREE OF STANDARDIZATION

Related to the formalization dimension of interorganizational cooperation is what Marrett calls degree of standardizations. This refers first to the degree to which the units of exchange are specified. A second factor comprising this dimension is the standardization of procedures of coordination. Procedural standardization occurs when a set of appropriate actions are specified for the participants in the cooperation.

Although standardization and formalization are related there are differences between these two dimensions. An agreement can be officially sanctioned and specified but it need not define the procedures to be followed. A formalized agreement may include reference to the structure of a coordinating unit but the unit of interchange may not be specified. It is likely, however, that formalization and standardization will be highly correlated and both will result in a higher level of coordination.

SUPRAORGANIZATIONAL LEVEL OF ANALYSIS: FORMAL AND NON-FORMAL CONTEXTUAL FACTORS

Organizations perform their functions in an environment which influences their decisions. Consideration of the factors which go beyond the focal organizations brings the analysis to the contextual level. Marrett (1971) distinguishes between the formal contextual level which refers to the influence of the surrounding organizational situation, and the non-formal contextual level where the concerns are with larger social processes and conditions. Both of these will be addressed in the following paragraphs.

The formal contextual influences which will be discussed include coercion, reference organizations and the existing interorganizational setting. A brief conclusion to this section discusses the variety of non-formal contextual areas.

COERCION

Some authors prefer to include only voluntary cooperation in their review of interorganizational interaction. Levine and White (1961), for example, use the term "exchange" to include only situations where the cooperation is voluntary on the part of the participating organization. Others, like Warren (1972), recognize that coercion is an obvious determinate of concerted decision making. There appears to be no reference in the literature to the effects of various levels of coercion. For example, if a government agency were to regulate funding for a local welfare program on the basis of coordination with other programs, there might be some level of penalties which the local agency might be willing to endure so they did not have to participate in a coordinated venture.

Coercion can be absolute or it can be modulated. A parent agency can tell the local organization, "thou shalt," or it can modulate its request to "you should," leaving it up to local decision-makers to decide how much coordination they want to attempt. The question of local interpretation of coercive regulation has also been raised (Durant, 1977). Many agencies have creatively interpreted federal regulations to overcome barriers to coordination, while the opposite tendency, to overreact to regulations, has also been noted. (Cutler, 1976).

REFERENCE ORGANIZATIONS

Schermerhorn refers to the effect of normative reference organizations on interorganizational behavior. Every organization has a set of values which it develops by comparison to some reference group. Reid's (1970) focus on value-induced cooperation which was discussed as an intraorganizational component also has a supraorganizational component. Agencies have an organizational image or identity which is partially derived from other reference units. Evan (1965) is supported by Guetzkow (1966) in identifying the influence of both normative and comparative reference organizations. An organization's views of the value of cooperation will be derived from how it views and is viewed by comparable organizations.

EXISTING INTERORGANIZATIONAL SETTING

Will existing interorganizational patterns in a city influence new interorganizational linkages? Turk investigates these environmental effects in a study of poverty agencies (1970) and a subsequent review of hospital coordinating agencies (1973). He concludes in the first study (Turk, 1970) that the existence of local and extra-local integration, measured by the number of national voluntary associations' headquarters located within a city, was positively associated with interorganizational activity as measured by the funding level of the local poverty programs in a city. Turk's second project (1973) showed that the influence of scale and diversity of municipal governments and of community-wide voluntary organizations accounted for much of the variance in the formation of hospital councils.

Warren (1967) also focuses on the nature of the larger organizational setting. He views the density of the organizations as an important determinant of interorganizational relationships. The need for exchanges and the form they take are linked to the influence of organizations outside of those which are interacting.

In addition to the influence of other organizations, Marrett (1971) discusses the social processes and conditions of society. She suggests that this non-formal contextual setting is referred to by Clark (1965) in his discussion of interorganizational patterns in education. Clark reflects on how changes in society have influenced interrelationships. Interorganizational responses to these new demands include sharing of facilities and various consortia of educational institutions (Clark, 1965). Warren (1967) also suggests that these non-formal contextual factors may be significant when he analyzes the "field" within which organizations are imbedded.

HYPOTHESES ON COORDINATION

With the groundwork laid by a review of the literature on interorganizational cooperation it is now possible to develop specific hypotheses about the relationships between dependent and independent variables. Following Blalock (1969), for each of the levels of analysis a broad proposition will be stated which posits a link between one dependent variable and a series of independent variables. From each proposition a series of associated hypotheses will be derived. Each hypothesis states the expected influence of one independent variable on the willingness and ability of agencies or sets of agencies to enter into cooperative relationships. These variables will be discussed with

reference to their operational linkages and the empirical evidence which suggests their importance in determining interagency cooperation.

While the literature review considered a range of interorganizational activities among generally unspecified organizations, the focus will now narrow. For the development of testable propositions and hypotheses more precise definitions of the subject area will be specified. The organizations are health and other human service agencies which provide services to clients. The agencies are community-based and are in direct contact with their clients. The activity of these agencies which will be analyzed is the transportation which is provided by the agency for its clients. Exchanges between the agencies to be scrutinized are those which involve coordination of transportation between any set of agencies or any consideration of transportation services.

PROPOSITION AND HYPOTHESES ON INTRAORGANIZATIONAL FACTORS

The first proposition, which is illustrated in Figure 3 and will be empirically tested in a later chapter, posits linkages between influential factors and intraorganizational characteristics as follows:

Proposition I:

> The willingness of a local service agency to coordinate client transportation is influenced by its organizational security, the perceived regulatory barriers, the anticipated benefits and costs to the agency, and the availability of slack resources.

Willingness to coordinate is a variable which depends on the attitude of the policy-units or decision-makers toward coordination. Decision-makers represent the organization in dealing with other units. If they are predisposed toward entering into coordinative arrangements

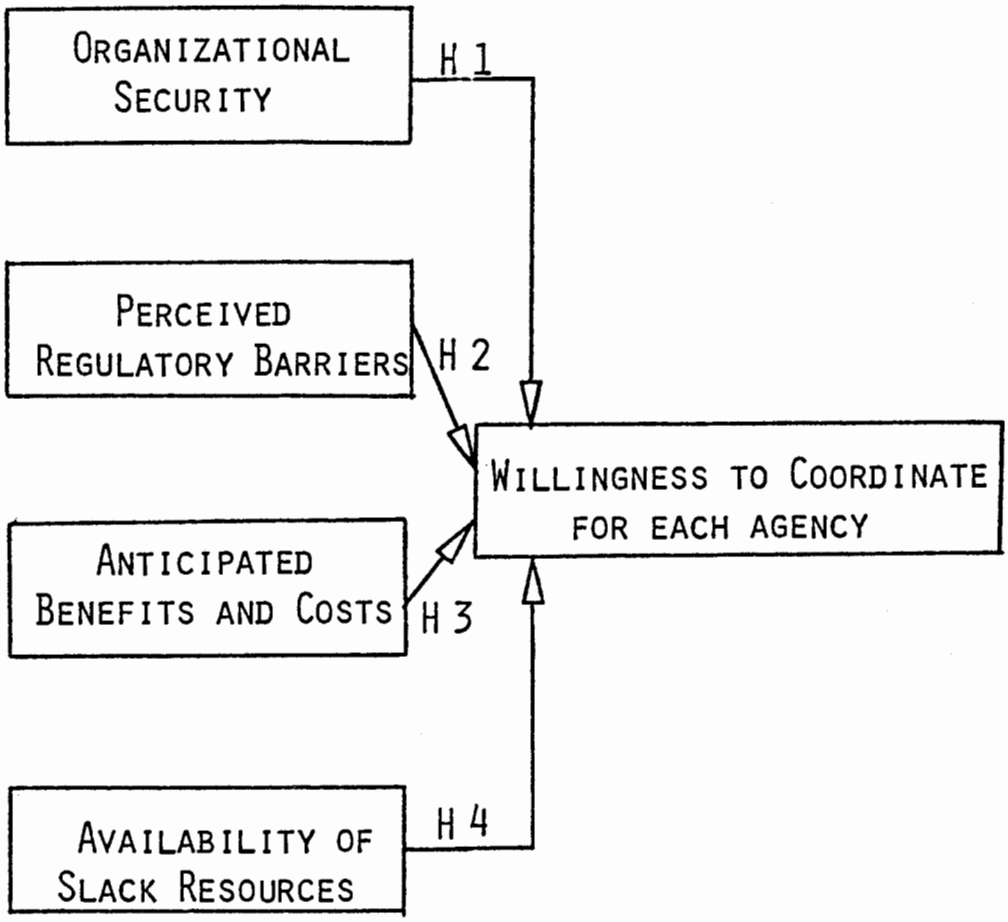


Figure 3.

Diagram of Proposition I: Intraorganizational Factors Affecting Agencies' Willingness to Coordinate.

then it is assumed that the organization is willing to coordinate with other organizations. This is similar to the concept of policy-unit felt need to cooperate which is defined by Schermerhorn as "the expression of preference within the policy-unit for organizational pursuit of action programs involving interorganizational cooperative relations" (1974, p. 62).

The proposition also implicitly includes the ability of an agency to coordinate. This recognizes that an organization may be willing to coordinate but not be able to because the resources - in this case vehicle seats, or funds - are not available.

The first hypothesis which is derived from the proposition is as follows:

Hypothesis 1:

> An agency will be more willing to coordinate client transportation when it has a higher level of organizational security.

Organizational security is a composite derived from other organizational characteristics. Security as an organizational dimension reflects clarity about mission and domain and includes a notion of guaranteed short term existence. Concern about the mission and focus of activity can result in an organization expending much of its resources on fighting encroachments. Agencies which have clearly defined tasks, clients, and problem areas are likely to cooperate more readily. For example, some agencies are providing transportation for clients because they have clear authority to do so. This authorization could come from a local governing board, a parent organization, or as a result of a specific transportation grant to the agency. Other agencies are not

specifically or formally authorized to provide client transportation but find it a necessary part of their delivery system. The hypothesis suggests that the agencies which have more authorization to provide client transportation will be more willing to coordinate. In general the hypothesis posits that organizational paranoia, the antithesis of organizational security, will lead to competitive behavior in an interorganizational context.

Guaranteed short-term existence is the second dimension of organizational security. Among the various factors which can contribute to the existence of an organizational entity, funding continuity is the most basic. Thus, for the purposes of this analysis of organizational security, short-term will be defined in terms of the normal funding cycle of organizations. This includes the time which passes from the time an annual budget proposal is prepared to the time the final appropriation and authorization to expend funds are approved. For the most agencies, this cycle takes from six months to two years.

Although two organizations may have similar funding cycles they may have a completely different level of confidence that their budget requests will be granted. Guaranteed short-term existence is thus dependent not only on funding level and length of the cycle but also on the probability that various levels of funds will be received.

Organizations will be less secure when they are unsure about their continued funding level. Also less secure are agencies which have little overlap in their funding cycles so that they are not given an approved allocation until just before they must begin spending it. Organizations in either of these situations are likely to be in a

constant state of crisis concerning their existence. As a result they are not prone to commit resources to cooperative ventures because they cannot be sure about the level of resources they have to expend.

Lower level individuals in these organizations may be in an unstable situation because their employment is not assured. They will therefore be expending part of their energy either positioning themselves within the organization so that they have the best chance to survive funding cuts, or looking for employment elsewhere. Communication with other organizations is likely to be cooperative only to the extent that new job opportunities are in the offering.

Managers in an institution whose short-term existence is not guaranteed may have more job security than lower level personnel, but will spend an inordinate amount of time in a struggle to maintain or increase their annual budget. Interorganizational cooperation will not be likely among institutions whose month-to-month existence is in doubt.

This principle should be applicable to interactions among human service agencies. Agencies which have assured funding will be more secure and therefore more likely to engaged in concerted decision making. Agency directors who are constantly in search of operating funds cannot commit resources they are not assured of having, and will be reluctant to do so even when some funds have been secured, because of the need to have carry-over funds available for subsequent periods.

Hypothesis 2:

> An agency will be less willing to coordinate client transportation if it perceives severe regulatory barriers.

An agency's perceptions of the ease of implementation of any cooperative venture will influence its willingness to attempt the cooperation. If the regulatory barriers to coordination loom too large then the agency director may not be willing to allocate resources to achieve coordination.

This problem has surfaced in reports on human service agency transportation. Some earlier work in this field identified regulatory barriers as major stumbling blocks to coordination of human service agency transit. Brooks (1974) complained that the multiple funding sources are a serious problem. Categorical grant programs provide transportation funds from over 50 federal authorities. Brooks cites the restrictive nature of these categorical programs as restricting local coordinations. The health agency is reluctant to use its under utilized vehicles to transport welfare agency clients because the bus was purchased with federal health agency funds.

However, more recent reports have determined that the restrictive regulations are not as prevalent as previously believed. The Institute of Public Administration (IPA,1976) notes that there are actually few regulations at the state or federal level which prohibit transportation coordination. Rather it is state, regional or local interpretations of the regulations which are inhibiting coordination. Thus, the issue at the local level is the perceptions and beliefs about the restrictions. For this reason the hypothesis suggests that perceptions about restrictive regulations will influence coordination without regard to the actual nature of the regulations.

Hypothesis 3:

> An agency will be more willing to coordinate client transportation if it anticipates that its benefits from coordination will be significantly greater than its costs.

Coordination requires an agency to use some of its resources with the expectation of some rewards. In addition to using resources, the act of cooperating also makes an organization less autonomous. Loss of autonomy and expenditures of money, equipment, or personnel are the major costs to an agency which coordinates.

Techniques for coordination in the areas of client transportation include purchasing trips for its clients (a monetary input) donating vehicles to a consolidated system (an equipment input), and providing a staff member to assist in the coordination effort (a personnel input). Loss of autonomy occurs in each of these cases because the agency no longer has complete control over the money, equipment or personnel it contributes.

Benefits of coordination are usually related to increased efficiency and image-building considerations. In a coordinated client transportation system it is usually assumed that the costs per passenger trip will decrease, the level of service will rise, or both of these will occur (IPA, 1976). Unfortunately, these efficiency benefits are only assumed and suggested. No empirical evidence exists either to show that coordination results in efficiency benefits or to precisely identify these benefits (Revis, 1977).

Anticipating these benefits and costs, an agency head will decide whether the proposed coordination is a reasonable course of action. The hypothesis suggests that an agency will anticipate these benefits and

costs based on its subjective evaluation of the result of the coordination. Extremely poor data are likely to be used in making these decisions. The response of other agencies must be anticipated and estimates of loss of autonomy and resource transfers must be made.

The hypothesis, however, only deals with anticipated benefits and costs. Because of the gross nature of, and inherent uncertainties in, the calculus of the decision, this proposition suggests that agencies will look for a significant benefit advantage before they are willing to coordinate.

Hypothesis 4:

> An agency will be more willing to coordinate client transportation if it has slack resources.

The previous proposition on benefits and costs introduced the resources which are available to human service agencies. The exchanges of economic goods, equipment, personnel services and clients are all possible elements of potential cooperation (Levine and White, 1961). However, the ability to coordinate, in the context of a transportation system, usually refers to underutilized vehicles and drivers or to funds to purchase client transportation from another agency. An agency which has underutilized vehicles can allow clients from other agencies to use its vehicles. Agencies which have transportation funds available are able to pay other agencies to transport their clients.

But while the previous hypothesis was concerned with the effect of perceived benefits and costs, the current hypothesis focuses on actual slack resources and how they influence the willingness of an agency to coordinate. The availability of these slack transportation resources will always make it possible for an agency to coordinate, but this

situation may or may not induce it to be more cooperative.

The term "slack resources" must be precisely defined if it is to be used in a hypothesis. For the purposes of this research, "slack resources" refers to the vehicles, drivers or funds which are available for coordinated use without substantially interfering with the routine operation of an existing system. Under this definition, unused seats on a vehicle are slack resources only when the vehicle does not have to deviate from its usual route to fill these seats. This does not imply that if coordination occurs that there will be no changes to the system's operation. Changes will take place and are part of the costs of coordination. However, when considering the effect of slack resources on willingness to coordinate, the non-interference stipulation must be used in defining underutilized resources.

As used in this hypothesis, slack resources will be in the form of readily available vehicles, drivers or transportation funds. An agency with an abundance of these resources will be more willing to coordinate them, either by transporting other agency clients or by paying another agency to provide transportation for its own clients.

Another aspect of slack resources is the effort necessary to implement the coordination. If an agency perceives that a large negotiating effort is needed it may be less willing to coordinate unless there is time available to do the coordination and the agency perceives large net benefits.

PROPOSITION AND HYPOTHESES ON INTERORGANIZATIONAL FACTORS

The interaction among organizations is the focus of the next section. Rather than considering the characteristics of individual agen-

cies, this level of analysis is interorganizational as indicated in Figure 4. The proposition covering these factors is:

Proposition II:

> This level of coordination in client transportation among any set of local human service agencies is influenced by the presence of a dominant leader, the activities of a charismatic agency head, domain concensus, and its density of agencies.

Among any set of health and welfare agencies in a given geographic area, various types of cooperative activities will occur. In the provision of transportation services this cooperation can range from simple sharing of information on client trip needs between two or more agencies to the consolidation of all transportation services in an area. Between these are less comprehensive consolidations and other cooperative ventures such as joint purchases of equipment and fuel. For the purposes of discussing this proposition the concept of a level of coordination will be used as the dependent variable in the hypotheses which follow.

Hypothesis 5:

> There will be coordination among a set of agencies when one agency dominates all others in the provision of client transportation.

Agencies vary in the way they provide client transportation. Some actually own vehicles and operate a system for their own and sometimes other clients, while others purchase transportation for their clients from a provider. When one or two agencies have much larger transportation systems then any other agency in the area, coordination is more likely to occur than when there is parity among several agencies in the set.

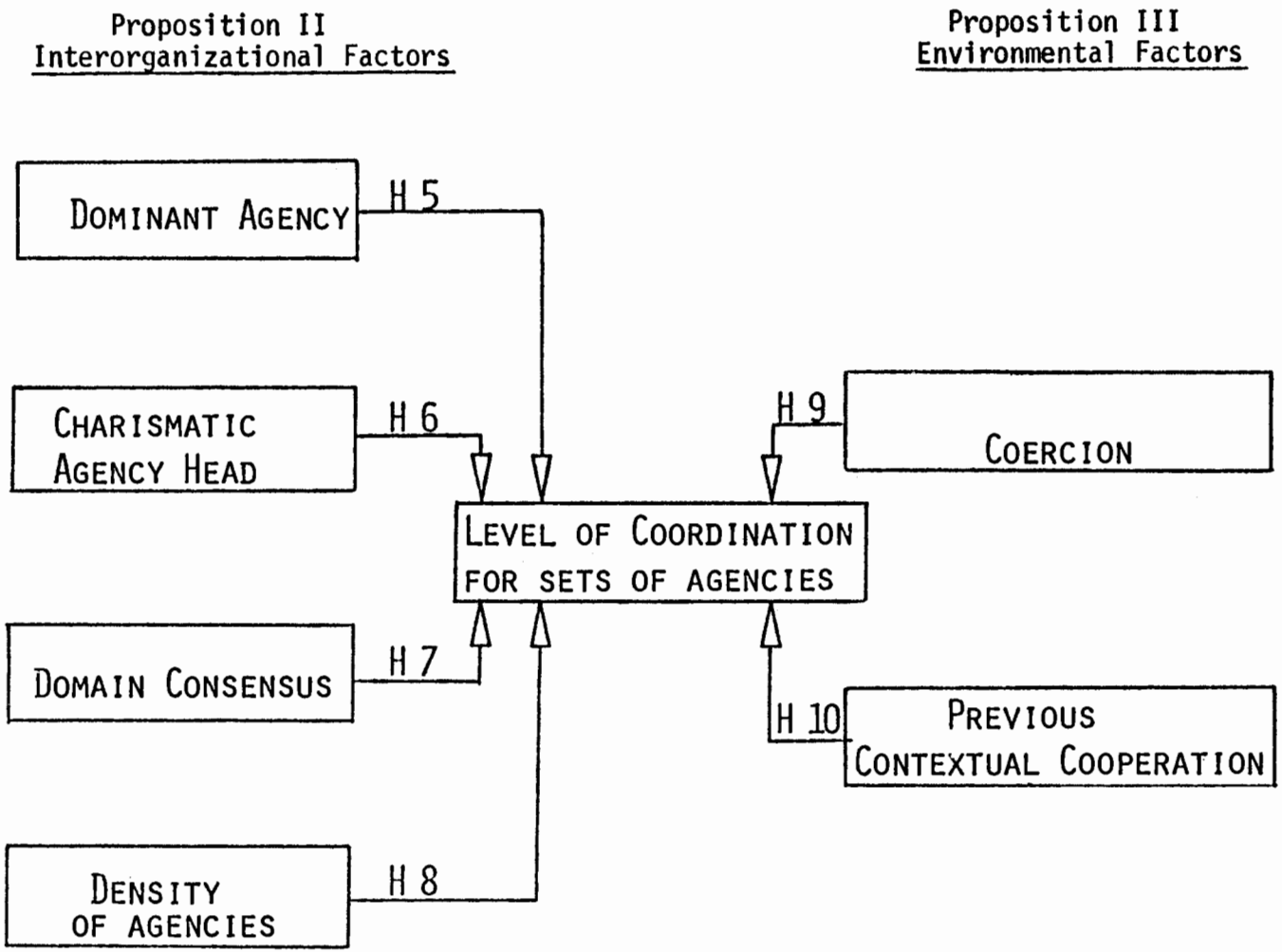


Figure 4.

Diagram of Propositions II and III: Interorganizational and Environmental Factors Affecting the Level of Coordination Achieved by a Set of Agencies

There is some theoretical justification for this hypothesized relationship. It is usually posed in terms of symmetry or asymmetry of the relationship. Schmidt and Kochan (1977) argue that the power-dependency aspects affect the frequency of interaction in an interorganizational relationship. Perry and Levine (1976), in a study of public sector collective bargaining, presented a theoretical case that linked asymmetrical relative dependence with conflictual behavior. This hypothesis was not confirmed when they found that high relative dependence of unions and public organizations did not lead to conflictual behavior.

This asymmetry-of-power dimension is similar to one element in the degree-of-reciprocity measure defined by Marrett (1971). Her initial statement on the payoff matrix and the relative balance in benefits which flow to the cooperating units is not relevant to the current concern with asymmetry of power. The other measure of reciprocity which is relevant is mutuality. Mutuality implies concern with power balances.

Hypothesis 6:

> There will be more coordination among a set of agencies when a charismatic leader is operating in the set in the area of client transportation.

The transportation literature is replete with references to the importance of the manager in determining the effectiveness and efficiency of human service agency transit. The ability of the head of a transportation unit to find resources and convert them into an operating system is essential to any successful system.

The hypothesis carries this notion one step further when it suggests that a charismatic leader will influence the level of coordination which is achieved. A charismatic leader - one who can gain the confidence of many agencies - can be the catalyst toward coordination. It is expected that an individual who has this charisma will be able to achieve not only coordination but some level of consolidation.

Hypothesis 7:

> There will be more coordination among a set of agencies in the provision of client transportation when there is consensus about their respective domains (turf).

In a widely quoted article on the subject, Levine and White (1961) conclude that domain consensus is an essential element in achieving cooperation between agencies. Mutual acceptance of the legitimacy of each organization in its role is implied by domain consensus.

In some of the more descriptive literature and among the practitioners in human service agencies this is translated into concern about "turf". When agencies do not agree on their respective functions, clients, and geographical areas, then there are turf problems and conflictual rather than cooperative behavior is the likely result.

Overlap of domain is frequent among human service agencies but this need not lead to competitive behavior. As long as there is some accepted technique for resolving disputes over domain there can still be domain consensus. Clients being served by more than one agency are the most frequent illustration of overlapping domain. What determines if the agencies will conflict or cooperate is whether they can differentiate their respective roles with respect to the client.

Coordination of client visits to agencies is often achieved by agencies who have overcome their turf problems. The hypothesis suggests that clients will take more multiple-agency trips, and other coordination will be more frequent, when agencies have achieved domain consensus.

Hypothesis 8:

> There will be more coordination among a set of agencies in the provision of client transportation when there is a higher density of agencies.

Of all the hypotheses this is perhaps the simplest to conceptualize. More coordination will occur when there are more frequent interactions among agencies. This in turn is more likely to occur in the larger, more densely populated areas which have more agencies and hence more client transportation systems.

Hall et al. (1977), in their study of organizations dealing with problem youth, verify that coordination is a function of frequency of interaction. The relationship was true whether the interaction was voluntary, formalized, or mandated. They do not, however, deal with whether the density of agencies affects the number of interactions.

Guetzkow (1966) and Reid (1972) recognize the importance of opportunities for interaction in order to achieve cooperation. Schermerhorn (1975) also suggests that transforming a willingness to cooperate into a cooperative outcome requires physical opportunities for exchange.

The hypothesis implies that coordination would take place less frequently in rural areas than in more dense cities because of differences in the density of agencies. A countervailing force which could negate the effect of this factor is that turf or domain consensus problems are

likely to be more prevalent where there is a higher density of agencies. Theory can suggest that these factors are in opposition but only empirical data can show under what conditions one is dominant.

PROPOSITION AND HYPOTHESES ON ENVIRONMENTAL FACTORS

The final level of analysis indicated in Figure 4 is concerned with the context within which organizations pursue their goals. Factors which are associated with the interorganizational environment are the independent variables in the following proposition:

Proposition III:

> The level of coordination in client transportation among any set of local human service agencies is influenced by coercion and previous contextual cooperative interactions.

For this proposition, as in Proposition II, the dependent variable is the level of coordination which is achieved by the focal agencies. Client transportation coordination in this case is linked to two factors which are not wholly under the control of the set of agencies.

Hypothesis 9:

> There will be more coordination among a set of agencies when there is more coercion from outside the set.

Coercion is a direct influence which is applied on the organization by some outside agent for the explicit purpose of causing coordination. Among environmental factors, coercion probably has the most direct and immediate effect. It can take the form of a mandate to perform some specific coordinative activity, or can be less definitive either about the type of activity required or the level of cooperation which is expected.

Even mandates which sound conclusive and definitive when promulgated often do not result in the desired level of cooperation at the

local level. This usually relates to the penalties or lack thereof which accompany the regulation. Unless there are severe penalties for not coordinating, a mandate to coordinate is likely to meet with mixed results. This aspect of coercion can be viewed as related to the comparison of benefits and costs which was discussed as an intra-organization factor. Not incurring mandated monetary or other penalties are benefits which accrue to an agency which coordinates.

Coercion to coordinate can also be considered as the antithesis of regulatory restrictions on flexible use of transportation funds and vehicles. While regulatory restrictions were included as an intraorganizational factor, because local perceptions were the independent variable, coercion is supraorganizational.

Most early research on interorganizational behavior considered only voluntary exchanges (Levine and White, 1961; Litwak and Hylton, 1962). Warren (1972) recognized that interdependency could be dimensioned as voluntary or coercive. More recent work by Hall et al. (1977) probes the basis for interorganizational relationships and develops three categories: mandated by law, based on a formal agreement, and voluntary. They found that many cooperative ventures are mandated or based on formal agreements and these should be analyzed differently than voluntary arrangements. The use of coercion in their model added to their ability to predict coordination.

Hypothesis 10:

> There will be more coordination among a set or agencies when there is a history of previous contextual cooperation.

Previous agency cooperation, as a factor affecting current coordination, could be considered as an interorganizational phenomenon. To

the extent that the previous history of cooperation was among the same set of agencies as those being studied, the interorganizational label would be appropriate. However, because of the time dimension it is likely that the previous set does not contain the same units as the current one.

Previous cooperation can also apply to a general level of cooperation which exists among all agencies in an area rather than in any subset which is coordinating. Turk (1970) studies some of these contextual attributes of whole urban areas and concluded that "activity level and complexity of new interorganizational networks are observable consequences of prior degree of social integration defined in organizational terms" (1970, p. 1).

It is possible that data derived from the current research project will suggest that histories of cooperation among the same set of agencies as those being studied will have more powerful predictive power than the broader city-related contextual measures. It would then be appropriate either to shift the emphasis to the more powerful interorganizational factor or to continue the investigation at both the interorganizational and environmental levels.

Hall et al. (1977) suggest the importance of previous interactions when interorganizational arrangements move from voluntary to formal agreements. They assume that at any particular time, interorganizational patterns serve as a basis for subsequent relations. If their assumption is correct this final hypothesis will be able to explain a large amount of the variance in coordination achieved among human service agency client transportation systems.

SUMMARY

A review of the literature has indicated that there are many factors which tend to influence the willingness and ability of organizations to enter into cooperative relationships. General agreement exists that there is a process involved in achieving cooperation. This process starts with the individuals who make decisions within organizations. Characteristics of the individuals and their organizations are identified as influencing joint decisions. Also important are interorganizational comparative factors as well as those which reflect the various dimensions of the interactions between the organizations. Finally, the environmental variables which define the context within which the organizations operate were identified. Both formal and non-formal factors which influence cooperation were identified.

This literature has allowed a theoretical base and working model to be developed. The next step in this study of coordination was to develop propositions for the intraorganizational, interorganizational, and environmental levels of analysis in the area of client transportation. Working hypothesis for the first proposition proposed linkages between willingness to coordinate transportation and the multidimensional element called organizational security, as well as perceived regulatory barriers, anticipated benefits and costs, and the availability of slack resources. The second proposition suggested that influential interorganizational factors leading to more coordination among agencies included the presence of a dominant leader, the activities of a charismatic agency head, domain consensus, and the density of agencies. The final proposition, which concerned environmental factors, allowed hypotheses

to be stated which linked the level of coordination to various types of coercion and a history of previous contextual cooperation.

These hypothesis stated the relationships between independent and dependent variables, some of which will be tested in the empirical section of this project. Two tasks which preceded the actual data gathering and analysis phases of the project were operationalizing the hypotheses and developing a series of questions to be included in the survey. The methodological aspects of these and other tasks are described in the following chapters.

Chapter IV

RESEARCH DESIGN AND METHODOLOGY

In the course of this study many decisions had to be made about the course the study should take. Some of these were strategic considerations which affected the focus and content of the study, while others were choices among a variety of research tools and techniques. This chapter on researcher design and methodology is an attempt to describe these choices and the research philosophy which guided them.

There are many ways to conduct a social science research project. Explicit decisions are made based primarily upon the objectives of the study. However, lofty objectives often must be tempered with an evaluation of resources and time available to the study. Thus, in this chapter some of the trade-offs which were made between goals and available resources will be reviewed.

Two additional purposes of this chapter are to allow for replication of the study and to reveal its inherent biases. Social scientists have often been criticized for being biased. This is virtually inevitable in doing any type of social science research (Hoover, 1976; Backstrom and Hirsch, 1963). What is most important, therefore, in the methodological review, is to show as completely as possible each of the steps that were taken in the study and indicate as clearly as possible the possibile biases of the researcher. If the study is to be understandable to those who read it, it is necessary that all relevant details be given.

Another reason for doing an extensive methodological section relates to the replicability of the study. The following sections and

accompanying appendices should allow a social scientist to conduct a similar project which would produce data that could be compared and contrasted to those gathered during this study.

Some issues concerning the management of the research--especially the processing, coding, and manipulating of the returns--will be raised here because they affect the study results. Attention to detail and sufficient prior planning are key elements in good research management, according to Babbie (1973). His sections on self-administered questionnaires provided guidance on practical matters which may seem mundane but will determine the amount of bad or misleading information in the data set.

NARROWING THE FOCUS

Even if the tools were available, no researcher has the time and resources to do a study in which an absolutely complete data set is collected to explore all the relevant hypotheses. Project decisions must always consider a series of time and resource aspects as the research design is refined and revised during the study's course. For example, there is an interaction between the content-oriented need to have many data points and the practical budgetary limitations which will place some limits on the data collection effort.

This type of decision had to be made after the theoretical model of interagency coordination had been developed. After consultation with other researchers, it was determined that for the project to be manageable within the available resources, a subset of the hypotheses should be chosen for empirical study.

If there were existing data on human service agency transportaion, then a broader scope could have been undertaken. Available data sets, if of sufficient quality and focused on the problem area, would have been very useful. But there is little useful information available on these units (Saltzman, 1978).

To narrow the focus to the intraorganizational hypotheses (1-4) seemed a logical choice because of a number of factors which relate to the dependent variables. The dependent variable for each intraorganizational hypthoesis is the willingness to coordinate of each agency director, while for the interorganizational and supraorganizational hypothesis (5-10) it is the level of coordination achieved by a set of agencies. The first factor favoring the willingness-to-coordinate hypotheses was the difficulty of measuring the level of coordination achieved. There are many activities called transportation coordination, and trying to rank them would be difficult. In addition, coordination can take place between different sets of agencies for different coordination activities. Thus, the operationalization of this level-of-coordination variable would have presented many difficult methodological problems. This was confirmed during conversations held with agency directors during field site visits.

Operationalizing the intraorganizational willingness-to-cooperate variable had been attempted in one other study (Schermerhorn, 1974), and, thus, some aspects of this variable had already been explored in the literature. Ease of data gathering also favored the intraorganizational hypotheses. The data needed to measure the operationalized variable, level of coordination achieved, would be more extensive and

might require an interview format. For the willingness-to-coordinate variable, a relatively simple mail survey was sufficient.

DETERMINING THE SAMPLE

The next project decision involved determining the sample size and the choice of specific agencies to be studied. For chi-square and other multivariate analysis techniques that were to be used in the study, sample sizes of at least 60 are necessary to achieve reasonable confidence levels (.05) about any associations found in the variables. Assuming a minimum 20% return rate from the mail survey meant that a mailing list of at least 300 was needed.

After considering such practical matters as the incidence rates of agencies with transportation programs and the availability of address lists for each area, it was decided that every agency in each of five sites would constitute the sample. Sites were chosen in cooperation with officials in CALTRANS who were knowledgeable about the various coordination efforts which were going on throughout the state. In choosing five sites from among the many which were originally considered, the primary criteria were: 1) to have a variety of levels of coordination at the sites. Areas which had a high level of coordination were chosen as well as other situations where little coordination was evident. 2) A variety of political and institutional situations were looked at. In some cases there was involvement of the transit operator, while one system contracted for service from a privately owned taxi company. 3) A mix of geographical areas and urban and rural settings was another set of factors that was considered. 4) The availability of some previous data on local human service agency transportation was also

considered. CALTRANS had grant applications from many areas and had developed reports on client transportation in some others. The sites chosen were San Francisco, Sacramento, San Jose, the Pomona Valley and the Imperial Valley.

During each field site visit, lists of local human service agencies were found. Three of these lists included data on the services provided by each agency. Thus, it was possible to select agencies which the lists said provided transportation to their clients. For San Francisco and the Pomona Valley, studies of paratransit had generated a geographically coded list of agencies which provided paratransit. All lists were supplemented by additional names gathered during the field visits.

The resulting 420 agencies which constitute the sample come from a variety of areas and are probably reasonably representative of agencies in California. Unfortunately, no statewide data are available to test this statement.

DATA SOURCES

Two types of primary data were gathered during the course of the study. First was the detailed descriptive information on the process of coordination which came from field site visits conducted at five sites. The second set of data was derived from a mail survey which was sent to every agency in the sample. A review of the methodological problems encountered in the construction and administration of each of these surveys is given below.

THE FIELD SITE VISITS

At each of the five selected sites, interviews were conducted with

knowledgeable persons involved in human service agency transportation. These persons included agency directors, regional and local planning officials, clients of the transportation system, vehicle drivers and dispatchers, and others who were knowledgeable about the transportation operation and the local political environment.

An extensive field survey data-gathering instrument (see Appendix A) was developed for the visits. Many of the questions were open-ended to account for the wide variations in the characteristics and functions of the agencies. The first series of questions requested data on physical and geographical variables. The next series of questions delved into the types of human service agency transportation which existed in an area. Additional questions pertained to the cooperation that existed or was being planned. The planning process which resulted in coordination was also scrutinized. Another section was concerned with the persons who were involved in the coordination process and how they were interacting in order to try to coordinate.

EFFECTIVENESS OF THE FIELD SITE VISITS

The five field visits proved invaluable in developing an overview of the process of coordination and the institutions involved in each case. Respondents seemed very willing to give straightforward answers to questions about the coordination process, and shared their opinions on which agencies were interested in coordination and which were not. They talked freely about their own coordination efforts and what the local impediments to coordination were. Anonymity of the agencies was granted to those who wanted it. Only at two sites was there concern about this issue. Most of the respondents seemed willing to talk

frankly during the interview. They also seemed interested in hearing about the coordination that was taking place at other sites. In many respects the interviews served as an information dissemination function for the agencies which were visited. Agency directors would often ask about the results of interviews with other agencies in the same area. The interviewer, in this respect, became part of the coordination process. This was especially true in Sacramento where coordination strategy was discussed with a number of different agencies who were concerned about the role being played by the regional transit operator. These agencies found it useful to hear an outsider's comments about the local situation and comparisons with other areas.

In one of the areas where confidentiality was requested, there was concern that interagency coordination would be constrained in the future if some of the events which had take place were made public. This type of concern varied among sites, and in the same site there was wide divergence in the confidentiality requested by agency personnel.

Data from the field site visits were used to prepare a series of case studies. These case studies were used to provide an interorganizational perspective in the chapter on research context. These visits also served another methodological function. Cooperative agency directors were ideal subjects for a pretest of the mail survey. A complete methodological review of this survey will be given below.

THE MAIL SURVEY

The other primary technique used for gathering data for the research was an extensive mail survey (see Appendix B). This survey was sent to every known operator of human service agency client transpor-

tation in each of the five sites visited. The objective of the mail survey was to provide data with which to scientifically test the intraorganization hypotheses (1-4).

DEVELOPMENT OF THE QUESTIONNAIRE

The first version of the questionnaire took some graduate students at the University of California, Irvine, forty-five minutes to complete. The response rate to be expected of a questionnaire of this length is very low. The questionnaire was to be sent to directors of social service agencies. Experience has shown that these directors are besieged by surveys and other requests for data, and unless the survey questionnaire was short, a very low response rate would result. It was therefore decided to drastically cut the size of the questionnaire. Doing this forced a detailed review of the need for each piece of data on the form. Questions which would have related to other than the willingness-to-coordinate hypotheses were deleted. In addition, requests for extensive background information on each of the agencies were removed from the survey instrument.

PRETESTING THE INSTRUMENT

An extensive pretest of the survey instrument was conducted. Lists of social service agencies from the Los Angeles area and Sonoma, Contra Costa, and Alameda counties were used as sources of addresses for the pretest.

The purpose of the pretest were: first, to try to find any obvious problems that existed with the questionnaire; and second, to estimate the returns to be expected. These agencies were similar to the ones

which would be in the final survey, so the response rate should have been approximately the same for each group. Most conditions of the final survey were approximated in the pretest. First class mail was used, a request for data and a return envelope was sent, and the questionnaire was attractive and legible. A total of 50 surveys were sent out to these randomly selected agencies.

The response rate of the pretest was 25%. This was deemed reasonable, since there was only one mailing and no reminders were sent out. It was expected that with the reminders that would be part of the actual survey, a 40% response could be achieved. There were some questions which gave the respondents problems and resulted in some terminology changes. Weaknesses in the way some of the variables had been operationalized also became clear during the pretest. The revised questionnaire is shown in Appendix B. The word coordination was not mentioned in the survey or the cover letter, so respondents would not have a preconception about the desired answers.

It became apparent during the pretest that there were problems with the lists which were used to get the names of the agencies. Some of the pretest respondents indicated that they did not have transportation provided for their clients, even though this was supposed to be a list of agencies which provided some type of transportation. This issue will be discussed in more detail in another section of this methodological review.

INCREASING THE RETURN RATE

An attempt was made to try to achieve a very high return rate. Of course, the optimum is to have every survey returned with a usable data element. In practice, a 100% return rate of a mail survey is almost never achieved. Of the 420 surveys which were sent, 392 were delivered. A total of 258 were returned, for a response rate of 66%. There were 99 agencies who did not provide transportation or for some other reason did not return a usable survey. Thus, the final number of cases used in the analysis was 159.

There are many ways to try to increase the response rate. A comprehensive review of those techniques which were used is given below.

Length of time required to complete the questionnaire is one determinant of the response rate. As described earlier, every effort was made to reduce the length of the questionnaire. It was designed to make it as simple as possible for the respondent to answer. In most cases, the questionnaire simply required the respondent to circle a number or check a box. A comment on the confidentiality of the results and an offer to send a copy of the summary of the results may have been inducements for responding. A place on the introductory letter was used to allow the respondents to indicate if they wanted a summary of the results. Over one half of those who completed the survey and slightly less than one half of those who sent the form back uncompleted asked for and were supplied with a copy of the summary.

Follow-up requests are an effective way of increasing the return rate. Approximately ten days after the first mailing, a post card reminder was sent to those who had not yet responded. The post card

indicated that another follow-up letter and survey would be sent in the near future, so that if the respondent had lost his questionnaire, he would soon be able to fill one out. It was hoped that this would induce those who did not want to bothered with another letter to respond to the survey if they had not yet lost or misplaced it. The replacement questionnaire was sent to each respondent approximately ten days after the post card. The rate of returns, as charted over time, indicated that the post card and the replacement questionnaire were quite effective in increasing the return rate.

Miller (1977) suggests that many other factors within the researcher's control can affect the return rate. When it was possible, those factors which influence the return rate were subjected to some empirical verification. It is suggested that the type of the return envelope used would affect the response rate. Miller believes that an increase of 17% in the responses can be achieved by using a return envelope which actually contains an administered stamp rather than a business reply envelope. It was simple to conduct a small test of this hypothesis. In the San Francisco area, 100 of the agencies were sent different return envelopes which contained a business reply stamp, while the other agencies from San Francisco and those in the other areas each received an envelope with a stamp affixed to it. The resulting response rates tended to support the hypothesis. The special envelopes bearing a business reply stamp were returned by 56% of the agencies, while 68% of those receiving a manually stamped reply envelope returned their survey form.

A test was run to determine whether surveys which were sent to a

specific person were more likely to be received and responded to than those simply addressed to a director. The reason that there was a difference was that some address lists used in the survey as a source only had the name of the agency, and in these cases the survey was sent to "Director". In other situations where the director's name was known, this name was used. All of the letters were individually typed and addressed. It was found that there was little difference in the return rate of those surveys that were sent to "Director" and those sent to actual names.

According to Miller (1977), it is also possible to increase the total percentage of returns by designing an aesthetically pleasing survey. He quotes Letto, who indicated that a title that would arouse interest, an attractive page format, and easily readable type would help increase the return rate. For this reason, the survey instrument was carefully constructed to meet these criteria. It was printed front and back as a booklet, as opposed to stapling together four separate pages. This made it look smaller and easier to complete.

Some problems were caused by the quality of the local lists which were used to develop the final list of addresses for the sample. Approximately 10% of the surveys were returned after the first mailing because of insufficient addresses or because the respondent was not available at that address. Two actions were taken to try to get these surveys delivered. First, in the cases where the surveys had been addressed to a specific person rather than "Director", the survey was readdressed and sent to "Director" of the agency rather than the specific person. Thus, if the reason it had been returned was simply that

the person listed was no longer there, the questionnaire might find its way into the director's hands when it was re-sent. Next was a comparison of the addresses on the returned envelopes with those on the original agency lists. In typing the address labels from the original agency lists some mistakes had been made. In many cases it was possible to readdress the surveys more accurately. Of the envelopes which were returned for poor addresses, approximately half eventually found their way to the addressee and were not again returned for these reasons. Twenty-eight could not be delivered.

CODING AND DATA ANALYSIS

The data from the completed surveys were transferred to a coding sheet by trained coders who had already assisted in the pretest. A code book (Appendix C) had been prepared so the data could be correctly and uniformly coded. Code sheets were keypunched and verified. The resulting data deck was cleaned by a 100% check of the data going from the completed questionnaire to a print of the raw data file. A final check on the data was accomplished by a review of the frequencies generated in the first stages of the analysis phase.

For the initial analysis, the SPSS (Statistical Package for the Social Sciences) (Nie et. al., 1975) of the DEC-10 computational facilities of the University of California, Irvine, was used. More advanced relational anlaysis was accomplished using multiple regression techniques featured in the JAGUAR program (Lave, 1976) also on the DEC-10 system.

Chapter V

RESEARCH CONTEXT

In addition to the variables which were measured during the mail survey, there are many other aspects of the agencies and the environment within which they operate which are germaine to this study. For discussing these factors, which collectively constitute the research context, the three levels of analysis used in the model development will be used. These are the intraorganizational, interorganizational, and supraorganizational levels of analysis. The order of consideration of these factors will be changed from their previous sequence. Starting at the supraorganizational level, the relevant socio-political environment will be reviewed. Next, at the intraorganizational level, statistical data on the important aspects of the agencies will be given. Finally, the interorganizational aspects will be presented. Case studies will be used to provide insights into the planning and negotiating process which occurred at the sites visited.

SUPRAORGANIZATIONAL ASPECTS (ENVIRONMENTAL)

The two most salient aspects of the outside environment within which the agencies operated were fiscal and political. Concern with funding is almost universal among human service agencies. Because of the instability of the categorical grants which support them, the agencies orient their entire operation toward attracting a continuing flow of funds to support their programs.

In the state of California there are some significant funding sources which affect agencies in a number of ways. First, some funds

are available from a transportation agency rather than the health and welfare agencies which provide most of the support for these agencies. CALTRANS, the state transportation agency, conducts one competitive grant program which requests proposals from areas that want to develop coordinated transportation. This program undoubtedly stimulates many agencies to be involved in coordination who might not be otherwise. There are also TDA (Transportation Development Act) funds available to each area of the state. While local transit properties apply for and use most of these funds, some human service agency transportation units have begun to seek these funds which are distributed by the local Transportation Commissions. The availability of funds from transportation sources causes more planning to take place because of the application process. Formalization of the systems and greater sophistication of the operations are likely results of the funding situation.

Proposition 13, which dramatically reduced local taxes in California, probably had significant impacts. Agency directors expected that Proposition 13 would induce cutbacks in funding levels. Because transportaiton is not a primary service for many agencies, any cutbacks would have severe effects on the level of transportation service which could be offered, which in turn could affect their attitudes about coordination. This change in attitudes due to Proposition 13 is discussed in another chapter.

On the political front there were many activities that could have affected agency coordination. Each of the items mentioned below was likely to have accentuated the benefits of coordination and to have made it an important issue that agencies had to consider in their planning.

In addition to the statewide competition for grants to assist in coordination of human service agency transporation, there was a Federal program sponsored by the Office of Human Development Services of the Department of Health, Education, and Welfare which chose five sites to conduct demonstrations of coordinated transportation. Sacramento was one of ten sites selected for the final competition but was not one of the five areas which received grants.

At the state level, a bill was introduced into the legislature by Sen. Ingals which would have virtually mandated coordination in each area of the state. Many agencies were aware of this proposed legislation and some testified at a hearing on the bill. A regional planning agency, the Metropolitan Transportation Commission of the Bay Area, had already passed a requirement that each county had to form a Paratransit Coordinating Council whose function was to effect local transportation coordination.

Because of these and other activities, coordination of human service agency client transportation was being either discussed, planned, or implemented in every area in which data were collected. Studies of the extent of paratransit modes had been completed by the Southern California Council of Governments in an area which included the Pomona Valley, where a coordinated system had recently been started. Likewise, a cooperative agreement between several agencies existed in San Jose, while in Sacramento and the Imperial Valley negotiations on coordinated systems were taking place.

INTRAORGANIZATIONAL ASPECTS OF THE RESPONDENTS

The 159 separate agencies which responded to the mail survey covered a wide range along most dimensions for which data were available. The survey contained many factual and attitudinal items which will be thoroughly presented in the analysis chapter. Only those aspects which will not be profiled in that chapter will be described below.

Respondents were usually agency directors (33%) or associate directors (30%). The remainder of those who completed the survey were supervisors, social workers, transportation directors, or secretaries. They reported that the distribution of the agencies' total annual budgets started at zero and went to $300 million. Reports on transportation budgets for these agencies also included ten who had no apparent expenditures. One agency reported an annual transportation budget of $750,000, while the median value was $9,612. A 13% increase in the median transportation budget was noted between 1977 and 1978.

The final sample of 159 agencies provided client transportation by a variety of techniques, many of the agencies using more than one. The largest portion (64.8%) operated (leased or owned) their own vehicles. Approximately the same percentage of agencies coordinated volunteers (25.8%) or purchased trips from private providers such as taxi operators (28%). The two techniques mentioned least often were purchasing from another human services agency (17.6%) and reimbursing clients (16.4%).

The sizes of their fleets reflect the wide variation in tranportation budgets. While some agencies owned over 100 vehicles, a typical agency had 2 or 3 vehicles. The van was the most popular vehicle, but

agencies also owned virtually every gasoline-powered vehicle available, from sedans to school buses and full-sized transit vehicles. With these vehicles they provided a median of 151 trips per month.

Many social, health, and welfare services were provided by the agencies. Table 3 below shows the primary and secondary services performed by the agencies. It indicates that while health and education were the most frequently mentioned as the primary services of an agency, the vast majority of agencies indicated that they functioned in at least one other secondary capacity for their clients.

Table 3

PRIMARY AND SECONDARY SERVICES
PROVIDED BY RESPONDING AGENCIES

(n=150)

Services	Reported as Primary Service		Reported as Secondary Service	
	No.	%	No.	%
Health (includes services for physically disabled)	39	26	45	30
Recreation	11	7.3	54	36
Education, training, or employment	22	14.7	54	36
Information & referral	8	5.3	66	44
Children & youth (day care)	6	4	28	18.7
Alcoholism, drug abuse	9	6	25	16.7
Welfare, financial services	11	7.3	44	29
Senior Citizen Center	11	7.3	27	18
Other	33	22	21	14

Note: Respondents were asked to choose one primary service but could indicate more than one secondary service.

The data shows that in general they also served multiple client categories. Table 4 indicates that each of the client groups named in the survey was well represented in the final sample of agencies.

Table 4

PRIMARY AND SECONDARY CLIENT GROUPS

SERVED BY RESPONDING AGENCIES

(n = 145)

	Reported as Primary Client Group		Reported as Secondary Client Group	
Client Group	No.	%	No.	%
Elderly	43	29.7	41	28.3
Handicapped	37	25.5	52	35.9
Low Income	32	22.1	61	42.1
Other	33	22.8	31	21.4

Coordination activities were being engaged in by many of the agencies. In Table 5 a summary of these coordination activities is presented. Each agency was asked how many other units it was involved with in cooperative ventures for each activity listed. Under each category there were usually fewer agencies involved in cooperative programs than were not. However, over half of them (54.3%) were coordinating client visits, and almost the same percentage coordinated vehicle schedules (49.2%) and did cooperative planning (46.6%). Frequent examples of more than two cooperators were cited. One agency reported that it did planning in concert with fifty other units.

Table 5

TRANSPORTATION COORDINATION ACTIVITIES

REPORTED BY AGENCIES

Number of other agencies being coordinated with	0	1	2	3	4-10	11-50
Activities	Number of responding agencies					
Coordinating client visits	53	18	10	15	16	4
Coordinating vehicle schedules	60	29	15	7	4	3
Joint purchasing of insurance, gas, maintenance, etc.	99	10	2	0	1	2
Central dispatching	81	19	9	2	4	3
Sharing office or garage	99	7	5	2	1	2
Cooperative planning	63	14	16	11	8	6
Other cooperative activities	0	4	0	0	1	1

INTERORGANIZATIONAL ASPECTS

During the field site visits which were made to each of the five areas studied, many interviews were conducted with the important actors involved with or affecting human service agency client transportation. As reflected in the field site survey questionnaire (see Appendix A), the interviews focused on the interactions which took place between the various organizations involved in coordination efforts.

Based primarily on the information gathered during these interviews, a series of case studies were prepared which describe the situation which existed in each area as of the date of the field site

visit. In some cases, information from various reports and data gathered by telephone after the field site visit were used to supplement the primary data.

These case studies describe the institutional context at a level of detail and comprehensiveness which is not possible using descriptive statistics as was done in the intraorganizational review. The field site visits also provided insights into the process of coordination which were useful in reviewing and revising the mail survey. A valuable pre-test of an early version of this survey was conducted during some of the field site visits, using agency directors as subjects.

A sample of three of the five case studies will be presented in reports on Sacramento, Pomona Valley, and Imperial Valley. These represent the urban, medium density, and rural contexts. Collectively, these three case studies give a good overview of a variety of agency interactions and will suffice for the descriptive purposes of this chapter.

CASE STUDY OF SACRAMENTO AREA HUMAN SERVICE AGENCY CLIENT TRANSPORTATION

Introduction

During the course of the field visit interviews were held with a number of key actors involved in coordinating transportation among human service agencies in the Sacramento area. As a result of these conversations it was possible to piece together the development of a coordination process which has included participation by a wide variety of agencies. Background reports prepared by the transit operator and the regional planning agency included technical and historical information which was useful in preparing the case study.

A unique opportunity to observe interactions of the major actors presented itself in Sacramento because a public meeting of the Citizen Advisory Committee to the Regional Transit System occurred during the visit. This committee was discussing social service transportation. During this meeting, most of the key persons involved in the transit decision-making process participated in a lengthy discussion of paratransit in Sacramento County, with emphasis on how best to provide human service agency transportation. They tried to determine the role that the Regional Transit agency should assume.

Overview

Social service transportation is a topic which has received a substantial amount of attention from various government units in the Sacramento region during 1976-78. It had become an item of contention between many organizations within the month prior to the field visit. Transit planners, operators, and human service agencies had been

meeting frequently to try to resolve some of the outstanding issues. Most of the concern was stimulated by a unique situation whereby state funds were available which could be used for developing additional human service agency transportation. Also unique was the strong role being played by the conventional transit agency. This case study illustrates many of the difficulties in trying to coordinate human service agency client transportation. It provides an example of the extraordinary efforts which are required to overcome the differences in the objectives, methods and perspectives of transit operators and human service agencies.

Local Characteristics

Sacramento is an urbanized area containing approximately 660,000 persons. There are few areas that would be considered rural in Sacramento's urbanized area. No unusual population statistics are evident. Incidence rates of elderly, handicapped, poor and other transportation disadvantaged persons are about what is found on a national average.

The weather characteristics are not unusual in any way. There are no distinquishing physical characteristics which would affect the provision of transit in the area. There are a number of interstate highways which go through Sacramento. Vehicular traffic in and out of the downtown area is facilitated by wide one way roads.

The human service agencies generally tend to cluster near the downtown area, but there are a few which have been located in suburban areas. Access to agencies by conventional transit is difficult to determine accurately but the existence of a large number of special transportation

services implies that, as in most cities, the conventional transit system is not adequate to serve agency clients.

The Conventional Transit Operator

Regional Transit (RT) is the fixed-route conventional transit operator in the Sacramento urbanized area. Service started in April, 1973. As of February 1978, RT provided 84 routes operating over 1275.8 route miles at an average fleet speed of 15.2 miles per hour. These extensive routes have a radial structure operating in and out of the Central Business District (CBD).

RT was one of the first transit operators in California to develop a special service for elderly and handicapped persons. Care-Ful Coach and S.A.R. are two special services which are under the aegis of RT. Care-Ful Coach is a door to door subscription operation for the handicapped. Planning for the system started in July 1974 when the RT Board of Directors set the development of a service for the handicapped as a number one priority. After a substantial period of research and planning Care-Ful Coach was initiated in March, 1976. It provides a subscription service during peak hours on wheelchair-lift-equipped vehicles. During off-peak hours 24-hour advance reservation is required. Handicapped persons must purchase an identification card for $1.00, and fares are 30¢ per one-way trip.

As of October, 1977, Care-Ful Coach was providing an average of 154 round trips per day to the 328 individuals who were using the service. Approximately 108 of these clients were in wheelchairs. According to RT there was a substantial backlog of persons who would like to use Care-Ful Coach but the capacity of the four vehicles which were operating was not

sufficient to meet this need.

Operating costs, excluding capital expenses, for Care-Ful Coach were $.76 per mile and $11.36 per hour, and the average productivity was 3.5 trips per hour. The average operating subsidy per trip for fiscal year 1976-77 was $6.69, which, according to RT, is not excessive when the type of operation is considered. These operating cost and productivities are reasonable when compared to the special services being provided by other transit operators.

Vehicles have suffered service mechanical problems since the first day of operation and RT is overhauling its current service fleet and looking for alternative vehicles and wheelchair equipment.

Developmentally disabled clients of the Sacramento Association for the Retarded (S.A.R.) are the beneficiaries of the other special service provided by RT. A fixed-route operation using conventional transit buses transports these agency clients to and from workshops and other important locations in Sacramento. This service was started in 1974 as a result of pressure which was put on Regional Transit from the director of S.A.R. Through his contacts in city government pressure was put on RT to provide special bus routes using full-sized transit buses. S.A.R. is not directly responsible for providing any of the operating expenses of the system. Five different locations and seven different workshops are served by the seven buses and the cost to each individual using the service is $12.00 per month.

Local planners believe that RT has been innovative by providing these special services. They note that RT offered these services before most other cities in California and that they were started before

federal regulation from UMTA required this activity. However, the Care-Ful Coach and the S.A.R. system do not provide any relief to most social service agencies whose clients need transportation.

RT reports that it is in full compliance with UMTA regulations on transit for the elderly and handicapped persons. Federal guidelines can be met if a transit operator uses at least 5% of the funds they receive under Section 5 to provide special services for the elderly and handicapped. RT has estimated that when it tallies the total being spent for the Care-Ful Coach and the S.A.R. operation, it is allocating the equivalent of 16% of UMTA Section 5 funds.

Paratransit Providers

While there were volunteers providing transportation for human service agency clients prior to 1970, the more formalized transportation systems were not initiated in Sacramento until the mid-1970's. The largest transportation providers among the local human service agencies have only been operating for three to four years.

A report by the Sacramento Regional Area Planning Commission (SRAPC) found that 49 independently operated human service agency transportation programs were functioning within a four county region. This SRAPC survey indicated Sacramento had 63% of these programs, which provided transportation with their own vehicles.

SRAPC identified one hundred twenty-six vehicles being operated by agencies in the four county area in 1976. A fleet of paratransit vehicles was being supported by significant expenditures of public funds, which were derived from many different funding sources. They report that, by conservative estimates approximately $209,000 is spent

yearly by human service agencies in the Sacramento county area whose primary client group is the transportation handicapped.

In reviewing human service agency transportation in the Sacramento area SRAPC also researched the demand issue. The 36 agencies able to supply information on the number of clients they provided with transportation were serving 14,438 clients per month. Unmet demand was also surveyed. Among twenty agencies in the region, the respondents estimated an unmet need of an additional 2,087 trips per month.

SRAPC did this research to provide some basic planning data for the development of transportation plans for the region. This regional planning agency is attempting to have some agreement reached among the major actors about the future course of special transportation services. SRAPC's major role has been information gathering and dissemination. They also established a Paratransit Coordinating Council and developed a number of proposals which would provide major funding for the coordination effort of the planning agency. But SRAPC has been frustrated in trying to achieve coordinated planning of the elderly and handicapped transportation services. SRAPC has no funding authority; thus, like most regional planning agencies, it is only as effective as the persons who are in control of the funds will allow it to be.

Coordination Activities (The Grant Application Procedure as a Motivator)

With strong leaderhsip from SRAPC the major actors in the area of special transportation service were able to put together a proposal for coordination of local special transportation. SRAPC had been chosen by the Federal Department of Health, Education and Welfare to compete for a transportation coordination demonstration program. Another factor which

led up to the development of this proposal was the concern of local government officials that funds were not being used efficiently. They therefore wanted to see if existing resources could be better utilized before any additional funds were put into the system.

The proposal suggested cooperative programs which brought together independently operated special transportation programs. After doing preliminary research on the human service agencies and their cost of providing service, two aspects of coordination were proposed. One provided for management coordination while the other involved operational coordination. It is important to emphasize that neither of these proposals would have removed total control of transportation from the social service agencies.

Under the management coordination concept, an attempt was made to substantially decrease the administrative and other overhead costs assocated with operating separate transportation systems. All management functions in support of vehicle operation and purchase of transportation services from outside agencies would be coordinated. The functional areas of management coordination were to be the joint purchases of fuel, maintenance, and insurance.

Operational coordination focused on the components of agency transportation which affected the operation of vehicles and were part of the actual delivery function. The proposal pointed to the low productivity of the systems. To improve this situation an agency referral system was suggested. A central agency would be established to provide a single contact point where either clients or participating agencies could receive information and be referred to an appropriate provider.

Another centralized function of the clearinghouse was to provide participating agencies with the ability to place their clients on another participating agency's vehicles when it was convenient to both agencies. This clearinghouse would essentially provide brokering for ridesharing. It would be the coordination link for the actual provision of services.

In addition to these two functions, a centralized dispatch plan was also conceptualized and recommended in the proposal. When their vehicles were not in use participating agencies would allow them to be dispatched by a central dispatching organization. It was envisioned that initially the two largest local providers would participate in this central dispatching plan. They later would be joined by other agencies as the initial system showed the benefits of coordination. Regional Transit was to provide the central dispatching facilities.

The application for funding which contained these two components was chosen as one of the ten finalists. Unfortunately it was not one of the five projects which were eventually funded by the Department of Health, Education and Welfare. This was a setback to the SRAPC planning staff, but they soon identified another potential funding source for a coordination proposal. This was SB 283, a piece of state legislation which among other things provided funds for demonstration projects of transportation coordination. A proposal for approximately $100,000 was prepared by the planning staff of SRAPC. The proposal contained all the essential elements of the previous proposal to HEW. The proposal was submitted during the summer of 1977 and early indications from CALTRANS were that the proposal had received positive evaluations and would probably be funded although not at the level originally requested.

Subsequent telephone contacts with SRAPC indicated that the proposal had been funded for $49,000. Negotiations were underway to decide on the parts of the original proposal which would be implemented.

Even while the proposal to CALTRANS for a demonstration project was still pending RT appeared interested in developing some level of coordination with the two large social service transportation providers, the Senior Health Day Care Center and United Cerebral Palsy (UCP), both of whom had wheelchair accessible vehicles. The original plans formulated in October 1977 called for a pilot central dispatching system to be initiated in November 1977. These agencies agreed that Regional Transit would dispatch their vehicles when they were not being used by the social service agencies. This would provide Regional Transit with the ability to accommodate excess demand for their Care-Ful Coach Service which provides transportation for wheelchair users. Only Senior Health and UCP had lifts on their vehicles and thus they were the only ones who were requested to provide information on when their vehicles were available. Detailed cost estimates for providing service to RT were also requested. These estimates, which were provided to Regional Transit during December 1977, showed that the total hourly costs for each of these agencies were almost identical, ranging from $9.25 to 9.52 per hour depending on the vehicle being used.

Directors of these agencies were perturbed that as of February 24, 1978 no responses to these estimates had been received from RT. It was speculated that the reason Regional Transit had not responded was because of concern with the labor protection issues that might arise if RT were to contract for service from a provider whose drivers were not

unionized and at a rate which was far lower than could be provided by RT.

There seems to be some question about whether Regional Transit would have a problem if they were to contract with the social service agencies. It was reported that the unions had said that this would not be a problem, as long as they were not asking their union drivers to work at lower wages. However, one of the planners for Regional Transit reportedly has indicated that the contract with non-union providers might not be acceptable to the union. This is a major unresolved problem which tends to exacerbate the existing conflict between Regional Transit and the social service agencies.

Financial Motivation of Regional Transit

The availablity of a large amount of funds from CALTRANS exerts a major influence on RT's special service policies. The funds in question are from Section 4.5 of the Transit Development Act, which provides funds for development of community transit services. It is Regional Transit's intent to use some of the approximately $485,000 which they will receive in the fiscal year 1978 under this Act to provide special services. These funds are assigned to Regional Transit, the city government, or the county government. Any of these agencies can receive these funds and either expend them directly on operations or purchase service from other agencies. The availabililty of these funds seems to be one of the strong driving forces in the desire of Regional Transit to be the lead agency. If the county government decides that Regional Transit should not receive these funds, it could conceivably pass them

through directly to other agencies, thus taking away control from Regional Transit.

The funds from Section 4.5 will only be available for one more year. However, Regional Transit is anticipated having a perpetual source of operating funds from a one-half percent sales tax which it expects to be on the ballot in November, 1978. These funds would allow Regional Transit to substantially upgrade the transit service it offered to the Sacramento area. The vote on the sales tax concerns many local officials, Regional Transit and the SRAPC. They recognize that an excessive amount of conflict over the human service agency transportation issue could mean rejection of the sales tax by the voters, and they are anxious to have a reasonable resolution to the paratransit issue at an early date.

Another Motivator for Regional Transit

Some agency directors suggested that the motivation for Regional Transit to provide special service came from pressure from the handicapped community of Sacramento. This induced Regional Transit to develop their Care-Ful Coach system. The social service agencies felt that if Regional Transit demonstrated that they could provide transportation, then the social service agencies would get out of the transportation business. Major social service agencies said that they would much rather not be providing transportation services if a suitable alternative was found. The previous director of United Cerebral Palsy, who now runs the Center for Independent Living, said that when agencies get involved in transportation it becomes a monster which occupies inordinate amounts of directors' time and distorts the purpose of human

service delivery. He was one of the persons who stimulated Regional Transit to become the service provider or at least to play a lead role in transportation for human service agencies in the area.

Although no legal action against RT was ever started by the elderly and handicapped advocates, it was threatened. The Legal Center for the Handicapped was considering a suit against Regional Transit because they were not using all available funds and were not developing plans on how to spend these funds. These agencies were still discussing legal action, if there were no further progress by RT in following through on their commitments.

Regional Transit as the Lead Agency

Regional Transit seems to want to be responsive to the transportation problems of elderly and handicapped persons. It is providing two services previously outlined and its participation in other activities indicates that it is aggressively pursuing policies which would assist in providing better mobility for transportation disadvantaged persons. RT's Citizens Advisory Committee has as one of its first tasks to recommend the appropriate role for Regional Transit in the area of special transportation services. At a meeting for this committee which took place during the field site visit on the evening of February 22, 1978, this topic was fully explored. In attendance at this meeting were all of the major actors involved in human service agency transportation. It thus provided a unique forum for all the problems to be discussed and resolved.

Regional Transit in a briefing statement indicated its desire to play a lead role in all special transportation services in the region. This designation of Regional Transit as the lead agency caused a good deal of consternation among the representatives of the social service agencies who were present at the meeting. They were concerned with the way Regional Transit defined what was meant by the lead role because the agencies would lose control over the funds which they have been using to provide transportation for their clients. This loss of control of the funds was clearly unacceptable to the agencies. Near the end of the meeting a Regional Transit representative explained that it was not their intention to take away control of the funds. But this impression was the one that had been picked up by most of the other persons on the Citizen's Advisory Board.

One important issue was who would be the actual service provider. Regional Transit attempted to clarify this issue near the end of the meeting by the use of the diagram which showed all of the alternatives that were available to the Regional Transit Agency in the provision of special services. According to this diagram and the accompanying literature there were three potential roles that Regional Transit could play in the provision of special transportation. It described these three roles as follows:

(1) Take the lead role in providing all service to the elderly and handicapped in the Sacramento area (e.g., manage all funding, operations, need determination, etc.).

(2) Be one of many independent providers whose service is not necessarily associated with that of every other agency.

(3) Take a consultant role wherein the technical capabilities of the district (planning, operations, maintenance, etc.), are made available to outside operators to better manage their systems.

Regional Transit suggested and recommended that because it is the major transit agency in the area that Regional Transit be the lead agency in operating or directing the operations of specialized services. Another section of Regional Transit's document suggested that all existing and new funding for paratransit would be funneled through Regional Transit. This would include revenue sharing, Older American Act funds, etc. Further comments made during the meeting indicated that Regional Transit may not want to be the actual provider of services. RT envisions its role as being more like a broker who would contract with providers and match the existing available services with the demands for service which existed in the Sacramento region. Unfortunately RT did not anticipate the negative reaction which the proposal received from the social service agencies. These agencies indicated that they might be willing to allow Regional Transit to provide brokerage types of services but they were not willing to relinquish their funds to Regional Transit's control. Some agency directors indicated that not only would they not do this, but that it would be illegal according to their program guidelines. It was naive of Regional Transit to expect the local agencies to give up control of their funds. This naiveté about the funding issue is one indication of the problem the transit operator has in trying to provide transportation for social service agencies. Most transit operators have little understanding of the operating environment of social service agencies. Likewise the social service

agencies are not transportation professionals.

Reasons for Conflict Between Regional Transit and Social Service Agencies

What was it that turned the initial enthusiasm of the Para-Transit Coordinating Committee into the rather negative and pessimistic attitude which was exhibited during the field site visit? Several factors seem to have influenced the deterioration of the working relationship which seemed to exist previously.

First was the simple passage of time since the initiation of the original concept of coordination. The agencies and Regional Transit, as well as SRAPC, all assumed that some results from their planning and proposal-writing efforts would have been seen well before February when the field trip occurred. Putting together the proposal to the Department of Health, Education, and Welfare for a demonstration of coordination required a large expenditure of time and effort by all persons involved. The proposal which went to HEW was extremely well written and conceptualized. It included a number of written commitments from the agencies indicating that they would participate, and a reasonably well-defined role for each of the participants involved was articulated in the proposal. Even when the HEW proposal was rejected after a protracted review period there seemed to be a good deal of enthusiasm left as evidenced by the submission of the proposal to CALTRANS for a similar demonstration grant. But the final six or eight months between the submission of the CALTRANS grant and its approval in February of 1978 wearied many of the participants. Decisions about funding had to be made, services had to be provided, and relationships between Regional

Transit and the social service agencies clearly had deteriorated during this time.

The Directors of two of the social service agencies that were the largest providers of special transportation commented that they were very frustrated with the long lead time required to start the centralized dispatching for their vehicles during idle times which RT had discussed. One agency director suggested that they had turned down requests for transportation services from other social service agencies because of RT's assurance that they would soon be under contract to provide vehicles to RT during slack periods of the day.

Agency directors were also concerned about the sincerity of Regional Transit's participation on the Para-Transit Coordinating Committee. No RT representative was present at some of the meetings and when RT was represented it was not always by the same person, causing a lack of continuity. A new RT transit planner was sent to a particularly important meeting. Agency directors complained that this new planner repudiated previous statements made by Regional Transit and showed that he had not been briefed about the previous deliberations that had taken place. A number of social service agency persons commented on the problem of continuity of Regional Transit representation on the Para-Transit Coordinating Committee.

A number of major actors have concluded that the basic problem is that Regional Transit, the social service agencies, and CALTRANS do not talk to each other often enough, and that perhaps there are some irreconcilable differences in their perspectives.

As indicated earlier, Regional Transit has been a leader in providing special transportation services. Most of this leadership was provided by some aggressive transportation planners who were on the Regional Transit staff and who were supported by persons who worked for the SRAPC. Unfortunately some of this thrust was lost when the planners at Regional Transit left or were replaced by less experienced persons who did not know the entire history of the development of special services in the Sacramento area.

Thus, the coordination of paratransit services in Sacramento has gone through a stage of initial enthusiasm which was maintained until after the proposal to CALTRANS was prepared. More recently, good-faith communication has ceased and the situation has lapsed into one of conflict between the major actors involved. Perhaps the advent of the demonstration grant from CALTRANS will once again provide the impetus for resolution of some of these problems but it is unlikely that the initial cooperative attitude can be recaptured.

Additional Data on Coordination in Sacramento

The major purpose of developing this case study was to provide a data base for the analysis of coordination issues. A series of hypotheses have been developed which guided the interviews used to develop the case studies. While the previous case study material presents the general observations of coordination in the area, some specific data were gathered which do not easily fit the case study format. These data are presented below.

Previous Agency Coordination

The Sacramento area human service agencies had engaged in some cooperation prior to the planning of a coordinated transportation system. Agency directors noted a reasonable amount of client referrals among agencies. They also named a number of organizations which facilitated coordination in the area. United Way is the fund raiser for many agencies. The Director of United Cerebral Palsey thought that United Way tried to keep competition at a minimum level, but he did not think that the United Way tried to effect coordination among agencies.

SRAPC, and especially their Human Services Department, play a role in coordination with respect to state and federal funding sources. Another organization called The Community Services Planning Council has for many years compiled a Directory of Community Services. First done in 1953, the Directory provides a convenient way for agencies to list their services and eligibility requirements, as well as application procedures, hours, fees, areas served, and sources of funding. The Community Services Directory for 1977 describes the available service aids for each of the agencies listed. When transportation for clients is available from an agency it is listed under this category. Thus, the Community Service Directory perceives transportation as an aid to the delivery of services rather than a primary function.

The Planning Council of Sacramento was not mentioned by major actors as having played a substantial coordinating role. It appears that most of the coordinating activities in the area of transportation were handled by SRAPC. There was a brief mention of some previous conflict about whether SRAPC or the Planning Council should be the lead

agency in coordination of services. SRAPC is currently the designated coordinating agency for the region.

Willingness of Specific Agencies to Coordinate

Information was derived from the interviews about the types of agencies which seem more willing to coordinate than others. It was suggested that county agencies, such as those concerned with schools and recreation, were easiest to coordinate. They were more used to compromising than private agencies. The private agencies expect immediate action when they want it, which is a very difficult condition for any coordinate system to live up to. It was also suggested that Catholic and other church related social service agencies were easier to deal with because they were least threatened about losing their clients or their funding. Established agencies such as United Cerebral Palsy get their funds consistently, and defending their right to exist is not an issue. Therefore, the older, more established agencies, and those with the larger funding budgets, especially with respect to the certainty of receiving continued funding, are likely to be more cooperative, because they have more experience and a better understanding of the operational problems which are likely to occur in any coordinated effort.

The funding issue has another aspect. Many agencies which receive federal funds are allocated budgets based on the number of cases they process. This means they have to maintain large case loads or they will face decreased funding. Thus, agencies whose funding depends on their case load are very concerned about losing clients. This is a "turf" issue which can cause agencies to be reluctant to have another agency provide their clients transportation services. Agencies that receive

general funding rather than funds based on the number of clients will tend to be less "possessive" about their clients, and therefore more cooperative.

It is also suggested that agencies which are larger tend to do more long term planning. They are more experienced in administering programs and they are therefore more likely to be cooperative.

Charismatic Leader

There were a number of candidates for the role of the charismatic leader in the Sacramento area. A planner with SRAPC was often mentioned during the interviews, as was another person who had previously been on the Regional Transit Planning staff and had developed most of the early plans for special services. He had left the planning staff by the time of the field visit but was still retained as a consultant to Regional Transit. The previous UCP director was also mentioned as a leader in the elderly and handicapped community. His participation on the SRAPC Para-Transit Coordinating Committee was important in developing impetus to do a better job in providing social service agency transportation. Each of these persons was identified as a leader. In addition there were two or three other leaders who could also have been the prime mover. However, the large institutional conflicts had progressed to a point where no single person could direct the activities of all these many organizations. A situation had developed which was likely to take enormous efforts at negotiation and compromise on all parts before it would be resolved.

Level of Coordination

Determining the level of coordination in Sacramento presented a difficult problem. There seems to have been a good deal of concern about the coordination issue and it was certainly a volatile subject. But it was also clear that little coordination had yet occurred. The two major providers in the area seem to have accomplished cooperation with other smaller agencies, but the larger framework of coordination had not yet been established.

It was mentioned that when Regional Transit was on strike, the Senior Health Day Care Center had provided transportation to the elderly, especially those who had previously used Regional Transit. It was also suggested that there was a good deal of informal cooperation when the need arose in other agencies. Thus the level of informal cooperation was quite high, while the number of instances of formal cooperation found in the area is at a fairly low level.

The Benefits and Costs of Coordination

Some of the benefits mentioned by interviewees included the fact that coordination would lead to less down time of the vehicles. A major factor mentioned by some agency directors was that it would improve relationships. Reaching out by providing transportation to other agencies is very helpful to interagency coordination. It was suggested that there would be better vehicle utilization with the coordination project which was to be operated by Regional Transit, although this had not yet been implemented. Another benefit mentioned without solicitation was that coordination would cut insurance costs. Also suggested was another interesting aspect of maintaining paratransit fleets in

operation. The highway patrol had recently been cracking down on paratransit vehicles which were not operated in accordance with local regulations. An agency director suggested that the coordinated system would stop this problem with the highway patrol although it was not clear whether the agency director thought the highway patrol would simply leave the vehicles alone because they were covered by a legitimized umbrella agency, or whether this agency would correct the deficiencies in the vehicles which were causing the highway patrol to stop them.

In discussing the costs of coordination to agencies, it was suggested that if the transit agency was a provider it would be much less responsive to agency clients. One agency was not concerned about the loss of control of vehicles when they were under contract. This would not result in loss of control since the agency would still retain responsibility for the actual dispatching of the vehicle except when it was not being used and was being dispatched by the centralized system.

Performance Measures

When asked about measures of the productivity of client transportation, one agency director suggested total trips was an important number because it allowed his agency to justify its client expenditures, under a funding allocation formula which depended on the total number of clients served. With regard to whether it was possible to compare data on performance between systems, one response was that different programs' restrictions made this comparison difficult.

Agencies paid per day of client attendance keep extremely accurate data on the number of passengers who are served. However, although passenger counts may be accurate, it was admitted that there were many hidden costs in providing transportation which were not usually taken into account in calculating costs per client trip.

Barriers to Coordination

The one person who was able to respond to the question of the most difficult barriers to overcome cited five barriers in the following order from most to least difficult to overcome: (1) uncertainty of funds and continuity, (2) personality conflicts between agency heads; (3) unwillingness of agencies to give up control; (4) difficulty of overcoming competition among the agencies; and (5) lack of support for coordination from local public officials.

CASE STUDY OF GET ABOUT TRANSPORTATION IN THE POMONA VALLEY

In the Pomona Valley of Los Angeles County, where most cities have virtually no local transportation services available, an innovative concept in providing for the better mobility of the elderly and handicapped persons has been initiated by the Get About Transportation system. Get About Transportation provides an escorted transportation service for any elderly and handicapped persons in the cities of La Verne, San Dimas, Claremont, and Pomona. This system provides an interesting example of the use of multiple funding sources for an integrated system of transportation which is provided by the local taxi operator in special vans.

Funds and in-kind services from the four municipalities are coordinated through a joint powers agreement. This organization arrangement illustrates a successful example of local government integration of resources for the purpose of providing transportation for elderly and handicapped persons.

Local Conditions

The four cities cover approximately 125 square miles of low density suburban areas. The elderly tend to cluster in small pockets, but there were no systematic or predictable ways of locating these pockets.

Other transportation in the area includes some Southern California Regional Transit District (SCRTD) buses, which provide peak-hour service to the city of Los Angeles. The social service agency directors report that many of their clients are afraid to use these conventional transit buses and that local destinations are not served by these commuter runs.

A dial-a-ride system also operates in the city of Claremont, but it is restricted to origins and destinations within the city limits.

The field site visit to review the coordination existing in the Pomona Valley area was made on Friday, March 10, 1978. This was approximately thirteen weeks after the formal initiation of Get About Transportation. While the new system with a new name had started only recently, it had been preceded by a variety of activities in the region.

Development of Coordinated Transportation

The beginnings of this operation can be described as spontaneous cooperation for relatively altruistic motives. In 1975, four retirement homes began a search for a way to have more visibility in the suburban communities within which they operated. A student intern suggested to the retirement homes that a transportation service would provide more visible evidence to the communities of their interest in providing a needed service, than some of the nutrition-oriented outreach ideas they had been considering. Each of the retirement homes had a van which it used to transport its own clients, and it was agreed among the directors that they would use these vehicles to help other elderly and handicapped persons.

A fifth vehicle was soon allocated to this cooperative venture by the local American Red Cross. Each agency contributed its vehicle one day a week, thus allowing for service on each of the five weekdays.

Administrative responsibility for the system was delegated to Pomona Valley Community Service Inc. (PVCS), a non-profit corporation which was established by the retirement homes. Volunteer drivers and

escorts were used to provide transportation to the elderly on a pre-scheduled basis in the Pomona Valley.

Growth from Grants

Demand for the service soon overloaded the system capacity. At this point, a volunteer worker, who would eventually become the system's director, recognized the need to tap some additional funding sources. If the system were to grow and develop some stability it needed funds, and also some legitimization by local authorities.

The first grant came from the Area Agency on Aging (AAA). A $7,500 award was made to pay for the operation of the system for 40 hours per week from May, 1975 to November, 1975. The purchase price of one additional van was also included in this grant. PVCS had severely underestimated the expense of purchasing this one vehicle and keeping it in operation. They were required to pay $3,000 per year for insurance and paid much more than they anticipated to operate the vehicles. This experience did not discourage them. Rather, it gave PVCS some experience in grantsmanship and especially in budgeting and costing.

A second award was made by the AAA, through one of the nursing homes, to extend transportation services from July 1976 to June 1977. After some lobbying by the PVCS convinced local officials of the need for the system, $14,000 from the AAA was supplemented by $22,000 in city revenue sharing funds. This was followed by subsequent awards of $18,000 from the AAA and $22,000 from revenue sharing to cover the period July 1977 to June 1978.

Hearing about the availability of local transportation funds from the state, PVCS in February, 1977 prepared a grant application which was

submitted to the regional transportation planning agency, the Southern California Association of Governments (SCAG). However, this proposal for additional vehicles and operating expenses was rejected as not being innovative.

Working with the city of Claremont, a more innovative proposal was developed which included a unique institutional arrangement. A joint powers agreement between the cities of Pomona, Claremont, La Verne and San Dimas was instituted to establish a specialized transportation authority which would contract with PVCS for elderly and handicapped transportation. The Pomona Valley Senior Citizens and Handicapped Transportation Authority had representation from each of the four cities. Its purpose was to develop a special transportation system for the region.

The new proposal thus contained a technique for smaller communities to eliminate many jurisdictional barriers to a coordinated specialized transit system. In addition, a private carrier was involved in the project as a service provider. Paul's Yellow Cab which also operates the dial-a-ride system in nearby San Bernardino was to be the operator of the system, although the Authority would own the vehicles.

A proposal including these features was sent to SCAG in April, 1977. They were enthusiastic about the uniqueness of the proposal and through the Los Angeles County Transportation Commission the Authority was awarded a grant of $70,000 from funds provided by Section 4.5 of SB 283.

PVCS also successfully competed for a demonstration grant from CALTRANS. Encouraged by SCAG to tap all available sources, PVCS, again

with the city of Claremont, prepared a proposal for a grant under the Section 9 transportation demonstration projects program of SB 283. The $95,000 which was awarded to the Authority in early 1978 will be used to enlarge the system and also provides a system for monitoring and evaluating the effort by PVCS.

Insurance Problems

Some of the motivation for getting grants to continue the system came from insurance problems. The transportation operation being offered by Pomona Valley Community Service Inc. developed these insurance problems in March 1977. The insurance underwriters informed the retirement homes who owned the vehicles that they were not allowed to provide transportation for persons other than those living in the retirement homes. This forced these homes to withdraw their vehicle from the system because of the exorbitant insurance rates they would have to pay if they were going to transport other local residents. It was not even clear that, had they wanted to receive additional insurance to remain in the system, they could have found an underwriter to provide coverage. The Red Cross vehicle also was withdrawn for insurance reasons. An accident with the Red Cross vehicle was influential in the decision to take their vehicle from the operation.

Thus, the system was in need of vehicles and a way of for keeping them insured. The interim solution for these problems was the grants the PVCS received from the AAA. A longer-range solution was to use the insurance coverage of the private taxi company that operates the current system. This arrangement is described in more detail in a subsequent section.

Review of the Institutions Involved

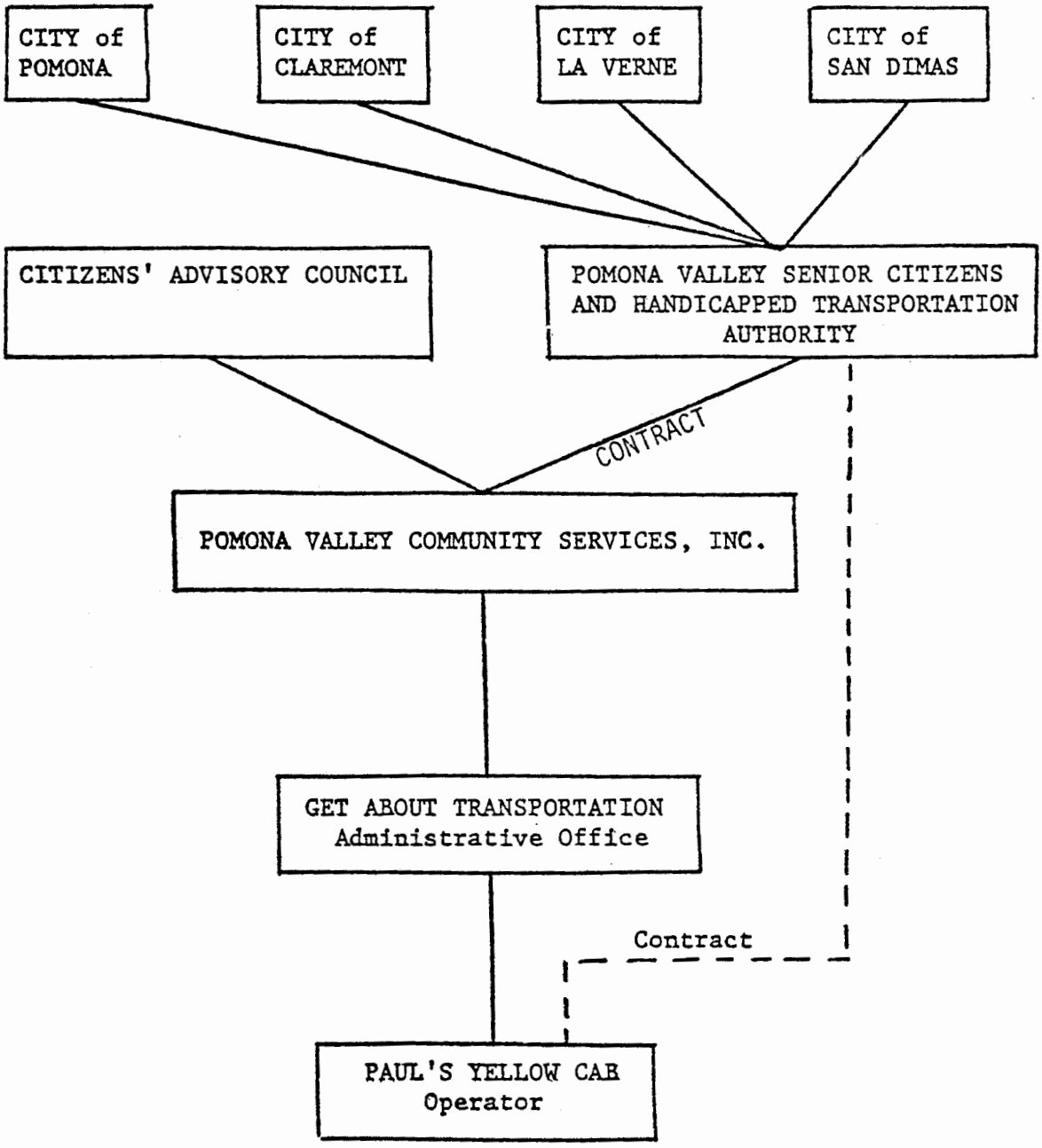
The institutional arrangements at this site are more complex than most others involved in special services. Figure 5 illustrates the situation as of the date of the site visit. Setting policy is the Pomona Valley Senior Citizens and Handicapped Transportation Authority, which resulted from the joint powers agreement of the four participating cities. The Authority consists of representatives of the cities of Pomona, Claremont, La Verne and San Dimas. The cities thus have a policy input through their representation on the authority. One important function of the authority is to determine when Get About Transportation is allowed to go beyond city limits of the four cities in order to serve clients who have a destination which is not within the normal area being served. The transportation Authority is responsible for approval of capital expenditures, reviews grant proposals made by Get About Transportation, and contracts with the private taxi operator who provides the service.

One reason for the joint-powers approach was the geographical restrictions on the dial-a-ride system in Claremont. The social service agencies had experienced problems with using this dial-a-ride system because, in the words of one of the agency directors, "transportation like smog knows no boundaries." It was therefore decided that the new system would have a geographical service area that would include most of the destinations desired by elderly and handicapped persons living in any of the four cities which are involved in providing the service.

Each of the cities involved in the system makes a contribution to it. Financial contributions from the four cities total $66,000. In

Figure 5

CHART OF ORGANIZATION
FOR
GET ABOUT TRANSPORTATION



addition to this, each of the cities provides other assistance. San Dimas has provided cash when needed to purchase capital equipment, for which the city is reimbursed. This "up front" money is extremely useful to Get About which has no large capital resources to draw on. La Verne provides a building which houses Get About Transportation, and also pays for the utilities of the headquarters building. It is an attractive building which has been repainted to include the Get About logo on it. The city of Pomona provides accounting services for the system, and Claremont has given administrative assistance to Get About and also has assisted them in the preparation of proposals.

Although the cities established the Authority, they were reluctant to become involved in the administration of a special transportation system. Administration of the transportation system was assigned to the already existing PVCS.

While most transit authorities either operate the system or find a contractor to operate it for them, in this case the contractor developed an Authority so it could more easily secure a wide range of funding resources.

Get About Transportation is the name of the system which is administered by PVCS. A contract from the Authority to PVCS provides for funds to manage the program. Get About has a staff which screens and certifies riders, coordinates escorts, schedules the vehicles and provides general administrative support for the operation.

The other unit involved in the organization of the transportation service is the operator, who is under contract to the Authority to provide transportation. The operator is a taxi cab company named Paul's

Yellow Cab. Although this company was involved in the proposals which were made to SCAG, it was not granted a sole source contract. Bidding was required on the provider contract. The joint powers authority put out a call to bid which went to a number of providers in the region. This call specified that the vehicle and radio would be supplied by the Joint Powers Authority and it requested bids from persons who would want to provide insurance and drivers and also maintain the vehicles.

Only one bid was received. Paul's Yellow Cab proposed that they provide service on a cost plus fee basis. The Authority would pay for incurred hourly wages and fringe benfits for the drivers, maintenance, and all parts for repairs. They would also pay for the insurance, and the overhead of 39.1% which applied to the total of the preceding items. In addition, a ten percent profit was added to the above.

The above items were included in a contract, which the Authority negotiated with Paul's Yellow Cab. The maximum contract amount is $195,000 for one year.

Service Provided

All requests for service are made to the Get About Transportation office which is located in La Verne. To be eligible for service an elderly or handicapped person needs a card from Get About which is easily obtainable. No detailed certification procedure is used. Cards are issued to handicapped persons or those 60 or over who request them by completing an information form and paying a 25¢ fee.

Persons who desire service call Get About to make the request. On a pre-scheduled twenty-four hour basis they can ride from any point in the four city area on regular vans or wheelchair equipped vehicles.

Paul's Yellow Cab takes the requests from Get About on a daily basis and provides door-to-door service. A volunteer escort accompanies each vehicle and assists the riders in getting on and off the vehicle. The escorts will also accompany riders at their destination if necessary.

Operating seven days a week, the service is available 8:30 a.m. to 4:30 p.m. Monday through Friday and 9:00 a.m. to 3:00 p.m. on Saturdays and Sundays. A 50¢ donation per trip is requested, but only if the rider can afford it. Many can, but some cannot, so the average being paid per passenger is 31¢ per trip.

In addition to the regular provision of service with Get About vehicles, Get About can request additional service from Yellow Cab at a rate of $9.90 per hour, which includes all charges for van and driver. For non-dedicated "peak-period" service, Yellow Cab vans are used with Yellow Cab drivers. It was reported that the supply of transportation is currently just meeting the demands. All requests from the elderly and handicapped community are being met but there is little excess system capacity.

Local Coordination

The Director of Get About Transportation indicated that the cities had had little previous experience of substantial cooperation on any items concerning the four cities. No indication was found of an environment hostile to cooperation, but Get About was the first time these four cities were involved in a cooperative effort. As indicated earlier, this cooperation has been institutionalized through the cities' representation on the Senior Citizen and Handicapped Transportation

Authority.

Contributions from the cities to this cooperative effort are also substantial. The total cash contributions of $66,000 per year are supplemented by in-kind contributions that are estimated at over $20,000 per year. The volunteer escorts are valued at over $15,000 per year.

Get About has stimulated better working relationships among local social service and health agencies, especially between the retirement homes and the Red Cross who initiated the project. The directors of these agencies all serve on the board of PVCS, which results in frequent interaction among them. This increased communication has improved the knowledge each agency has of the others' services which, according to the Director of Get About, results in more frequent client referrals between agencies.

Visibility

Get About is a good example of a very visible service which uses this high profile to its own advantage. Since the four retirement homes contributed their vans to a consolidated special transportation service, the system frequently has been brought to the attention of the public and elected and appointed officials. Publicity in local media has been used by the system to tell potential users about the availability of the service. Details about the service and how to request a ride have been announced in all local newspapers. These service details are always repeated in the articles on Get About which are frequently printed as features in various magazines and newspapers. This coverage means that more agencies who have client transportation problems turn to Get About for assistance. Individuals eligible for the service are also more

likely to know about it. Get About usually has a predictable surge in requests for new service soon after an article about the system appears in the local press.

The response to one article about Get About, which said it was a dial-a-ride system, indicated the alertness of local residents to the local media. Patrons, who thought the nomenclature "Dial-a-ride" meant that service would be available as soon as they wanted it instead of the usual 24 hour advance request, were soon asking for immediate service. The Get About operator had to explain to many callers that the newspaper erred in calling Get About a dial-a-ride service. Members of the general public who requested this "new" service also had to be informed that they could not be served unless they were over 60 years of age or handicapped.

Perhaps more important to the long term survival of Get About, the media coverage is always supportive of the system. Feature articles always praise the system for bringing better mobility to elderly and handicapped residents. Thus, a strong positive image for Get About is reinforced by this media coverage, which has headlines such as "Getting About Gets Easier," and "Housebound Residents Gain Mobility."

It is clear that the exposure of the benefits of the system is useful when local and regional agencies are deciding on whether to continue support for Get About. Funding continuity is critical for the system, since fares are not expected to cover more than a small fraction of the costs. Local contributions from the four cities, the AAA and SCAG are encouraged when agency officials see the systems attributes extolled and funding sources named in laudatory feature stories.

Performance Problems and Measurement

After allowing a private contractor to operate the system, Get About is now worried about loss of control. Get About has voiced a concern about the lack of responsiveness by the drivers to the special needs of their clients. They are watching the responses of their clients very carefully because they want to make sure that the clients are receiving adequate service.

Get About is also concerned about the performance of the system. Vehicle utilization rate is the primary performance measure. Get About said that the performance measure, passengers per hour, was most important to them. They used this measure to compare the performance of the taxi-based operation with the smaller operation which existed prior to the initiation of Get About. While before Get About they were averaging 3.0 passengers per vehicle hour, the system average was below 2.5 passengers per hour in early 1978.

No detailed analysis of the operation has been undertaken to determine why productivity has fallen. They were carefully watching this trend in performance with the hope that it would become more favorable as the system grew in size.

CASE STUDY OF HUMAN SERVICE AGENCY TRANSPORTATION IN THE IMPERIAL VALLEY

While many rural areas do not have any transit for their residents, the Imperial Valley of California has already developed a well received and well executed system which serves the transportation disadvantaged persons in the area. This coordinated system, operated by the Economic Opportunity Council (EOC) of Imperial Valley, was cited by the California Department of Transportation as a model that other rural areas might want to follow. The coordination, which had been achieved by combining many different funding sources, has resulted in a more efficient service than could be achieved if each agency operated its own system.

Campesinos Unidos Inc. (CUI) is another human service agency with headquarters in the Imperial Valley. CUI currently operates a small fleet of vehicles to serve their Head Start students and has developed some experience in operating these vehicles. Based on this experience, CUI applied for a grant from the Federal Highway Administration (FHWA) of the United States Department of Transportation to operate a rural transportation system. The subsequent grant they were awarded would have allowed them to provide substantially better transportation for their clients, who are primarily migrant farm workers. When this grant was awarded to CUI, the Federal Highway Administration indicated that they wanted CUI to effect some level of coordination with the existing system of the EOC.

No specific type of coordination effort was requested by the FHWA. They suggested that EOC and CUI meet and develop a plan to coordinate their programs. Since the notification of the award to CUI, the two

agencies had met frequently to agree on a plan, but had not been able to reach an accord. Negotiations on the coordination issue were still going on at the time of the field visit to the Imperial Valley which covered the period May 8-9, 1978. During this field visit, it was possible to actually observe the interaction process during a meeting which included representatives from each of the agencies as well as the federal and state transportation agencies involved.

Thus, two human service agencies, CUI and EOC, are the major actors in the area of special transportation in Imperial County. They are involved in a process which should eventually result in better transit for local transportation disadvantaged persons. These organizations serve significantly different client groups and have different constituencies. They also each relate to different institutions for funding purposes. In the following sections a review of local area characteristics will be followed by an analysis of the origins and background of each of these organizations. Special attention will be paid to the current transportation operations and future plans of each. An analysis of efforts to coordinate these systems will also be presented.

Local Characteristics

The Imperial Valley of California is one of the major agriculture areas in the state. Its 84,000 residents live in a total area of 4,597 square miles. Virtually the entire county is rural. There are no urbanized areas of over 50,000. The three major urban areas (those between 5,000 and 50,000) are El Centro, Brawley, and Calexico. Imperial Valley has a substantial minority population. Approximately 40% of its residents are Mexican-American. It is also a relatively poor county, with

3,255 out of 24,534 total households below the poverty level. The median household income for the area was $8,257 which ranked it 48th of 58 counties in the State of California. Of the 24,534 households in the area, 3,093 households did not own an operating vehicle.

Agriculture is the major business of the Imperial Valley. There are many large corporate farms. The flat terrain and hot and dry weather are ideally suited to the production of agriculture. The many small towns provide a labor supply which works for the agricultural concerns.

Social and health services are provided by a network of over two hundred local agencies. These diverse organizations receive their funding from a variety of federal, state, county and city government sources as well from private contributions. The clients of these agencies are as varied as the agencies. Low income persons and migrant workers are eligible to receive sources from many agencies as are elderly and physically- and mentally-handicapped persons. Children with a range of disabilities are another major focus of some local agencies.

Public Transportation

Public transportation in the Imperial Valley is sparse. The one conventional transit operation was started in Calexico in 1972. Not yet subsidized by public funds, the Calexico system serves approximately 825 daily riders with a fleet of four vans and two mini-buses which are operated by the local taxi company. Calexico also provides a demand-responsive service for their seniors who ride free on the one van allocated to this service.

Other local public transportation is available from an interstate carrier and private taxis. Greyhound Bus Lines provides inter-city transportation in the region on a limited basis. Taxicabs serve the cities of El Centro, Brawley and Calexico.

Campesinos Unidos Inc (CUI)

During the field site visit, a trip was made to the headquarters of CUI where the three major administrators and managers of the organizations were interviewed. This agency, located in Brawley, is much more than just a local agency delivering service to local clients. It is a major employer and economic force in the area. CUI, started in 1972 as a private non-profit organization, currently has a 100-person staff and an annual budget of 3.5 million dollars. It evolved from the Rural Development Corporation and has carried forth the aims of this agency which was to provide needed services to migrant and seasonal farm workers. Most of the staff including the executive director were previously farm workers. In addition to local service delivery, the organization relates to regional and national funding organizations and operates a wide range of programs, some of which go beyond the State of California.

The largest funding source is the Department of Labor. Approximately 1.7 million dollars annually comes to CUI to operate manpower training for migrant laborers in five California counties south of Los Angeles as part of the federally sponsored Concentrated Employment Training Assistance (CETA) programs. The Department of Health, Education and Welfare allotted $1,509,000 in 1978 to fund a local daycare center, and the State Department of Education provides $200,000 for two satel-

lite daycare centers. With $900,000 in support from the federal Community Services Administration, a community food and nutrition program in a four-state area and an energy conservation program which covers three states are administered through CUI. Other smaller programs make up the total of 3.5 million dollars per year administered by CUI.

In addition to these other programs, a $200,000 award was approved for CUI to provide rural transportation for local residents. This grant comes from Section 147 of the Federal Highway Act of 1973 which authorizes a rural public transportation demonstration program. Awards under this program have been granted to virtually every state in the country. The CUI grant was one of several to the State of California.

Because none of their funding comes from the county and city government, CUI is not controlled by these local institutions. This has caused some local concern, and it was reported that prior to the last few years there was considerable conflict with local authorities over the control of resources. Local county government wanted all funds for CUI to come through them. Because they did not control the funds, the county was wary of CUI. More recently, however, CUI has made an effort to convince county officials that they are providing useful services for the county residents. CUI officials feel that the county is beginning to realize that CUI is also contributing payroll income to the community, and also provides many local services. CUI is also in an adversary role with local farming interests because they represent the farm workers. CUI sees its primary responsibility to the farm workers and the federal and state sources of its funds. Their loyalties are not to the local

government system. However, because of their increasing size and local payroll, they believe they are achieving more local acceptance.

CUI's Interest in Transportation

In 1972 the Board of Directors of CUI noticed that transportation was a problem for farm workers. Most farm workers are from one-car families. This means the family is autoless when the wage earner takes the car to work. There was no public transportation to allow the family to have access to local medical, and social service agencies. To take a member of the family to the doctor, a farm worker would take a day off and lose wages for that day. This transportation problem was of concern to CUI for some years, but no apparent solution was forthcoming until the staff of CUI heard about the federally funded Section 147 Rural Public Transportation Demonstration Program. They saw this as an opportunity to try and initiate an innovative transportation system for their clients. A proposal was prepared by CUI staff and submitted to the Federal Highway Administration through the FHWA regional office. The proposal was approved by the Federal Highway Administration although for a lesser amount than was originally requested. CUI notes that they had a fixed route system indicated in their proposal which was new to the area. In contrast, the EOC proposal for the same demonstration program was for a demand responsive system based on the one they had previously established.

CUI staff indicated that they were not very concerned about which agency received transportation funds as long as sevices were provided to their clients. Like most human service agencies they did not have a

primary interest in transportation as a service but rather as it effects their other services. Their plans were for a public transportation system which focused on their clients' needs.

As CUI personnel pointed out it appears that only when they control the system can they be assured of providing service to their clients and also of using some of their clients as drivers. The question of drivers clarified and made explicit the issue of local control. The major contention was whether the EOC would hire drivers who were clients of CUI. It became obvious that coordination was going to be difficult because CUI would insist on controlling resources to a degree which might not be tolerable to the actual system operator.

Operational Experience

CUI operates a small number of vehicles to provide transportation to the agency for children who are enrolled in the Head Start sponsored day care center. Thus, they have some experience in maintaining and operating vehicles. However, CUI operates these vehicles strictly as a adjunct to the major day to day operation.

Equal Opportunity Commission of Imperial County

EOC was incorporated in 1964 as a private non-profit organization which delivered local services to clients of Imperial County. It was one of the Office of Economic Opportunity local funding recipients whose major function was to provide assistance to the poor. Although some of these services could come through the county, elected officials decided at that time to establish a separate organization which would handle the administration and provision of these services. The 21-member board of

EOC consists of seven representatives of poor people, seven representatives of agencies throughout the county, and seven elected officials.

The first client transportation provided by EOC was in 1967 when vans were purchased to increase the accessibility of the Head Start students. By 1972 between six to eight vans had been purchased. However, as many human service agencies were finding out, it is fairly difficult to maintain and operate a fleet of vans which are in frequent service. EOC also realized that the vehicles were not being used efficiently. Three separate programs owned vehicles and it was a totally uncoordinated system. Each unit within the EOC had a separate operation and there was little communication or coordination between the various programs which provided transportation. An economic rationalization of the system in 1972 caused some of the transportation services to be deleted because they had been so expensive on a per client trip basis.

Activities increased rapidly in the transportation area starting in 1974. In that year a Henning grant under Title III of the Older Americans Act allowed EOC to review the problems of the elderly in the area and develop a plan to eliminate some of these problems. Transportation was identified as a primary issue of concern to the elderly in Imperial County. Thus, in 1975, two vans were purchased from funds provided through the Older Americans Act. In addition, an attempt was made to bring the Head Start vans into a single coordinated transportation system. EOC asked for permission to coordinate from the regional HEW office which administered the Head Start program. Permission was granted to use the Head Start vehicles for other clients. As long as the Head Start children were being served, EOC could use the

vans for other purposes. It was noted by EOC that this relaxation of some HEW restrictions on the use of the Head Start buses cannot easily be generalized. Permission was granted because the EOC Head Start program was a day care center and not a school and the vehicles were not considered school buses. Other Head Start programs have not been allowed to put their vehicles into a coordinated system.

The three Head Start buses and two previously purchased vans were consolidated and a radio communication center was established. Mobile radios installed on each of these buses provided a constant communication link to the central office of EOC located in El Centro. Additional funding sources for transportation have since added capacity to the EOC system. This included client transportation funded by Title VII of the Older Americans Act and additional funds from other agencies that are not under the EOC umbrella but who contract with EOC for transportation services. These include the Imperial Valley College which requested some fixed routes for their students and the Imperial Valley Association of the retarded who requested transportation services for their clients.

The road to coordination has not been without many stumbling blocks. At one point, the problem of commingling funding sources almost destroyed the entire concept of coordination. Many agencies had to receive permission from their funding sources for the coordination to occur. In another situation, the Head Start program asked that their vans be returned, but negotiations between Head Start and EOC administrators enabled them to overcome the problems.

The level of coordination achieved by EOC administrators seems to

be due primarily to the skills of the three major actors in transportation for EOC. These are the executive director, the associate director, and the transportation director. These three form a competent management team who are able to handle the external and internal institutional and policy issues as well as the operational problems. Throughout the operation there is an attention to detail and the individual needs of clients. An extreme amount of flexibility is built into the program so that responses to transportation needs are measured in minutes rather than in days and weeks. They have been able to improvise, adjust and personalize the system to meet a wide variety of transportation needs.

In addition to the actual provision of services the new transportation director has emphasized the constant evaluation and monitoring of the results of the operation. A good data collection scheme was established to assist in these management efforts.

A Common Carrier Application

As part of their efforts to provide better service, EOC attempted to get common carrier status from the State Public Utilities Commission (PUC). This would have allowed them to charge fares and appeal to a wider variety of potential clients. They waited two years to get a decision from the PUC and the decision they got was so prohibitive as to not allow them to conduct a reasonably efficient service in the area.

They requested a certificate that would allow them to pick up persons anywhere in the area. The PUC said that they could only pick up elderly and handicapped persons in the main corridors of Imperial County which includes the city limits of Calexico, El Centro, and Brawley.

Thus no non-elderly or non-handicapped persons (i.e. the general public) could be served in these main corridors. Furthermore, EOC was prohibited from providing any demand responsive services within three miles of any post office in a town served by Greyhound Bus Lines. Apparently Greyhound objections to the EOC application were the main reasons for the restrictive covenants imposed by the PUC. Because of these restrictions, EOC estimates that they can not serve approximately 95% of the potential passengers that they had proposed to serve. They were also prohibited from mixing demand responsive and fixed route services.

The EOC has applied to the county to provide general public transportation through county auspices as a way of avoiding the PUC restrictions. EOC requested that the county contract with them for a demand-responsive transit system for elderly and handicapped residents of Imperial County. The county is currently funding a small amount of transportation for elderly residents. However, the county was reluctant to move ahead with plans to fund more transportation until it had reviewed a comprehensive transportation plan which was being prepared by the Imperial Valley Association of Governments.

Also influencing the county was the questionable future availability of local funds to support any new transportation services. The Jarvis-Gann Amendment (Proposition 13) was being watched closely by county officials. It was predicted before the vote that should Proposition 13 be approved it would eliminate the possibility of county funds for transportation.

The EOC Section 147 Application

The EOC also applied for a Section 147 grant from the U.S. Department of Transportation. This grant received the endorsement of regional offices of the Federal Highway Administration and was given a high rating in the regional competition. However, in the National competition it was not one of those applicants which received awards. EOC, however, was encouraged to negotiate with CUI to see if some type of coordinated effort could be achieved. EOC staff reports that CUI was initially reluctant to enter into coordinated efforts but, stimulated by CALTRANS and FHWA, sporadic negotiations have gone on to try to see if a series of proposed solutions could be agreed upon. Apparently these negotiations have been frustrating for all parties concerned. Initial agreements reached at the outset have never been implemented. These proposals are discussed and revised but communication between these agencies on specific items has never resulted in any formal agreement.

Scope of EOC Client Transportation

Currently EOC is the only major operator in the city of El Centro. A number of agencies who had vehicles in service stopped their operations because of rising costs and insurance problems. Some of these have subcontracted to EOC to provide client transportation. EOC was able to offer service at the same or lower costs to the agencies, thus making this an attractive alternative. The successful integration of local agency transportation needs into a centralized system has been due in large part to the charismatic EOC director. He and his associate director have an enviable record in the successful delivery of services

to the needy. They work well with local officials and have earned their respect.

More recently the EOC proposed for a transportation demonstration grant under Senate Bill 283. CALTRANS has approved this proposal but for less than originally requested. This approval is contingent on the ability of the county to assign California Transit Development Act (TDA) 325 funds. It remains to be seen if the county will supply 325 funds for this project.

Department of Public Works Coordination

One coordinated effort which was reviewed during the field visit was that of the joint effort of EOC and the Department of Public Works of Imperial County. The public works director indicated that he believes EOC is adept at determining people's needs. EOC developed data which established the need for a senior bus service to the Salton Sea area of Imperial County. They prepared a plan to meet this need and proposed it to the Department of Public Works. The Department of Public Works funded the service which is operated by the EOC.

EOC Operations

The central administration and dispatching for the EOC system is in El Centro. Communication with each vehicle is maintained by the dispatcher who tries to provide a brokerage function. She matches available vehicles with trips requested.

Although direct service between each point in Imperial County is not possible, there is enough coverage so that with transfers, every major population center is served most days. The transportation super-

visor stressed that their operations are reliable. People know that they can depend on them which in turn encourages ridership.

The personnel skills of the new transportation director were evident during the field site visit. The director, a retired air force officer, conducted his business with his drivers and passengers in a friendly and compassionate way. He believes that he shouldn't treat the system as a mass transit system but rather as a personalized transportation operation. An excellent rapport between the seniors and drivers was evident. The supervisors and the drivers were serious but in a casual and friendly way.

The atmosphere in the waiting room was convivial and congenial. Many elderly passengers who were waiting to be picked up were seniors who came in to the Equal Opportunity Commission building to wait for the buses, rather than wait on the street corner. They chat with each other as well as the transportation operation staff. When needed, the transportation director pitched in to do other parts of the operation including assisting the dispatcher when large amounts of trip requests were coming in. There seemed to be a genuine fondness for the operation among the employees. Passengers reported that drivers were extremely helpful and would go out of their way to help needy passengers on and off the bus. The drivers act as an important communication link to EOC about the needs of their passengers.

The various agencies which purchase service from the system are billed on a monthly basis. The general system is to charge on a zone basis. Prior to the employment of the new director the charge had been 51¢ per zone for each vehicle. An evaluation of the actual costs of

operating the system caused them to raise the charges to 71¢ per zone. This increased rate includes an allowance for depreciation. Agencies which contract for the service for their clients sign a standard transportation agreement with EOC. Thus the coordinating mechanism has been institutionalized and standardized. An agency may also charter buses for servicing special trips. Because of the PUC regulations, only agency clients may be served by EOC vehicles. Agencies may call for changes to schedules within 24 hours.

Elderly persons who are not referred by an agency can also be served. Seniors may call the EOC and ask to take a trip. These calls are usually done a day or more in advance, but a trip request will also be served instantaneously if a vehicle is available. Thus, the EOC serves both the elderly and other human service agency clients. The vehicles serving these clients are unified into a single system; often the elderly and other agency clients will be put in the same van.

In rural areas, there are volunteer wagon masters in each section. Usually this person is a senior citizen who makes the arrangements for the bus. The wagon master is selected by the senior citizens clubs in each of the areas. They call EOC each evening to tell about the pickups that should be made the next day. This is an excellent example of the use of volunteers to personalize the service.

Two direct telephone lines come into the central dispatcher. One additional line which goes into the EOC switch board is also available for making trip requests.

There were seven vehicles in use at the time of the field visit. One of these is used for a spare. The other vehicles consisted of two

modified school buses, with hydraulic lifts which could accommodate wheelchair users. These were smaller types of school buses which had seating capacity for 22 and 26 passengers. In addition there were three vans which could seat 11 passengers and one van which could seat seven passengers. Additional vehicles were soon to be delivered. Two of these new vehilces which would have lifts were ordered through the UMTA 16(b)(2) program. Two more leased vehicles were expected within a month.

There were five part-time drivers and five full-time drivers in the program. Another cost savings of the program was that the first six hours per day of the drivers were paid by a senior employment program.

The maintenance was done by a private garage. The transportation director indicated that this garage was providing good service for the vehicles. The buses started their runs between 5:30 and 6:30 AM.

The transportation system constantly adjusted drivers and vehicle schedules to best meet service demands. The average wait for the elderly using the demand response service was approximately 25 minutes. It is noteworthy that in this flexible system there were no unions. It is likely that any unionization would substantially decrease the flexibility of the operation. In addition, it would increase the level of wages which EOC would pay the drivers thus resulting in substantial cost escalation. The dispatcher is a CETA employee, thus effectuating substantial savings.

There was coordination with doctors in the Valley reported by the transportation director. Doctors would consider the bus schedule in making appointments so that their clients could use the bus to get to

and from clinics, hospitals and offices. This close coordination of medical service providers was important in attracting more passengers to the vehicles.

Meeting of May 9, 1978

Concern about the fact that CUI had not yet initiated a system, although over two years had passed since they were notified about the award of their grant, led the Federal Highway Administration to ask for a meeting of the concerned parties to try to resolve some of the issues that were impeding progress. Thus, representatives of the Federal Highway Administration CALTRANS, CUI and EOC and the Department of Public Works of El Centro all convened to try to reach agreement on how best to implement the Section 147 demonstration program in the Imperial Valley. The initial statement by the Federal Highway Administration representative indicated that it was their desire to have the section 147 program implemented as soon as possible. They were still willing to award the $200,000 to CUI with the following conditions:

1. The project would be underway within a reasonable amount of time (six months would be considered a reasonable amount of time.)
2. The CUI and EOC were both actively involved.

The funds would flow to CUI but there was a desire to have some involvement by EOC. It was suggested by the CALTRANS representative that one possible solution would be to have CUI receive the funds and determine which trips they wanted but that the actual services would be purchased from EOC. The monitoring of the actual operations would be done by CUI.

The CUI response to this was that they wanted to determine who the drivers were. Hiring unemployed persons as drivers was one of the objectives of the grant. The Federal Highway Adminstration representative stated that since EOC had the operational experience it did not seem to make sense to have duplicate systems. They wanted to avoid overlapping systems in the same area. The county representative indicated that there was the potential that the county would be an operator so they could begin to charge fares.

It was apparent during this meeting that CALTRANS and FHWA were using the section 147 grant to push the issue of coordination. They consistently emphasized that EOC had more operational experience than CUI. CUI maintained that they had sufficient operational experience with the Head Start transportation program that they were currently running.

When CUI suggested that they wanted to determine who the drivers would be EOC responded that they could not let another organization dictate the hiring procedures to them.

CUI said that they had met with EOC and indicated their willingness to coordinate. They further indicated that part of the delay was due to the fact that the original award letter to them indicated that they were going to receive a $300,000 award which was reduced to $200,000. CALTRANS officials, assuming a mediator role, tried to establish a negotiation process so that an agreeable relationship between CUI and EOC could be worked out.

CUI representatives said that purchasing of services is not the only way to get coordination. But they had no specific recommendations

to make about what coordination they would be able to enter into. CUI asked if FHWA has any "bottom line" that would be acceptable to them. FHWA did not want to dictate the type of coordination. They suggested that their primary concern was that the dollars be used to provide a transportation service. They did not want duplicate systems serving the same need.

CUI said that EOC and they would be serving different clients. CUI thought one possible solution would be to contract with the county to serve Imperial Valley College students. If they contracted with the county they could then charge a fare. The county was not willing to talk about this possibility until they were assured of continued funding. At this point the issue of Population 13, the Jarvis Amendment, came up and the county said that until the Jarvis Amendment had been settled they would not be in a position to offer any funds to solve the transportation problems. CUI requested time to discuss the issues and submit their plan on how they would coordinate with EOC.

Another problem which seemed to be resolved but did come up a number of times was whether CUI would be able to subcontract to EOC. Earlier there had been a question about this which was submitted to the Federal Highway Administration. FHWA ruled that a subcontract to EOC would be allowable, even though this would mean a non-profit agency was subcontracting to another non-profit agency.

The negotiations were not able to continue to a conclusion. EOC had indicated their willingness to provide transportation to CUI on a subcontract basis and FHWA was encouraging CUI to do this. CUI still seemed quite reluctant to enter into a contract with EOC. Although CUI

had not categorically turned down the concept of subcontracting to EOC, they were clearly thinking of other alternatives that they could propose. One of the alternatives that they suggested might be possible was for CUI to provide transportation in one part of Imperial Valley with EOC taking another part of the service area.

It was suggested to CUI that they would save a substantial amount of funds if they did not have to set up an administrative and dispatching unit themselves but rather allowed these functions to be done by EOC. They could then take the funds they save from not having to duplicate these functions and use these funds to purchase additional transportation for their clients. Should CUI do this, their clients might not be hired as bus drivers; although it was expected that some agreement could be negotiated on this issue. They also would not own the vehicles. But, as long as they were able to determine which trips were to be served and wrote a specific contract with EOC there was hope that their loss of control would be justified by cost savings.

The meeting concluded with a determination that CUI would write up their plans for coordination and submit it to the Federal Highway Administration by May 31, 1978.

As of May 31, 1978, no letter had yet been received from CUI.

Thus in Imperial County, there is the potential for the major special transportation provider to be given a substantial amount of additional funding, via a purchase of a service agreement. However, it semed more likely that there were going to be two totally uncoordinated systems with each agency serving similar clients and maintaining duplicate administrative units.

CHAPTER VI

DATA PRESENTATION AND ANALYSIS

In this chapter the hypotheses on willingness to coordinate will be tested using the data gathered during the field visits and subsequent mail-out survey. The analysis will suggest that the dependent variable, willingness to coordinate, is influenced by some of the variables which were measured, and not significantly influenced by others. Agencies that expected net benefits from their efforts to coordinate, those that saw coordination resulting in lower costs, and those that did not expect any large losses of control, were generally more willing to coordinate than others. The analysis also indicates that agencies' perceptions of regulatory problems, their organizational security, and the level of administrative effort needed to accomplish the coordination, did not seem to have a significant influence on their willingness to coordinate.

A standard format has been developed which will be used to test each of the hypotheses on willingness to coordinate. This format and the statistical techniques which will be applied to the analysis will be discussed below.

FORMAT OF DATA PRESENTATION, ANALYSIS, AND STATISTICS

After a discussion of the dependent variable, the independent variables will be considered in the sequence in which they were introduced as hypotheses in Chapter III. For each hypothesis a complete analysis will be performed. This will include the presentation of simple descriptive data as well as the statistical testing.

For each of the hypotheses the general format will be as follows: First the hypothesis will be introduced with a brief description of the theoretical linkages between the independent and dependent variables. Hypotheses and sub-hypotheses will be restated and the general relationships between the variables will be discussed in the context of human service agency transportation. This will be followed by a discussion of the operationalization of each variable, including a discussion of how well the survey questions actually represented the concept being tested. Data from the mail-out survey will be presented to indicate the responses to each question.

A relational analysis will then be performed for each hypothesis. Following the hierarchy of scientific goals in statistical inference and estimation techniques referred to in Blalock (1972) the analysis will proceed from exploratory reviews of the data to higher order analysis.

Contingency tables derived from the SPSS program CROSS TABS are used to indicate the existence of any systematic relationship between the dependent and independent variables. Because seven-point perceptual and attitudinal scales were used in the questionnaire, the original SPSS runs generated a series of 7 x 7 contingency tables. These were difficult to interpret because there were few responses per cell. Thus, the scales were condensed to produce 3 x 3 or 3 x 2 tables. To do the condensing of scores, the perceptual and attitudinal seven point scales have been divided into three categories representing the high, middle and low scores. For example, the responses to the willingness to coordinate variable were recoded so that scores of 1 to 3 would be classified as Not Willing, 4 would be Neutral and those from 5 to 7

could be called Very Willing.

The Chi-square test (using the full contingency tables) was chosen to indicate the significance of the relationships while the statistic gamma (G) will test the strength of the associations between the dependent and independent variables (Loether and McTavish, 1976). The Pearson correlation coefficient r which is another test of strength of relationship is also given in each case. Finally, a higher order analysis of the hypotheses will be accomplished by the use of multiple regression.

TESTING THE WILLINGNESS-TO-COORDINATE PROPOSITION

Each of the first four hypotheses developed in the literature review postulated relationships between the dependent variable, willingness to coordinate, and one of the four independent variables:

1. organizational security (which had some identifiable components)
2. perception of regulatory barriers
3. perceptions of benefits and costs
4. availability of slack resources

Following the analysis format described earlier each of these hypotheses will be reviewed and then tested by the use of increasingly sophisticated techniques. In a separate section following the review of each individual hypothesis, a multivariate analysis will be performed with multiple regression. However, before turning to the hypotheses, a section on the dependent variable and how it was operationalized will be presented.

THE DEPENDENT VARIABLE: WILLINGNESS TO COORDINATE (WTC)

Agencies are managed by persons who, through their decisions and activities, will determine the willingness of each organization to enter into cooperative relationships with other units. An accurate assessment of the willingness to coordinate of any organization would include data from many decision makers within the unit.

This data could then be aggregated to provide a composite score for each agency. Time and budget constraints of the project meant that only one survey per unit was sent. The survey was addressed to the director of each unit, whose perceptions of the imperatives of his/her agency presumably are accurate measures for the agency. The most frequent respondents were agency heads but as previously discussed, many other employees were probably assigned the task of responding to the survey.

The dependent variable willingness to coordinate was given a perceptual connotation by the way it was operationalized. It was measured by two questions in the survey. In each of these questions there were three techniques given which could be used by agencies to improve their client transportation. These techniques were:

A. Improve the use of current transportation resources;

B. Increase the resources from outside organizations;

C. Develop cooperative programs with other local agencies.

Item C, "Develop cooperative programs with other local agencies", was designed to test the willingness of an agency to coordinate.

The other two techniques were included to force variance in the responses to what is otherwise a "motherhood" type of question; that is, since all agencies presumably will profess a willingness to cooperate,

some other choices were made available to force them to discriminate among the techniques.

To further induce a spread in the responses, the question was asked in two different ways. In question 3 of the survey, respondents were asked to rank each of these techniques. A rank of one indicated the techniques they would be most likely to choose, two was assigned to their second choice, and three indicated their least preferred option.

The second measure of willingness to coordinate was a seven point scale which was adopted from a similar scale used by Schermerhorn (1974) in a study of cooperation among hospitals. In question 4 of the survey, respondents were asked to indicate whether they were Not Willing, Neutral, or Very Willing to adopt each of the aforementioned techniques by circling a number on the scale below.

Not Willing			Neutral			Very Willing
1	2	3	4	5	6	7

The number circled for the technique C, "Develop cooperative programs with other local agencies", was thus the other willingness-to-coordinate score.

It was expected that forcing respondents to rank the techniques in question 3 would result in a wider distribution of response to the items in question 4. The results, however, were still highly skewed. The scores on the willingness-to-coordinate scale had a mean of 5.3 and a standard deviation of 1.84. Only 7 agencies (4.8%) of the 147 who answered the question indicated they were "not willing" by circling "1," while 58 agencies (39.5%) said they were "very willing" to coordinate,

with a score "7". The other two techniques, also, had a skewed distribution of results.

Responses to the ranking question showed that developing cooperative programs was not as popular a technique as the other two. Only 29 agencies (18.8%) ranked it first. The highest aggregate rank was given to "improve current resources," with over 50% of the first place scores, while "increase resources from the outside" was ranked first by 27.3% of the agencies.

For the analysis both rank and scale scores were tried. A composite score which combined the two was also used. The scalar scores allowed for a larger amount of variance while the ranks only allowed for 3 responses. The scalar scores proved to be the most useful in the analysis. The composite scores were slightly less useful while the lack of spread of the ranks made them the least useful of the three.

An alternative way of operationalizing the willingness-to-coordinate variable was also considered. In an early version of the survey each agency was asked to rank every other agency in its area by their willingness to coordinate, similar to the techniques used by Hall et. al. (1977). This would have provided a peer ranking for each agency. In the pretest of the survey a number of problems arose with this question. First, it was difficult to accurately list every agency in an area. Even if they all were listed, each unit had a limited set of other agencies it interacted with and would only be able to rank a subset of those listed making the final rankings difficult to determine. This peer ranking would have been more useful if the sample had consisted of a small number of precisely defined agencies in each area.

The methodological problems precluded the use of this ranking technique.

HYPOTHESIS 1: THE ORGANIZATIONAL SECURITY VARIABLES

It was hypothesized that the security of an organization will affect its willingness to enter into cooperative relationships with other organizations. This reflects the concept that organizations must feel secure in what they do before they are willing to be involved in outreach programs which force them into arrangements with other organizations. Some of the specific variables which were discussed in theory in a previous chapter are related to budget security. It was hypothesized that agencies who were sure about their next year's funding would be more likely to be involved in coordination. It was also suggested that the agencies which had more security about their basic mission would be more likely to coordinate. Thus the first hypothesis was stated as:

> Hypothesis 1 - An agency will be more willing to coordinate client transportation when it has a higher level of organization security.

The Budget Security Component

For human service agencies this organizational security variable should have a strong financial component. They are usually small and dependent on unstable sources of funds for their existence. Monthly financial crises are not unusual. Agency directors who are concerned about survival are not likely to extend the resources which are necessary to cooperate with other agencies. Perceptions of their financial security should therefore have an influence upon their willingness to coordinate. The budgetary security component or organizational security was measured by a number of different questions. The first two

were about when they received approved budgets. Questions 6 and 7 on the survey ask:

6. Did you receive an approved budget of transportation before or after you had to start providing services? Before __ After __

7. How many months before or after your budget was approved did you have to start providing transportation services? ___Months

These questions were evolved as a result of comments, noted by the author in previous research, that very often the human service agencies had to initiate transportation services without any approved transportation budget. They had to "put a transportation system on the street" even before they had approved funding for it. Agencies are often initially notified about government grants to start transportation systems but final approval of these grants is frequently delayed. Many systems have been started before authorization to spend on the grants was actually received. The data from these questions substantiated some of these concerns. Of 117 agencies who responded to this question, 42 (36%) received a budget after they had started service. In response to survey question 7, they indicate that often the budget was received up to a year after the transportation operation had been started.

Relational Analysis

In testing the effects of this item on willingness to coordinate, no significant relationship or strong association was found. Table 6, below, shows a contingency table which illustrates this lack of a relationship.

Table 6

CONTINGENCY TABLE OF WILLINGNESS TO COORDINATE BY WHEN BUDGET RECEIVED

		When Budget Received Before	After
Willingness to Coordinate	Not Willing	8 (11.8%)	7 (17.1%)
	Neutral	13 (19.1%)	4 (9.8%)
	Very Willing	47 (69.1%)	30 (73.2%)
	Totals	68 (100%)	41 (100%)

Missing Observations = 50
Chi square significance $p > .05$
Gamma = -.02

Note: Statistics based in full (7 x 2) table

To interpret this table the changes in percentage should be noted within each of 2 columns as a function of the 3 different rows. If there were a relationship, percentages in the columns would be very different for each willingness category. As it is, the differences between them (Row 1, 11.8% vs. 17.1%; Row 2, 19.1% vs. 9.8%; Row 3, 69.1% vs. 73.2%) are not enough to indicate that an association exists.

The significance ($p > .05$) of the Chi-square value and the low value of gamma (-.02) also show that this relationship was neither significant or strong. The Pearson correlation coefficient, r = -.02, also indicated that there was very little relation between the dependent variable and whether a budget was received before or after the agency had to start providing transportation services.

Adding the interval level data on actual months before or after did not improve the association statistics. When the independent variable from question 7, month started minus month budget received, was tested it was not significant ($p > .05$), nor was it strongly associated with willingness to coordinate. There was some improvement in the gamma and r statistics but not enough to suggest a strong relationship.

Another item relating to budgetary security was whether the agency expected to have a larger or smaller transportation budget for the next year. Respondents were asked to indicate their expectations about their future budget by answering question 8:

8. Do you expect to have a larger or smaller transportation budget for next year?

   Larger ___ Smaller ___ ___% Change expected

Agencies were optimistic about their future transportation budgets. Over three quarters of the agencies (77%) expected to receive a larger budget. The mean expected increase in budget was 16%, although many expected up to 100% increases. Another question relating to the next year's funding asked respondents to indicate on a seven point scale how sure they were about next year's funding. The highest value on the scale was 7 which would indicate that no budget was guaranteed as shown below.

9. How sure are you about next year's funding? (Circle one)

Entire Budget Guaranteed			Not Sure How Much It Will Be			No Budget Guaranteed
1	2	3	4	5	6	7

Generally agencies were not very optimistic about receiving the next year's budget. Some (20%) of them indicated that no budget was

guaranteed, and comparatively few (13%) indicated that their entire budget was guaranteed.

Relational Analysis

No association was found between either of these measures of future funding expectations and the willingness-to-coordinate variables. Tables 7 and 8 show this lack of relationship.

The ratio in Table 7 between those who expect larger or smaller budgets does not change appreciably as the willingness scale goes from not willing to very willing.

Table 7

CONTINGENCY TABLE OF WILLINGNESS TO COORDINATE BY SIZE OF NEXT YEAR'S BUDGET

		Size of next Year's Budget	
		Larger	Smaller
Willingness to Coordinate	Not Willing	11 (15.5%)	4 (18.2%)
	Neutral	10 (14.1%)	4 (18.2)
	Very Willing	50 (70.4%)	14 (63.6%)
	Totals	71 (100%)	22 (100%)

Missing observations = 66
Chi square significance $p > .05$
Gamma = -.05
Note: Statistics are based on full (7 x 2) Table.

Table 8

CONTINGENCY TABLE OF WILLINGNESS TO COORDINATE BY ASSURANCE OF NEXT YEAR'S BUDGET

		Assured of Next Year's Budget		
		All Guaranteed	Not Sure	None Guaranteed
Willingness to Coordinate	Not Willing	6 (12.2%)	7 (23.3%)	10 (19.2%)
	Neutral	6 (12.2%)	7 (23.3%)	8 (15.4%)
	Very Willing	37 (75.5%)	16 (53.3%)	34 (65.4%)
	Totals	49 (100%)	30 (100%)	52 (100%)

Missing observations = 28
Chi square significance $p > .05$
Gamma = -.04
Note: Statistics are based on full (7 x 7) table

Likewise the data in Table 8 show no clear pattern which would indicate a relationship. When subjected to further analysis neither of the two questions of this budgetary item resulted in strong relationships with willingness to coordinate ($r = -.02$ and $-.06$ and gamma = $-.05$ and $-.04$).

The other component of organizational security concerned the legitimacy an organization felt about being in the transportation business. It was an attempt to develop a variable which would measure whether they had the right and the authority to be involved in transportation. This concept was operationalized by use of a question on why their agency was involved in transportation for their clients. Question 5 of the survey asks the respondent to indicate along a seven-point scale whether each of three factors listed was important, moderately important, or unimpor-

tant in determining why their agency was involved in transportation for their clients. Item 5a below asked if transportation was one of their basic missions.

5. Why is your agency involved in transportation for your client?

(Circle one answer for each item)

	Unimportant Factor		Moderately Important				Very Important Factor
A. It is one of our basic missions	1	2	3	4	5	6	7

Agencies were somewhat divided in their response to this question, with 25.8% saying that it was a very important reason for providing transportation while 18.9% thought it was unimportant. The rest of the responses were evenly distributed on the remainder of the scale. The result, when this variable was tested for its relationship with willingness to cooperate, was that some association was shown by the data.

Table 9 .

CONTINGENCY TABLE OF WILLINGNESS TO COORDINATE BY WHETHER TRANSPORTATION WAS A BASIC MISSION

		A Basic Mission		
		Unimportant	Moderate	Very Important
Willingness to Coordinate	Not Willing	12 (23.5%)	3 (21.4%)	6 (9.7%)
	Neutral	9 (17.6%)	2 (14.3%)	11 (17.7%)
	Very Strong	30 (58.8%)	9 (64.3%)	45 (72.6%)
	Total	51 (100%)	14 (100%)	62 (100%)

Missing Observations = 32
Chi square significance $p > .05$
Gamma = .22
Note: Statistics based on full (7 x 7) table

The cross tabulation in Table 9 indicates that any relationship between the two variables is not significant ($p > .05$). However, the strength of association statistics gamma = .22 and r = .23 ($p < .01$) indicates that there was a moderate association between the two variables.

In summary, the budgetary items which were thought of as constituting a measure of organizational security did not have a strong or significant relationship to the willingness-to-coordinate variable. Only the organizational security item which described the agency's perceived authorization to provide transportation showed any meaningful relationship to the dependent variable. Although significant, even this relationship was slight. As operationalized for the survey, the hypothesis that willingness-to-coordinate is associated with organizational security must be rejected. The data do not substantiate the existence of a relationship.

HYPOTHESIS 2: THE PERCEPTION OF REGULATORY BARRIERS

Regulatory barriers include rules and regulations which are imposed on local agencies by either state or federal units. Earlier cited references on human service agencies suggested that the categorical nature of the federal grant programs made it difficult to affect coordination (Brooks, 1974; Revis, 1977). These categorical programs which require strict program accountability for the utilization of funds make it difficult to mingle various funding sources. However, as indicated in the literature review, more recent sources have suggested that these restrictions are a result of interpretations of regulations rather than actually being a part of the original legislation. State and local

agencies have been more restrictive than necessary, and have created more regulatory barriers than were actually mandated.

The factors which will affect a local agency's willingness to coordinate are not the actual regulations but how they are perceived by the agencies. Perceptual problems are more significant than the actual regulations themselves. If regulatory barriers appear to be difficult to overcome, then the operating agencies will be less willing to try to effect coordination.

Helping form an agency's understanding of regulatory barriers is the communication network among agencies. Agencies acquire part of their normative view of the external world by their interaction with other units. While the official instructions which agencies receive from their funding sources many indicate that certain restrictions apply to a funding program, interactions with other agencies who have already applied and received grants under the same program will affect the way an agency will respond to the same funding source. If the directors of a Head Start project hear from other Head Start directors that accountability for vehicles is particularly important to the funding source, then they will emphasize this accountability in their proposal and the way they operate, even if the accountability issue is not emphasized in the program guidelines published by the funding source. There are networks of agency personnel which are a major source of information for the directors on how they can successfully relate to parent agencies. The existence of these networks partially explains why the perceptions of regulatory environment are often different from the actual regulations themselves. It is through these networks that information flows

and perceptions of the regulatory environment are affected.

The hypothesis relating the dependent variable, willingness to coordinate, and the perception of regulatory barriers is as follows.

Hypothesis 2 - An agency will be less willing to coordinate client transportation if it perceives severe regulatory barriers.

This hypothesis was operationalized for the purpose of the mail survey by asking each agency director to indicate how much of a problem regulations would be. The question was stated:

11. Do you think federal or state regulations would be a problem in trying to coordinate transportation service with other local agencies?
(Circle one)

Major Obstacle 1 2 3 4 5 6 7 Not a Problem

This survey question tried to include in one response the agency's perceptions of regulatory problems which would arise in trying to enter into cooperative relationships with other local agencies. It attempted to combine state and federal regulations into one category.

Response to the question indicated a fairly evenly distributed range of concern about the regulatory barriers. There were 140 respondents who answered the question while 19 agencies did not respond. There were some respondents in every one of the numerical categories. The average response was a 4.1, approximately the mid-point of the scale.

Relational Analysis

Statistical tests applied to the data indicated that there was little evidence of a relationship between the independent variable and the dependent variable, willingness to coordinate. A Chi-square test

showed no significance ($p > .05$). The association of the independent variable, perception of regulatory barriers, with willingness to coordinate was insignificant. The gamma = .001 and r = .02 showed that as respondents varied in their willingness to coordinate, there was little predictable change in their perception of regulatory barriers.

One reason for the lack of relationship between these variables could be local agencies do not have a good understanding of the regulatory environment. It may be that there is a low salience among the agencies about the issue of regulatory barriers to coordination. The field visit results indicated that for many agencies this was the case. They were single-funding-source agencies and the issue of regulatory barriers appeared to be one that they had not previously considered. However, other units--especially those which received funding from multiple sources--were keenly aware of the problems associated with the categorical nature of the grants that they were receiving. For example, in El Centro, the EOC knew that Head Start vehicles were very difficult to integrate into their program because they had to ask for special permission from the Head Start Administration, mainly because the vehicles were being used to transport students to a day care center rather than a school. EOC personnel believe that this differentiation helped them to receive the permission that many other agencies have not been able to receive. For all agencies combined, however, the data show that agency directors' willingness to coordinate was not influenced by their perception of regulatory barriers. Other factors tested in this chapter were far more important to them than this one.

HYPOTHESIS 3: PERCEPTIONS OF BENEFITS AND COSTS

Agencies that coordinate their transportation will do so because they expect benefits. They also will expect some costs as a result of entering into interorganizational cooperation. Economic efficiency is the major benefit which will be expected by cooperating units. Other benefits which are more difficult to measure than economic efficiency, are those related to the positive image associated with coordinating. Agencies which perceive that these benefits are likely to be substantical should be more willing to coordinate. Modifying the impact of large expected benefits will be these agencies' expectation that they will lose a certain amount of autonomy when they coordinate. This loss of control is also accompanied by some resource inputs which the agency will perceive as a cost of coordinating. Thus hypothesis 3 was stated as follows:

> Hypothesis 3 - An agency will be more willing to coordinate client transportation if it anticipates that its benefits from coordination will be significantly greater than its costs.

The hypothesis states that a significant difference must be perceived by agencies if they are to be positively disposed to coordinate. Human service agencies, because of their poor record keeping, will need substantial evidence of net benefits. A threshold effect may be occurring in this situation. An agency that does not perceive a substantial net benefit to the organization is not likely to want even to initiate the effort which is required to coordinate.

One major reason why coordination seems to be universally regarded as desirable is that economic efficiencies of scale are assumed for human service agency transportation. Agency transportation units are

usually small and administrative costs are usually a large portion of the total. If these administrative costs can be spread over a larger number of units, the cost per unit output should be decreased.

The independent variable relating to perceptions of cost was operationalized in the survey questionnaire by a series of questions. The first of these dealt with perceptions of the agency director on the issue of whether coordination would lead to less costly transportation expenditures as stated in question 12 below:

12. Do you think that coordination would lead to less costly transportaion expenditures (per trip)? (Circle one)

Significantly Less Costly			No Change			More Costly
1	2	3	4	5	6	7

A subsequent question dealt with the loss of control an agency director would anticipate if the agency were to coordinate. The question focused on loss of control of funds as indicated below:

13. If you were to coordinate with other agencies you might lose some control of the funds you spend on transportation. How much of a loss of control would you anticipate?

Significant Loss of Control						No Loss of Control
1	2	3	4	5	6	7

Finally a summary question was asked, in which agency directors had to give their opinion on whether the cost savings were worth the loss of control, as follows:

14. Do you agree with the statement that the cost savings are worth the lost of control when agencies coordinate?

Agree			Neutral			Disagree
1	2	3	4	5	6	7

The frequency distribution of these variables showed that in general:

1. Agency directors believed that coordination leads to less costly transportation. While the 62.3% who chose numbers 1, 2, or 3 on the scale thought that coordinated transportation would be less costly, 16.4% thought that there would be no change, and only 15.1% of those responding thought that transportation would be more costly if there was coordination. The mean score of 2.94 was highly skewed. Again, there is little empirical data available to substantiate the claim that coordination results in lower costs. However, since this is a perceptual variable, the hypothesized relationship should be able to be tested.

2. The respondents were less sure about whether the coordination would lead to loss of control. Their responses were more evenly distributed for that question. Their mean score of 4.35 indicated that the agencies were divided on whether loss of control would result from coordination.

3. Some but not all thought that savings were worth the loss of control. Of those responding, 47.5% agreed with the statement while 36% disagreed and 26% were neutral. This somewhat ambiguous result indicates the difficulty that they may have in justifying their entry into cooperative relationships.

Some evidence as to why the agency directors were not sure that savings were worth the loss of control was found in the next question, which will be more thoroughly analyzed in a subsequent section. This question was about the administrative effort need to negotiate coordination. The agency directors felt overwhelmingly that a lot of effort was necessary for the negotiation of coordinated efforts.

Relational Analysis

A review of the statistics from the analysis of the three questions which tested this independent variable showed some significant relationships with the dependent variable, willingness to coordinate. However, these were only moderately strong relationships in terms of their predictability.

There were very significant relationships ($p < .001$) between the dependent variable, willingness to coordinate, and the independent variables which tested whether agency directors thought that coordination leads to loss of control and that the savings were worth the loss of control. For the independent variable that coordination leads to less costly transportation the relationship was slightly less significant than the other two variables, but still was significant enough ($p < .05$) to warrant further consideration. All the signs were as predicted.

Pearson correlation coefficients and gamma values for each variable are given in Table 10.

Table 10

RELATIONAL STATISTICS FOR PERCEPTION OF BENEFITS AND COSTS VARIABLES

	Relational Statistics		
Willingness to Coordinate	Gamma	r	Pearson Significance
1. Coordination leads to less costly transportation	-.25	-.19	.011
2. Coordination leads to loss of control	+.25	+.28	.001
3. Savings are worth losses	-.40	-.42	.001

Of the independent variables considered thus far these three have the strongest association with the dependent variable, willingness-to-coordinate. As should be expected, the composite variable which tries to combine the agencies perceptions of benefits and costs showed the most association. Agency personnel who perceived that there would be net benefits naturally seem to be more willing to coordinate. Similarly, those who were convinced that cost savings would accrue from coordination, and those who did not perceive large losses of control professed more willingness to enter into cooperative relationships with other agencies.

Additional evidence in support of this hypothesis comes from El Centro, where Campesinos Unidas Inc. (CUI) was being pressured to coordinate their proposed transportation project with the consolidated system operated by the Economic Opportunity Council. CUI was aware that they could purchase transportation for their clients for considerably less than they could supply it themselves. However, they were very concerned about the loss of control over their system. Driver hiring and adequate service for their clients were the two areas over which they were not willing to lose control, even if it meant higher costs per trip. Even coercion from CALTRANS and the Federal Highway Administration, who funded the CUI project, could not convince CUI to coordinate with EOC.

HYPOTHESIS 4: AVAILABILITY OF SLACK RESOURCES

Organizations that have resources available to enter into coordination with other organizations should be more willing to coordinate than those that have no resources to commit to a cooperative arrange-

ment. According to this hypothesis, agency directors who feel overcommitted should tend to cut off their outside commitments and not interact with other organizations to carry out their missions. As was pointed out in the review of the literature on interorganizational behavior, some authors have different views on the effect of slack resources. When viewed from the perspective of a large organization, the hypothesis that emphasized the better use of resources because of coordination may dominate. For these organizations a general management policy favoring coordination may lead to more willingness to coordinate throughout the organization. However, for the smaller units, entering into a coordinative effort requires a much larger proportion of their time and resources. Perhaps for this reason the smaller units will be more likely to coordinate if they have slack resources.

Because the focus of this study is organizations which usually are relatively small, the hypothesis was stated as follows:

Hypothesis 4 - An agency will be more willing to coordinate client transportation if it has slack resources.

The transportation units of human service agencies are likely to be underutilized. That is, the vehicles are not likely to be operated more than a few hours a day except in the more efficient systems, and the number of seats which are used on any vehicles is likely to be small in comparison to other public transportation. Thus in economic terms the efficiency of the system is likely to be low and from this perspective there will be slack resources available in most operations. However, it is unrealistic to expect directors of human service agencies to view these underutilized resources as being available for coordination with other agencies simply because vehicles may be idle during some parts of

the day. The scheduling problems inherent in trying to coordinate, and other operational problems such as not wanting to mix various types of riders, may be difficult to overcome.

In trying to operationalize the concept of slack resources an initial attempt was made to ask questions that would provide data on the percentage of additional trips an agency could handle. In the pretest of this early formulation it became apparent that no agency wanted to admit the underutilization of its resources. Even if they recognized that some number of seats were available during the day, they usually could not conceive of these seats being utilized without additional costs to the agency. In the final version of the survey an attempt was made to measure underutilized resources by focusing on the management and administrative resources that might be available to do the coordinating. It was recognized that the process of coordination requires a good deal of interaction between agencies, and this negotiating process would involve the use of management resources.

It was important to assess both the perception of the agency directors as to how much effort it would take to coordinate, and the time they or members of their staff had available to effect the coordination. Most agency directors consider their organization overworked and understaffed. This two-pronged approach to the availability of slack resources was meant to measure both of these aspects of the availability of resources. Each agency director was asked to respond to the following questions on the survey:

15. How much administrative effort do you think it would take to negotiate with other agencies to try to better coordinate transportation?

A Lot of Effort						Little Effort
1	2	3	4	5	6	7

16. Do you or a member of your staff have the time available to do the coordination?

Sufficient Time is Available						No Time Available
1	2	3	4	5	6	7

The responses to both of these questions were very skewed. The Data indicate that 88% thought that a lot of effort was required to negotiate coordination, while only 5% thought little effort was required, and 7% were neutral on this question. These directors were also of the opinion that there was not sufficient staff time available to do the coordination. While 17.4% were neutral, 63% indicated that there was little time available, and only 19% of those responding thought there was sufficient time available to conduct the negotiations to try to coordinate client transportation. These data support the contention that agencies perceive coordiration as a difficult process.

Relational Analysis

The results of the Chi-square test show that the relationship between willingness to coordinate and the perceived administrative effort needed to negotiate coordination was not significant ($p > .05$). However, the relationship between willingness to develop cooperative programs and time available to do the coordination was significant ($p < .05$). These conclusions were substantiated by the other analysis which was performed on the data. For the administrative effort necessary the

sign of gamma (+.20) and the correlation coefficient (r=+.20) were correct but the relationship was not significant ($p > .05$). For the time available independent variable the Chi-square test was substantiated. A gamma of -.32 resulted and the correlation coefficient ($r = -.28$) was significant ($p < .05$). Thus it can be concluded that respondents who had more time available to do the coordination were more predisposed to enter into cooperative relationships, while their perception of the administrative effort needed to enact joint efforts was not a good predictor of willingness to coordinate.

Data from the case studies redirected attention to the greater importance to some agencies of the availability of slack transportation resources, as compared with time available. In Sacramento two agencies reported that they were willing to contract with the transit agency because they recognized that their vehicles were not being sufficiently utilized. They were extremely anxious to make more efficient use of their vehicles and appeared very willing to coordinate their client transportation.

Earlier conjecture on the influence of organizational focus on the resource availability issue is supported by the case studies. When agencies spent a substantial amount of their time and effort on transportation, they were more likely to be concerned about the efficiency of their system. However, this quest for better system efficiency and effectiveness often focused on getting more passengers--with little increase in resource--rather than attempting to get better economic efficiency by coordinating with other operations.

The major provider in each of the five areas visited viewed coordination as a major endeavor. Where transportation loomed as an important function of the organization, the issue of slack resources did not seem to enter into agencies' decisions on cooperation. They would be interested in coordination under virtually any circumstances. They were not sensitive to the issue of availability of slack resources as it affected coordination, since coordination was one of their major functions.

For those agencies who considered transportation more as an adjunct to their program, the issue of the time available to participate in the coordinated effort was extremely important. As indicated earlier, most agencies were extremely overburdened with operating problems not related to transportation, and decided that coordination would not be worth the level of effort that is required to effect coordination.

A HIGHER ORDER ANALYSIS OF THE WILLINGNESS TO COORDINATE HYPOTHESIS

The previous relational analysis provides an initial test of the willingness-to-coordinate proposition. To summarize this analysis, Table 11 is presented below. As indicated, there were two independent variables which were influential (gamma $>$.30) and three additional ones which could be considered moderately influential (gamma $>$.20).

In the following section, a higher order analysis will be performed in which the implications of a set of causal assumptions will be investigated. The technique consists of the construction of a path diagram which suggests a system of relationships among each of the variables. The proposition that the orderings in the model are correct can then be analyzed using multiple regression techniques.

Table 11

FACTORS INFLUENCING AGENCY WILLINGNESS TO COORDINATE

Relative Rating	Gamma	r	Rank	Variable Description & Abbreviation
Influential	-.40	-.42	1	Perception of whether the cost savings were worth the loss of control when coordinating. (SAVWL)
	-.32	-.28	2	Amount of time an agency had available to negotiate coordination. (TYMAVL)
Moderately Influential	+.25	+.28	3	Whether an agency thought they would not lose much control if they coordinated. (LSCNTRL)
	-.25	-.19	4	Perceptions of how much cost savings would occur from coordination. (LESS$)
	+.22	+.23	5	If transportation is an authorized function of the agency. (HATODO)
Negligible or No Influence	+.20	+.20	6	The amount of administrative effort an agency thought it would take to coordinate.
	+.001	+.02	7	Whether they thought regulations were a barrier to coordination.
	-.04	-.06	8	Expectations about whether they were sure to have operating funds next year.
	-.05	-.02	9	Whether they expected an increase in next year's budget.
	-.02	-.02	10	Had they received their approved budget before or after they had to start operating a system.

CONSTRUCTING THE PATH DIAGRAM

In constructing a path diagram, each independent variable to be tested is linked either directly or indirectly or both directly and indirectly to the dependent variable. Direct linkages hypothesize that the relationship is not mediated by changes in intervening variables. Indirect linkages hypothesize the presence of intervening variables. For some independent variables, both direct and indirect paths can be proposed. For every path the direction of the relationship is specified (Lave, 1976).

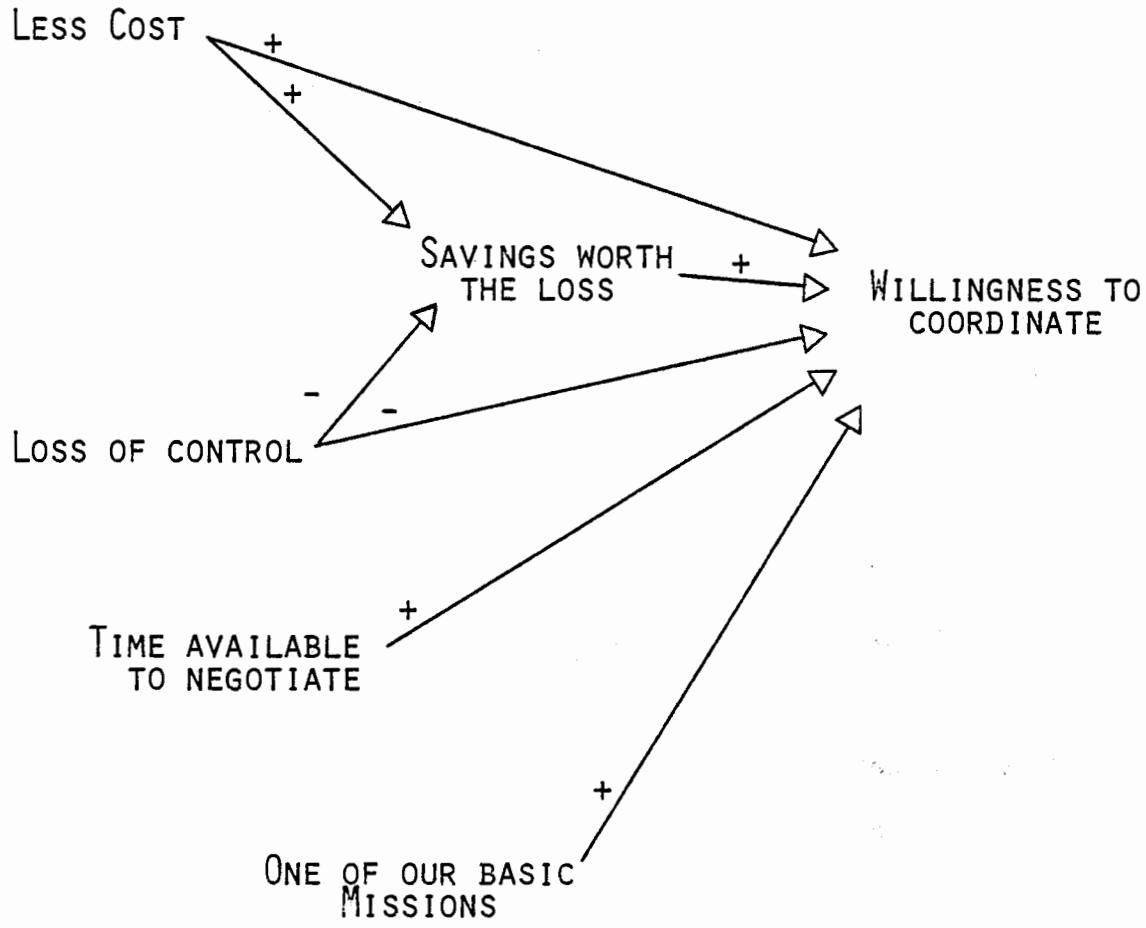
In Figure 6 a path diagram is given which postulates the causal relationships between willingness-to-coordinate and the five most influential independent variables.

The path diagram suggests that two variables, Less Cost and Loss of Control are moderated through the Savings Worth the Loss variable. These variables also should each have a component which has a direct effect on willingness-to-coordinate. The other two independent variables, Time Available to Negotiate and One of Our Basic Missions, are directly linked to the dependent variable in the path diagram.

It is hypothesized that the agency directors moderate their perception of the loss of control which will accompany coordination through a comparison of benefits and cost. Loss of control is only one of the cost of coordination, but because "turfism" and autonomy are salient local issues, then loss of control should be an important factor. Agency directors will be very sensitive to this cost component. Thus, this variable shows an indirect and a direct linkage to willingness-to-coordinate because automony is such a sensitive issue for local agen-

FIGURE 6

PATH DIAGRAM FOR
WILLINGNESS-TO-COORDINATE HYPOTHESIS



cies. Even if an agency perceives some benefits, it will not be prone to coordinate if large losses in automony are anticipated.

The same type of reasoning explains the appearance of both direct and indirect linkages between the agency's perception of cost savings and its willingness-to-coordinate. Costs are of great concern to agencies, especially for auxiliary services like transportation. Thus, even if there are few benefits, a large savings in cost will be likely to convince an agency to coordinate. Conversely, large benefits might not convince an agency to cooperate if the cost savings are not significant.

ESTIMATING THE MODEL

When regression analysis is used to test for relationships, certain assumptions are made concerning simple random sampling, the absence of nonsampling errors and continuous interval data. However, Babbie (1973) indicates that although survey research never completely satisfies these assumptions, he encourages the use of regressions "in any situation in which their use assists the researcher in understanding the data and, by extension, the world around him." (Babbie, 1973, p. 324)

The JAGUAR Program (Lave, 1978) was used in the analysis. This is a program which is particularly useful in exploring indirect and direct linkages between a set of variables. The correlation matrix calculated with this program is given in Table 12.

The scheme for the analysis of the direct and indirect effect is to sequentially add variables to the regression equation and note the effect of each added variable. This is illustrated below.

Equation 1 shows willingness-to-coordinate.

TABLE 12

CORRELATION MATRIX

	WTC	Basic Mission	Less Cost	Loss of Control	Savings Worth Loss	Time Available
Willingness to Coordinate	1.00					
One of Our Basic Missions	.23	1.00				
Less Cost	.29	.08	1.00			
Loss of Control	-.23	.04	-.10	1.00		
Savings Worth the Loss	.43	.09	.47	-.29	1.00	
Time Available to Negotiate	.28	.16	.18	-.29	.27	1.00

n = 102 cases left after deletion for missing values.

Note: These coefficients are slightly different from those given in previous sections because more missing values occur when this matrix is calculated. Some signs are different because of transformations done in the computer analysis.

Equation 1

$$WTC = 4.39 + .291\ LESS\$ - .178\ LSCNTRL$$
$$\qquad\qquad (2.9) \qquad\quad (2.1)$$
$$\qquad\qquad [.27] \qquad\quad [.20]$$
$$R^2 = .107$$

as a function of less cost and loss of control. The R^2 indicates that we have explained 10.7% of the total variance. The t-values for each coefficient are given in parentheses below the regression coefficients. Since we have specified the sign for each variable, a priori, it is appropriate to use a one-tailed test and so significance at the 5% level is indicated by a t-value of 1.65 or greater. Both variables are significant. Beta values, the standardized regression coefficients, are indicated in square brackets. Since the two betas are about the same size (.20 and .27) the conclusion is that the influence of these two variables on the dependent variable is about equal.

The model hypothesized that less cost and loss of control would have both direct effects and an indirect effect through the savings worth the loss variable. To test for the indirect effect we add savings worth the cost to the equation, which then holds constant the indirect path. This is shown in equation 2. Since equation 1 estimates the combined effect

Equation 2

$$WTC = 3.69 + .128\ LESS\$ - .105\ LSCNTRL + .291\ SAVWL$$
$$\qquad\qquad (1.2) \qquad\quad (1.3) \qquad\quad (3.2)$$
$$\qquad\qquad [.12] \qquad\quad [.12] \qquad\quad [.34]$$
$$R^2 = .183$$

of the direct and indirect paths, we would expect the regression coef-

ficients and t-values to be larger than they are in equation 2, and this turns out to be true. In fact the addition of SAVWL to the equation causes the other two variables to become insignificant. Hence we conclude that their major effect is through the indirect path.

Equation 3 shows the effect of SAVWL alone, and it is clear that this single variable does a better job than equation 1. That is, SAVWL represents the combined effect of LESS$ and LSCNTRL and is a more powerful predictor of WTC.

Equation 3

WTC = 3.64 + 3.69 SAVWL

(4.8)

[.43]

R^2 = .177

Starting with equation 3 we add in the two remaining variables, HATODO and TYMAVL to produce equation 4, the final results. The

Equation 4

WTC = 2.35 + .32 SAVWL + .131 HATODO + .152 TYMAVL

(4.1) (1.9) (1.7)

[.37] [.17] [.15]

R^2 = .219

equation explains about 22% of the variance, all three variables are significant, and all have the predicted signs. The beta coefficients show that HATODO and TYMAVL are about equally important in explaining the variance in WTC, and that SAVWL is about twice as influential as they are. Since SAVWL summarizes the effects of LESS$ and LSCNTRL, its greater explanatory power is not surprising.

Chapter VII

SUMMARY AND CONCLUSIONS

Interorganizational analysis was used in this study to investigate the process of coordination among human service agency transportation systems. These are transportation units which were initiated by agencies who want to improve the delivery of human services by enhancing their clients' mobility. The origins of these fragmented, uncoordinated systems are linked to the categorical nature of the multi-layered social welfare system in the United States. From the review of literature it was seen that human service agency transportation is a subunit of the local delivery system and exhibits the same set of coordination problems faced by this system.

A model of the coordination process was developed from a review of the theory in interorganizational relations. This model considered the various factors which would affect coordination among agencies. At the intraorganizational level were variables which were linked to an agency's willingness-to-coordinate. Interorganizational and supra-organizational factors were also considered in the model. Factors in these two categories were hypothesized to be associated with the level of coordination achieved by sets of agencies.

In the empirical part of the study the intraorganizational hypotheses were investigated. Case studies were used to describe the institutional context of these transportation units and also to provide an overview of the coordination process. Then the results of a mail survey were used to determine which factors were associated with the

willingness-to-coordinate of agency directors. It was found that there were two variables which were influential and three which were moderately influential. Five variables were deemed as having negligible or no influence on agencies' willingness-to-coordinate.

IMPLICATIONS OF THE RESULTS

There are several areas in which the result of this study has implications. Before taking up the policy implications of its results, the limitations of this review should be noted. The first limitation is the sample from which the data were obtained. While the agency directors are probably representative of those employed by human service agencies in California, there is no claim made that they are representative of any larger group of agency directors: for example, all others in the United States.

Other limitations of a methodological nature such as the way the various concepts were operationalized and the appropriateness of the statistics are covered in previous chapters and will not be reviewed again here. A final limitation is related to the level or strength of the associations which were measured: the best model accounts for only 22% of the variance in the dependent variable. With each of these limitations in mind, the implications of the results can be explored starting with those relationships which exhibit the strongest associations.

COST AND BENEFITS

The results generally indicate that agency directors are exhibiting very reasonable behavior. They were assessing the economic and institu-

tional impact of coordination in their agency and using their perceptions of these impacts to decide whether they should coordinate. Agency directors were interested in both costs and benefits of coordination. The relational analysis showed that the potential loss of control was important but that perceived economic benefits from coordination were even more important to the agencies.

The most significant factor which affected their willingness-to-coordinate was whether they perceived that the potential financial benefits were worth the loss of control which might result from coordinating with other units. This independent variable was designed to contain elements of both cost and benefits. The composite nature of this variable was verified in the path analysis.

The importance of both benefits and costs underscores the need for better information on actual savings and other benefits which result from coordination. Agency directors tend to have a turf orientation which must be overcome if they are to cooperate with each other. Because they are sensitive to the comparison of benefits and costs they will need reasonably strong evidence of the benefits before they will be convinced to coordinate.

AVAILABILITY OF TIME TO NEGOTIATE

The finding that the amount of time an agency had available to negotiate coordination influenced its willingness-to-coordinate has several implications. This result suggests that coordination will be more likely to succeed when agency directors have the time to devote to the interactions which must precede any cooperative venture. A further implication is that if the government wants to promote coordination it

should adopt measures which will relieve agency directors from other duties so they have more time available to negotiate. Expending temporary funds to pay for staff time to participate in negotiations would thus seem to be a reasonable technique to induce coordination.

The data suggest that the time available variable is more influential than an agency's assessment of the amount of administrative effort required to coordinate. Thus, merely simplifying the coordination process may have less effect than making more time available to do the negotiating.

LEGITIMACY OF THE TRANSPORTATION FUNCTION

The results also point to the need agencies have to legitimize their transportation activities before they are willing to coordinate. This result is probably more useful in guiding local coordination efforts. It suggests the coordination efforts are most likely to succeed among agencies who have a more formal commitment to their transportation system. Agencies which provide transportation to their clients through an identifiable subunit should be more willing to coordinate than those which are *ad hoc*.

REGULATORY BARRIERS

Also interesting, from the perspective of local efforts to coordinate, is the absence of a relationship between agency directors' willingness-to-coordinate and whether they thought regulations were a barrier to coordination. Their perception of the extent of regulatory barriers apparently neither encouraged nor discouraged cooperative

efforts. Other factors were more important motivators of a willingness-to-coordinate.

FINANCIAL SECURITY

The set of independent variables which were least associated with the dependent variable were those related to budgetary matters. Apparently, expectations about future funding did not affect agencies' willingness-to-coordinate. It was expected that more future financial security would give agencies a more stable base on which to negotiate with other agencies. The results did not confirm this hypothesis. The need for more financial security has to be justified on grounds other than its effect on coordination.

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APPENDICES

Appendix A

Preliminary Data Form
for Field Visit Interview

Area_____

Local Contact Person

Name_____ Date of Interview_____

Address _____ Time of Interview_____

_____

Telephone_____

Travel Instructions_____

_____

_____

Other Key Persons

Name	_____	_____	_____
Address	_____	_____	_____
	_____	_____	_____
Telephone	_____	_____	_____
Date of Interview	_____	_____	_____
Time of Interview	_____	_____	_____

Is there a consolidated system or will there be one soon?

How many agencies are in the area?

How many agencies are in the consolidated system?

Is there any other type of coordination?

Field Visit Survey Instrument for study of
Coordination of Human Service Agency Transportation

AREA_____

I. Respondent Information

Name_____

Address_____

_____

Telephone _____

Agency _____

Title or Position_____

Role in Transportation_____

Area Characteristics_____

_____

_____

What is the geographical area of concern?_____

_____

What is the total population of the geographical area you serve?_____

_____

How large is your service area? (square miles)_____

_____

Population density?_____

What percentage of the area is:

urban_____

rural_____

What percentage of the target population by residence is:

urban_____

rural_____

What percent of the total population is:

elderly_____

handicapped_____

below poverty level_____

What is the median household income for your area?_____

_____

What percent of the total population owns a car?_____

_____

Are any of the following transportation services available in your area other than your system?

	no	yes	operator's name
local transit			
intercity bus			
school bus			
taxi			
rail			

Have local agencies ever attempted any coordination with them? What type?_____

_____

Description of Local Agency Transportation

How many human service agencies are in the area?_____
(List types and number if available)

_____

How many of these are involved in transportation programs of each of the following types

	Number
Agency owns and operates vehicles	_____
Agency purcheses transportation from another provider	_____
Agency has volunteers transport clients	_____
Agency reimburses clients for travel	_____

Approximately how many total vehicles provide client transportation in the area?

_____

How many total trips per month?_____

How much does the average trip cost?_____

Name sources of funds which are being coordinated and amounts?

Source	Amount	Sources	Amounts

Previous Agency Relations

Is there an agency coordinating council or other coordinating mechanism?

_____yes _____no Name_____ Description_____

_____

Have there been formal or informal coordination efforts in other areas than transportation?

_____

_____

_____

_____

Could you rank each of the agencies in your area as to whether they were willing to coordinate their client transportation? (List and rank each)

Which of these agencies has the most and least financial security?

Which has largest transportation component? (Give % of budget spent on transportation)

Description of Local Coordination Efforts

Have there been any efforts to coordinat transportation among any sets of agencies? _____yes _____no

Have there been any attempts at forming a consolitaed system? _____yes ____no

Who originally initiated the coordination effort?_____

What is their title and organization?_____

_____

How and when was it initiated? (Grant, memo, informal, dates, etc.?)

_____

_____

_____

Why was it initiated? (Local initiative, outside coercion, availability of funds, suggestion from consultant, etc.) _____

_____

_____

Were there any state or federal funds involved in the coordination effort?_____

_____

_____

Were there any agencies or providers of funds who have dropped out, added, or shifted? Explain._____

_____

_____

Name other persons or goups who have been important to coordination efforts.

Name_____Affiliation_____Telephone_____

_____ _____ _____

_____ _____ _____

Is there one person who has devoted their energy and skill to overcoming the obstacles to coordination?

Name _____

Title_____

Agency_____

Is there any agency which would be the logical provider if a consolidated system were to be developed? If not largest provider then why not?_____

_____

_____

Is there much unused vehicle time among the agencies which operate systems?

_____

_____

Are any drivers unionized?_____

_____

Level of Coordination

Describe examples of the following types of agency transportation coordination which exist in your area. Name agencies.

Type	Agencies
A. Coordination of client visits	
B. Coordination of vehicle schedules	
C. Purchase of transportation services	
D. Joint purchase of insurance, supplies, gas, maintenance	
E. Joint use of office space, garage	
F. Cooperative planning	
G. Consolidated system	
H. Transfer arrangements	
I. Emergency back-up vehicle use	
J. Distribution of tickets	

Benefits and Costs of Coordination

Is there any evidence that coordination of transportation has resulted in each of the following benefits? Explain.

Better transportation services?_____

_____

Improvement of relations with other agencies?_____

_____

Cost savings

Better vehicle utilization?_____

Spread administrative costs over larger system? How?_____

_____

Joint purchases, results in lower costs?_____

_____

Other Benefits?

What costs are there to agencies that coordinate (Explain each)

Loss of control of vehicles _____

_____

Less responsive service to clients_____

_____

Other_____

_____

Performance Measurement

How would you to about measuring the productivity of client transportation?

Cost per unit output (miles, hours or passengers

Labor utilization

Vehicle utilization (passengers per hour, % seats occupied)

% target population served

Other

Is it reasonable to compare this data between systems?

Discuss data problems - availability, reliability, consistancy of definitions.

Based on your areas experience, indicate if each of the following inhibited coordination. Which were the three most diffiuclt to overcome. Also suggest how you overcame each barrier?

Circle barrier encountered and rank three most difficult.	How was each overcome?
a. Federal regulations	
b. Federal "red tape"	
c. State regulations	
d. State "red tape"	
e. Local interpretation of regulations	
f. Agencies do not want to give up control	
g. Personality conflicts between agency heads	
h. Nothing requires agencies to coordinate	
i. Mistrust of other agencies by top level administrators	
j. Mistrust of other agencies by middle level personnel	
k. Insurance problems	
l. Not enough cost saving to make it worthwhile	
m. Too much time and effort are required	
n. Competition among agencies is too difficult to overcome	
o. Lack of transportation funds in social services programs	
p. Insufficient vehicle capacity for additonal trips	
q. Short time horizen for planning and funding	
r. No support for coordination from local public officials	
s. Uncertainty of funds and continuity	

Transit, taxis and other agencies

Has the local transit company or taxi companies been involved in providing client transportation. Explain.

Has ther been any coordination with other agencies or groups in planning or operating client transportation

Appendix B

SOCIAL SERVICE AGENCY TRANSPORTATION SURVEY ☐☐☐☐☐☐

Please indicate your agency and your position within that agency.

AGENCY NAME_____

YOUR TITLE_____

---

1. How do you provide transportation for your clients (Check all that apply)

   (If you do not provide transportation for your clients then you need not answer the rest of the questions. In any case please return this questionnaire to the address indicated)

A._____Operate transportation system (lease or own vehicles)

B._____Purchase transportation service from another human service agency

C._____Purchase transportation service from taxi operator or other service provider

D._____Reimburse clients for transportation

E._____Coordinate volunteers who drive clients

---

2. How many vehicles do you operate? Station Wagons_____ Vans_____

   Sedans_____ Small Buses_____ Large buses_____ Other_____

---

3. Which of the following techniques would you choose to improve your client transportation. Rank them by putting a one (1) next to your first choice, a two (2) next to your second choice and a three (3) next to your least preferred choice.

Techniques	Rank (1,2,3)
A. Improve the use of current transportation resources	A._____
B. Increase the resources from outside organizations	B._____
C. Develop cooperative programs with other local agencies	C._____

---

4. How willing are you to adopt each of the techniques. Please circle the number for each technique which best reflects your answer.

	Not Willing			Neutral			Very Willing
A. Improve the use of current transportation resources.	1	2	3	4	5	6	7
B. Increase the resources from outside organizations.	1	2	3	4	5	6	7
C. Develop cooperative programs with other local agencies.	1	2	3	4	5	6	7

5. Why is your agency involved in transportation for your client? (Circle one answer for each item)

	Unimportant Factor			Moderately Important			Very Important Factor
A. It is one of our basic missions	1	2	3	4	5	6	7
B. We found our clients needed it	1	2	3	4	5	6	7
C. We received a special grant to do it	1	2	3	4	5	6	7

---

6. Did you receive an approved budget for transportation before of after you had to start providing transportation service? Before_____After_____

---

7. How many months before or after your budget was approved did you have to start providing transportation services? _____months.

---

8. Do you expect to have a larger or smaller transportation budget for next year? (Check one and indicate percentage)

Larger _____ _____% change expected

Smaller _____

---

9. How sure are you about next years funding? (Circle one)

Entire Budget Guaranteed			Not Sure How Much It Will Be			No Budget Guaranteed
1	2	3	4	5	6	7

---

10. Please indicate if your agency is involved in any of the activities listed. Give the number of agencies with which you are involved for each type of activity.

Type of Activity	Please indicate Number of Agencies
A. Trying to coordinate client visits	A._____
B. Trying to coordinate vehicle schedules	B._____
C. Joint purchase of insurance, gas, maintenance etc.	C._____
D. Centralized dispatching of vehicle	D._____
E. Joint use of office space or garage	E._____
F. Cooperative planning	F._____
G. Other (Specify)_____	G._____

11. Do you think federal or state regulations would be a problem in trying to coordinate transportation service with other local agencies? (Circle One)

Major Obstacle						Not a Problem
1	2	3	4	5	6	7

---

12. Do you think that coordination would lead to less costly transportation expenditures (per trip)? (Circle One)

Significantly Less Costly			No Change			More Costly
1	2	3	4	5	6	7

---

13. If you were to coordinate with other agencies you might loose some control of the funds you spend on transportation. How much of a loss of control would you anticipate?

Significant Loss of Control						No Loss of Control
1	2	3	4	5	6	7

---

14. Do you agree with the statement that the cost savings are worth the loss of control when agencies coordinate?

Agree			Neutral			Disagree
1	2	3	4	5	6	7

---

15. How much administrative effort do you think it would take to negotiate with other agencies to try to better coordinate transportation?

A Lot of Effort						Little Effort
1	2	3	4	5	6	7

---

16. Do you or a member of your staff have the time available to do the coordination?

Sufficient Time is Avialable						No Time Available
1	2	3	4	5	6	7

---

17. Have the agencies in your area developed a cooperative approach to serving clients or is there interagency conflict over "turf" (Circle One Number)

Cooperation						Conflict
1	2	3	4	5	6	7

---

18. Indicate your primary client group by putting a "1" next to (only) one of the items below. Also indicate other groups your agency serves by putting a "2" next to the appropriate items below.

A. Elderly_____ B. Handicapped_____ C. Low Income_____ D. Other_____

19. Indicate the primary service your agency performs by putting a "1" next to (only) one of the items below. Also indicate other services your agency performs by putting a "2" next to the appropriate items.

A. Health (includes services for the physically disabled) _____
B. Recreation _____
C. Education, training or employment _____
D. Information and referral (Includes legal consuling) _____
E. Children and Youth (day care) _____
F. Alcoholism, drug abuse services _____
G. Welfare, financial services (includes provision of food, clothing, housing) _____
H. Senior Citizens Center _____
I. Other (list category) _____

---

20. What is your agency's transportation budget for 1978? _____

21. What is your agency's transportation expenditures for 1977? _____

22. What is your total agency budget in 1978? _____

23. What is your total agency's expenditures in 1977? _____

24. How many one-way person trips per month does your agency provide? _____

---

25. In general, which of these activities would require the most effort by an agency like yours. Rank each of them by putting a one (1) next to the activity which would require the most effort, a two (2) next to the activity which would require the second highest level of effort and so on. Please assign rank to all of them.

Type of Activity	Rank
A. Try to coordinate client visits	_____
B. Try to coordinate vehicle schedules	_____
C. Joint purchase of insurance, gas, maintenance	_____
D. Centralized dispatching of vehicles	_____
E. Joint use of office space, garage	_____
F. Cooperative planning	_____

THANK YOU FOR COMPLETING THIS FORM. PLEASE RETURN IT BY USING THE ENCLOSED SELF-ADDRESSED STAMPED ENVELOPE.

Arthur Saltzman
School of Social Sciences
Institute of Transportation Studies
University of California
Irvine, California 92717

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SCHOOL OF SOCIAL SCIENCES IRVINE, CALIFORNIA 92717

May 4, 1978

Mr. Bill Rothier
S.F. Senior Center
890 Beach Street
San Francisco, CA 94109

Dear Mr. Rothier:

We are engaged in a study of the transportation services provided by social service and health agencies like yours. The enclosed questionnaire is being distributed to agencies in your region. It takes less than 10 minutes to fill out, and we would appreciate it if you could return it to us some time during the next week.

In return for your time, we are offering a summary of the results of the study. To obtain it, just fill out the appropriate item at the bottom of this page and return this letter along with the questionnaire.

Although we need your agency name and have coded this form for identification purposes, your answers will be kept confidential. Only statistical summaries will be reported.

We sincerely appreciate your cooperation. If you have any questions please contact me at the phone number below.

Sincerely,

Arthur Saltzman
Project Manager
(714) 833-6205

~~XX~~ Please mail me a copy of the summary at the name and address above.

____ Mail the summary to: Mr. Wm. R. Pothier
San Francisco Senior Center
890 Beach St.
San Francisco, Calif. 94109

May 13, 1978

Dear Respondent

I recently sent you a survey form asking for information about social service agency transportation. I realize that you do not want to spend a lot of your time filling out surveys. Therefore, I have tried to make it simple to complete so it does not require a large amount of your effort or time.

If you are knowledegable about your agency's client transportation then I appeal to you to take the 10 minutes required to complete this form and mail it to me today if possible. If you are not able to complete this survey then please give it to the appropriate person in your agency.

I need a large number of returns to be able to successfully complete this study. If you have merely misplaced this survey, you will still have the opportunity to complete one because I will send a duplicate copy with another reminder within one week. Thank you for your time and cooperation.

Sincerely,
Arthur Saltzman
Project Manager

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INSTITUTE OF TRANSPORTATION STUDIES IRVINE, CALIFORNIA 92717

(31)

May 25, 1978

Dear Respondent:

We recently sent you a short questionnaire about the transportation you provide for your clients. Since we have not received your response, this follow-up letter and another copy of the survey are being sent to encourage you to take ten minutes from your busy schedule to complete this form and return it to us.

If you do provide any sort of client transportation your response is especially important. You will find the questionnaire simple to complete. A self addressed stamped envelope is enclosed for your convenience. Please help us by responding within the next week.

As in our first mailing, we are offering you a summary of the study results. Please indicate your desire to receive this summary by giving us your name and address in the space provided below and return this letter along with the survey.

Thank you for your assistance.

Sincerely yours,

Arthur Saltzman
Project Manager
(714) 833-6205

✓ Yes, I want to receive a copy of the summary.

Mail it to: Dev. Svc. For Children
3444 Story Rd.
San Jose, CA. 95127

Appendix C

Codebook for Data on Agency Coordination

CARD 1

Column	Description	Question
1-3	Agency Identification Number: (first 3 digits from code on p. 1 of survey)	

	001-100	Regular Providers
23	100-299	Santa Clara County
25	300-599	San Francisco County
5	600-699	Pomona Valley
16	700-799	Sacramento County
	800-899	Imperial Valley

4 — Source of Agency Name: (fourth digit from code on p. 1 of survey)

1. EOC affiliates - Santa Clara
2. EOC survey list - Santa Clara
3. Rec. Center (Kevin Bond) list - San Francisco
4. Get About Board of Directors - Pomona Valley
5. SRAPC survey list - Sacramento
6. Directory of Community Services - Pomona Valley
7. SCAG list - (no directors names given) - Pomona Valley
8. MTC list - San Francisco
9. MTC list - Santa Clara
10. Imperial Valley - 3 lists

5-6 — Date Survey Sent: (from code on p. 1 of survey)

Date in May, 1978 coded in two columns

7 — Card Identification Number: 1

8-9 — Date Survey Returned (from date recorded under code on p.1 of survey)

Date in May, 1978 coded in two columns. For dates in in June and beyond record June 1 as 32, June 2 as 33, etc.

Column	Description	Question
10	Types of Providers:	
	"Does agency operate a transportation system?" (lease or own vehicles) 1. Yes (checked on survey) 2. No	1A
11	"Does agency purchase transportation service from another human service agency?" 1. Yes 2. No	1B
12	"Does agency purchase transportation service from taxi operator or other service provider?" 1. Yes 2. No	1C
13	"Does agency reimburse clients for transportation?" 1. Yes 2. No	1D
14	"Does agency coordinate volunteer who drive clients?" 1. Yes 2. No 3. Special code for staff provides transportation for clients.	1E
	Number of Each Type of Vehicle Owned	2
15-16	Station Wagons: (Actual number coded in two columns)	
17-18	Vans: (code none as 00)	
18-20	Sedans: "	
21-22	Small Buses: "	
23-24	Large Buses "	
25-26	Other: "	
	Ranking of Techniques for Improvement	3
	Actual rank (1, 2, or 3) is recorded (Where no rank 1 is given the code other two activities with a 5. If no rank is given then put 9 in all three columns.)	
27-	Rank of "Improve the use of current transportation resources."	3a

Column	Description	Question
28	Rank of "Increase the resources from outside organizations."	3b
29	Rank of "Develop cooperative programs with other local agencies."	3c

Willingness to Adopt Techniques

(Record numbers circled on scale or a 9 if not answered)

		Not Willing			Neutral			Very Willing	
30	Improve the use of current transportation resources	1	2	3	4	5	6	7	4A
31	Increase the resources from outside organizations.	1	2	3	4	5	6	7	4B
32	Develop cooperative programs with other local agencies.	1	2	3	4	5	6	7	4C

Why is Agency Involved in Transportation

(Record numbers circled on sclae or a 9 if not answered)

		Unimportant Factor			Moderately Important			Very Imp. Factor	
33	No one else is doing it so we had to	1	2	3	4	5	6	7	5A
34	We found our clients needed it	1	2	3	4	5	6	7	5B
35	We received a special grant to do it	1	2	3	4	5	6	7	5C

36 Did you receive an apporved budget for transportation before or after you had to start providing transportation service? 6

1. Before
2. After
3. Not answered

37-38 How many months before or after your budget was approved did you have to start providing transportation services? 7

Months: (Actual number of months recorded in two columns or a 99 if not answered)

Column	Description	Question
39	Do you expect to have a larger or smaller transportation budget for net year? 1. Larger 2. Smaller 9. if not answered	8
40-42	% change expected (Actual change expected recorded in three columns or 999 if not answered)	8
43	How sure are you about next years funding? (Record number circled on scale or a 9 if not answered) Entire Budget Guaranteed — Not Sure How Much Will Be — No Budget Guaranteed 1 2 3 4 5 6 7	9
	Number of other cooperating agencies for each type of coordination activity (Record actual numbers coded in 2 column, or 99 if not answered)	10
	Activity	
44-45	Trying to coordinate client visits	10A
46-47	Try to coordinate vehicle schedules	10B
48-49	Joint purchase of insurance, supplies, gas, maintenance	10C
50-51	Centralized dispatching of vehicles	10D
52-53	Joint use of office space, garage	10E
54-55	Cooperative planning	10F
56-57	Other (Specify)_____	10G
58	Do you thank federal or state regulations would be a problem in trying to coordinate transportation service with other local agencies? (Record number circled on scale or a 9 if not answered) Major Obstacle — Not a Problem 1 2 3 4 5 6 7	11

Column	Description	Question
59	Do you think that coordination would lead to less costly transportation expenditures (per trip)? (Record number circled on scale or a 9 if not answered) Significantly Less Costly — No Change — More Costly 1 2 3 4 5 6 7	12
60	If you were to coordinate with other agencies you might loose some control of the funds you spend on transportation. How much of a loss of control would you anticipate? (Record number circled on scale or a 9 if not answered) Significant Loss of Control — No Loss of Control 1 2 3 4 5 6 7	13
61	Do you agree with the statement that the cost savings are worth the loss of control when agencies coordinate? (Record number circled on scale or a 9 if not answered) Agree — Neutral — Disagree 1 2 3 4 5 6 7	14
62	How much administrative effort do you think it would take to negotiate with other agencies to try to better coordinate transportation? (Record number circled on scale or a 9 if not answered) A lot of Effort — Little Effort 1 2 3 4 5 6 7	15
63	Do you or a member of your staff have the time available to do the coordination? (Record number circled on scale or a 9 if not answered) Sufficient Time is Available — No Time Available 1 2 3 4 5 6 7	16
64	Have the agencies in your area developed a cooperative approach to serving clients or is there interagency conflict over "turf"? (Record number circled on scale or a 9 if not answered) Cooperation — Conflict 1 2 3 4 5 6 7	17

Column	Description	Question
	Agency's Client Groups	
	For each category: 1. Primary group served 2. Other group served 9. No answer given	18
65	Elderly	18A
66	Handicapped	18B
67	Low Income	18C
68	Other	18D
	Services Performed by Agency	
	For each category: 1. Primary service performed 2. Other service performed 9. No answer given	
69	Health (includes services for the physically disabled)	19A
70	Recreation	19B
71	Education, training or employment	19C
72	Information and referral (Includes legal consulting)	19D
73	Children and Youth (day care)	19E
74	Alcoholism, drug abuse services	19F
75	Welfare, financial services (includes provision of food, clothing, housing)	19G
76	Senior Citizens Center	19H
77	Other (list category)	19I
78-80	BLANK	

CARD 2

Column	Description	Question
1-3	Agency Identification Number (first three digits from code on p. 1 of survey)	
4	Budgets and Expenditures Record actual number given in seven columns or code seven 9's if not answered. (on #19-25, 9999997 = 300,000,000; 9999996 = 54 million; 9999995 = 100 million)	
5-11	What is your agency's transportation budget for 1978?	20
12-18	What is your agency's transportation expenditures for 1977?	21
19-25	What is your total agency budget in 1978?	22
26-32	What is you total agency's expenditures in 1977?	23
	Trips Provided	
33-36	How many one-way person trips per month does your agency provide? (Record actual number given in four columns or colde four 9s if not given. 9998 means 12,800)	24
	Ranking of agency coordination activities in order of effort required. Rank of 1 given to activity which requires most effort. Rank of 6 requires least effort. Record actual rank given for each column or code 9 if rank not given.	25
	Activity	
37	Try to coordinate client visits	25A
38	Try to coordinate vehicle schedules	25B
39	Joint purchase of insurance, gas, maintenance	25C
40	Centralized dispatching of vehicles	25D
41	Joint use of office space, garage	25E
42	Cooperative planning	25F

Column	Description	Question
43	Coders I.D. Number	
	NOTE: Write coded and indicate date coded and coders initials and number on top of p. 1.	
44	Title of Respondent (from top of p. 1)	
	1. Agency head Director or Executive Director	
	2. Assoc. Director or Manager or Subunit Director	
	3. Secretary	
	4. Supervisor or Head Nurse	
	5. Transportation Director or Coordinator	
	6. Social Worker or Specialist or Councelor or Teacher	
	9. Not given.	
45-80	BLANK	

ABOUT THE AUTHOR

Arthur Saltzman is Associate Professor and Director of the interdisciplinary Transportation Institute at North Carolina A&T State University, Greensboro, N.C. Since accepting this position in 1970, he has directed federally funded research programs in the areas of the transportation needs of the poor, elderly and handicapped; transit problems in small cities and rural areas; and paratransit systems. He is responsible for developing a new undergraduate degree program in transportation at the University and establishing cooperative programs in transportation and regional planning units, local and state government agencies and other universities. He is also responsible for developing a series of lecturers and seminars to provide those outside the University with training in transportation.

Professor Saltzman received his undergraduate degree in Physics from Brooklyn College in 1960. He spent three years in the aerospace industry before attending graduate school in Industrial Management, first at Carnegie Mellon University and then at the Massachusetts Institute of Technology where he received his Master of Science Degree in 1966. He contributed to the development of the Apollo Guidance and Navigation System at the MIT Instrumentation Laboratory until 1968 when he transferred to the MIT Urban Systems Laboratory to work on the Dial-A-Ride Project. While at the Urban Systems Laboratory, he conducted research in transportation, with an emphasis on the problems of innovation in the transit industry.

From 1976 to 1978 Professor Saltzman was a doctoral student in the School of Social Sciences at the University of California at Irvine. He was awarded the Ph.D. in Social Sciences in 1980. This publication is based on his dissertation.

Professor Saltzman has published extensively in the area of public transportation and is a member of a number of professional societies. He is currently the Chairman of the Transportation Research Board Committee on the Transportation Disadvantaged.

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