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**ANALYSIS OF INTERORGANIZATIONAL RELATIONS**

by

**Donald Andrew Dillman**

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## CHAPTER 1. INTRODUCTION

If the problem of cooperation can be solved it seems that specialization is capable of accomplishing almost any material objective.

This observation (Thompson, 1961, p. 4) succinctly depicts one of man's present dilemmas. Modern society has developed as a result of the specialization of productive tasks. Such a society can be maintained and materially advanced only by the continuation of an extensive division of labor. But, the division of labor itself can only be maintained by the corresponding development of systems of cooperation which will adequately articulate specialized efforts. This problem of achieving productive integration under the rationalized and impersonal conditions of large-scale bureaucracies has been much observed and studied by sociologists.

The differentiation of tasks among autonomous organizations and resultant efforts to integrate their operations is a more recent phenomenon, but now a fundamental condition of existence in most modern societies. This secondary division of labor and the efforts to bring organizations together to accomplish increasingly difficult tasks is the topic of this dissertation. Questions of how and why organizations relate to one another in a complex society are considered both theoretically and empirically. Specific hypotheses are derived and tested in an effort to contribute to our understanding of interorganizational dependencies.

Until very recently an appropriate way to initiate a discussion of interorganizational relations would have been to note as a rationale the near void of applicable research. Such an absence has been pointed out by Etzioni (1960 and 1964) twice within the last decade. On one of these

occasions he stated (1964, p. 110):

Modern society is a society of organizations but the obvious question of how these organizations interact has not been systematically explored. We know a great deal about interaction among persons, something about interaction among groups, but surprisingly little about interaction among organizations.

Recently much has been done to fill this void. A bibliography of materials containing information about interorganizational relations prepared by Collver (1968) contained 220 entries. Over two-thirds (148) of the items entered were published in the 1960's. Only five items were dated prior to 1950.<sup>1</sup> In a very recent article in the American Sociological Review (Aiken and Hage, 1968) in which an attempt was made to explain the occurrence of organizational interdependencies, 33 articles were cited which dealt with interorganizational relations. Of these 23 were published after 1960, and only one prior to 1950.

In light of these observations two questions seem particularly appropriate for consideration in the introduction to this dissertation. First, why is the study of interorganizational relations becoming of increasing sociological concern? Second, where does the present study "fit" with regard to the recent proliferation of interorganizational research? Discussions of these questions are followed in this chapter by a statement of the specific objectives of the study.

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<sup>1</sup>Dates were not reported and could not be ascertained for another 11 items.

### Why Study Interorganizational Relations

Organizations are collectivities (social systems) that have been established for the pursuit of relatively specific objectives on a more or less continuous basis (Scott, 1964, p. 488). Their development represents an attempt to rationalize work efforts under conditions imposed by a division of labor. Parsons (1956a, p. 66) has stated:

The existence of organizations is a consequence of the division of labor in society. Where both the 'production' of specialized outputs and their consumption or ultimate utilization occur within the same structural unit, there is no need for the differentiation of specialized organizations. Primitive societies insofar as their units are "self-sufficient" in both economic and other senses generally do not have clear-cut differentiated organizations ....

The organizational problem of modern society has advanced far beyond the one first presented by the industrial revolution and its relatively simple division of labor. Whereas emphasis initially was on building organizations to coordinate individual efforts, continually greater emphasis is now placed on building organizations and mechanisms to coordinate the organizations themselves.

A basic condition contributing to the need for interorganizational coordination is the unprecedented proliferation of organizations into the structures of all societal institutions. In Etzioni's (1964, p. 10) words:

We are born in organizations, educated by organizations and most of us spend much of our lives working for organizations. We spend much of our leisure time paying, playing and praying in organizations. Most of us will die in an organization, and when the time comes for burial, the largest organization of all -- the state -- must grant official permission.

It may be said however, that the problem of organizational coordination stems less from the existence of such large numbers, and more from the conditions of their existence. For example, organizations

interpenetrate one another in their search for scarce resources. Competitive interaction is generally a fundamental condition of existence. In addition organizations must operate to deal with problems that present themselves in less discrete units than do the organizational structures designed to cope with them. That is, there exists a division of labor among organizations such that organizational effectiveness necessitates interorganizational effectiveness. The many health and welfare, or "helping", agencies present in most cities illustrate this situation. Each agency performs a relatively specialized service. Employment agencies provide occupational counseling and seek jobs for clients, family service agencies provide family counseling, mental health clinics provide psychiatric service, alcoholism agencies treat alcoholics, welfare agencies provide financial assistance, and other agencies provide legal services. Persons served by one or more of these agencies often do not have single problems but exhibit problem syndromes. For example, a person may have a drinking problem aggravated by the loss of a job he did not like in the first place. And as a consequence perhaps his wife threatened to divorce him. An attempt to solve the man's occupational problem may be totally ineffective if not accompanied by the resolution of his other difficulties. The coordination of services among agencies, although certainly called for, is complicated by competition among them for resources with which to provide their respective services.

The necessity of effective interorganizational relations between functionally specific organizations is further illustrated by present efforts to make unprecedented assaults on problems of extreme complexity. Examples of these efforts are programs to place men on the moon, to more precisely control economic growth and inflation, to provide near

instantaneous flight confirmations and to stop intergenerational poverty.

The organization of all areas of life and efforts to control organizational attacks on the super-complex problems that simultaneously penetrate many aspects of life can be defined in interorganizational terms. Etzioni (1968, p. 7) has concluded:

In the realm of machines, there are two so-called revolutions; the mechanization of work and mechanization of control of the machines that work. In the social realm, a similar, two-step development may be recognized. The first societal revolution came with the development of the corporation, or modern organization in general, which provided the sociological machine, the more effective way of 'getting things done.' The second societal revolution involves the control by second-order organization of first-order organizations which do the work, in other words, the introduction of a comprehensive over-layer of societal guidance.

Etzioni's reference to second order organizations points more to the present need for the ordering of relations between organizations rather than to the present existence of such organizations with control responsibilities in all or even most institutional areas of society. Much of the ordering of relations that Etzioni foresees being done by second order bodies is now performed through direct interactions between the relevant organizations. Until recently little has been done to describe and explain the ways that organizations relate to one another and the ways in which such relationships impinge on their operations.

Evan (1963, p. B-218) is one of many who has discussed the need for research which deals with organizations and their environmental interactions:

The widespread neglect of interorganizational relations is all the more surprising in view of the fact that all formal organizations are embedded in an environment of other organizations as well as in a complex of forms, values and collectivities of the society at large. Inherent in the

relationship between any formal organization and its environment is the fact that it is to some degree dependent upon its environment; in other words it is a subsystem of the more inclusive social system of society.

The need for a better understanding of organizations' environmental relations is also pointed out by Yuchtman and Seashore (1967) who define organization effectiveness as the ability to obtain resources from the environment under conditions of competition. Arguments for the study of inter-organizational relations have also been offered by numerous others including Mouzelis (1968), Terreberry (1968), Levine and White (1961) and Thompson and McEwen (1958).

In considering the need for studies of interorganizational relations a relevant question is to what extent, if at all, do they represent social phenomena that are unique, so their separate study is warranted. March and Simon (1958) for example, suggest that intergroup conflict within organizations is very similar to interorganizational conflict. However, Litwak and Hylton (1962) have suggested two important ways in which inter-organizational relations differ from the commonly studied intergroup relations of units within the same organization. They are that in the case of interorganizational relations 1) an overarching authority structure is absent, and 2) social behavior operates under conditions of partial conflict.

It is argued that within organizations the relations between subunits are in all cases subject eventually to a single authority. The presence of this authority tends to affect and enforce decisions about resource allocations and relations between the subunits. In effect, formal authority plays a larger role in explaining relations between units within

organizations, whereas other variables to which only minimal attention would otherwise be given assume greater importance in interorganizational analysis. A similar point is made by Warren (1967), although he sees the absence of an overarching authority as a matter of degree. He identifies four interorganizational contexts for decision-making -- unitary, federative, coalitional and social choice. They specify, from most to least, the inclusiveness of the interorganizational decision-making structure.

The existence of partial conflict in the interorganizational situation is seen by Litwak and Hylton (1962) to stem from the organizational need to cooperate in some areas, but protect others from outside influence. As seen in Loomis' (1960) social systems terminology this can be expressed as the need to maintain systemic linkages while simultaneously performing boundary maintenance activities. Litwak and Hylton's argument is developed in reference to the goal structures of organizations. They suggest that organizations have tended to develop, historically, in support of different and sometimes conflicting values. To the interorganizational situation each of the participants contributes efforts to achieve its own goals. Conflict exists even in the absence of logical conflict between goals. As later stated by Litwak (1969, p. 5) "... scarce resources can produce conflict between goals or means which logically are consistent". Because of scarce resources and differences in goals one organization can generally maximize its own goals only at the expense of the other's goals attainment. The central idea to their argument is, then, that interorganizational relations are motivated by concerns of self-benefit and although each organization may gain from interaction with the other what can be gained is limited. The possibility of greater cost than benefit is always present.

In summary, major arguments for the expenditure of effort in the study of interorganizational relations are, 1) the vast numbers of organizations that penetrate all areas of life, 2) the division of labor among organizations that results in environmental dependencies, and 3) the possible differences of the phenomena of interorganizational relations from other types of social relations.

#### How This Study Differs From Past Research

An important consideration in developing the present research study was the contribution it could make to our understanding of the occurrence of interorganizational relations. Thus it is appropriate to discuss past research and contributions that have already been made. Emphasis is placed here on delineating different ways that the social phenomena, interorganizational relations, have been approached, citing selected studies as examples.<sup>1</sup>

Past studies have varied on several dimensions. Most common in the literature are the many articles and books which have dealt with interorganizational relations only briefly, often in a tangential manner (March and Simon, 1958, Blau and Scott, 1962, Caplow, 1964, Etzioni, 1964, and Morris and Binstock, 1966). Some authors have limited their concern to the theoretical aspects of research (Parsons, 1956a and 1956b, Guetzkow, 1966, Thompson and McEwen, 1958, Thompson, 1967). In contrast others have placed little, if any, emphasis on theoretical considerations and have done

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<sup>1</sup>This section is not intended to serve the purpose of a comprehensive review of literature, but merely to point out a research rationale for the present study. Studies are discussed in varying detail as judged warranted in terms of this objective.

work which is largely "applied" in nature (Barth, 1963, Black and Kase, 1963, Morris, 1963a and 1963b). A number of studies have attempted to bridge the gap between theory and empirical study, but most often have relied on exemplary data sometimes qualitative in nature (Evan, 1963, Selznick, 1966, Levine and White, 1961, Litwak and Hylton, 1962, and Caplan and Kohout, 1966a). A recent article by Aiken and Hage (1968) is one of the very few published studies in which hypotheses were theoretically derived and put to a quantitative field test. The present study is most similar to the latter one inasmuch as the aim is to theoretically derive and empirically test hypotheses.

It may be said that in general researchers have approached their studies from one or the other of two meaningful perspectives. Individual studies have tended either to study the effects of environmental relations on the operation of organizations or to determine what factors affect organizations' involvements in relations with organizations of their respective environments. Examples of each of these approaches are discussed here with emphasis on the latter inasmuch as the present study follows that pattern.

A "classical" interorganizational study which examined the effects of environment on organizational policies and actions was Selznick's (1966) study of the Tennessee Valley Authority, conducted in the 1940's. Selznick used the term cooptation to describe the efforts of certain organizations to mitigate threats to their operations by absorbing new elements into their leadership or policy determining structures. Thompson and McEwen (1958) have followed in this tradition by classifying organizational strategies for dealing with environments as to whether they are competitive

or cooperative (subcategorized as bargaining, cooptation and coalition). They then examined the varying degrees of restraint these ways of relating to the environment place on organizational goal setting. A similar study is the one by Dill (1958) in which he examined the limits on managerial autonomy imposed by the environment. In another study Evan (1963) sought to delineate "organization sets" of focal organizations and examined the consequences for the latter's decision-making. Evan also studied the effect of competition upon the tendency for organizations to amalgamate.

Closer to the central concern of the present research are those studies which have specified interorganizational relations as a dependent variable and attempted to explain their occurrence. A second, but incidental, way in which many of these studies relate to the present research is the similarity of the empirical arenas. That is, many have been concerned with relations among the health and welfare, or "helping" agencies, of communities. For these reasons the following studies are mentioned in somewhat more detail.

Lefton and Rosengren (1966) considered agencies' lateral and longitudinal interests in clients in order to explain the extent of collaborative relations with one another. Lateral interests concern the extent of an agency's interest in multiple aspects of clients' lives. Longitudinal interest concerned the degree of interest over time. It was hypothesized that formal collaborative relations are more likely to occur if lateral and longitudinal interests of the participant agencies are similar. In the absence of similarity conflict was hypothesized as more likely to occur. The major limitation of these authors' approach is, as they recognized, its

partial nature. No effort was made to incorporate other factors which might affect the occurrence of collaborative relations into their theoretical scheme.

Litwak and Hylton (1962) have attempted to explain a special type of indirect interaction among agencies, that is the emergence of coordinating agencies. They hypothesized that coordinating agencies will develop and continue in existence if formal organizations are partly interdependent, agencies are aware of this interdependence, and it can be defined in standardized units of action. As a modification of this hypothesis they suggest that if the agency system is small (few agencies) then direct interactions are likely to substitute for coordinating agencies. The Litwak and Hylton hypothesis has been further developed by Caplan and Kohout (1966b) who suggest that three different kinds of interdependence -- facilitative, competitive, and complementary -- may exist -- and affect the emergence of coordinative relations in different ways. The usefulness of the hypothesis in its different forms is limited inasmuch as no insight is provided into the organizational characteristics and conditions under which interdependence is likely to be perceived. Their studies are further limited by the provision of only illustrative data.

A study productive at both the theoretical and empirical levels, is one by Aiken and Hage (1968). Theoretically they focused on organizations' resource needs to derive five hypotheses about factors related to organizational interdependence, as measured by the number of joint programs in which an agency was involved. They were able to explain a considerable amount of the variation in the numbers of joint programs in which agencies were involved by examining five intra-organizational characteristics --

complexity, innovation, communication, centralization and formalization. Although a useful source of hypotheses and of considerable theoretical interest their study is limited in several ways. Empirically, they were able to study only five types of agencies and a total of 16 analytic units. More importantly they examined only whether a focal organization became involved in joint programs and did not specify with which agencies these joint programs were conducted. Consequently the explanatory role of inter-organizational factors (for example "perceived interdependence") in determining the existence of joint programs is ignored. Put one way, they have relied on a unilateral viewpoint to explain what is probably a bilateral phenomenon. Finally, the "number of joint programs" may be a poor indicator of organizational interdependence. For example, organizations may be interdependent through exchanges of information, services, and other resources, but not perceive they are involved in joint programs per se.

An earlier study by Levine and White (1961) is of considerable interest inasmuch as their attempt to explain the occurrence of interagency relations did take into account which agencies cooperated with which others. Although differing from the study by Aiken and Hage (1968) on that point, they similarly based their theory on the need for resources. Levine and White specified three categories of resources -- clients, labor, and a residual category of other resource elements. They hypothesized that the occurrence of exchange relations -- any voluntary activities between two organizations which have consequences, actual or anticipated, for the realization of their respective goals or objectives -- depends on 1) access to elements outside the community health agency systems, 2) goals of the organizations, and 3) domain consensus between the organizations. While

considering organizational needs and interorganizational factors which may affect the exchange process, their work is limited by not considering dynamics of the interaction process. More importantly their theoretical framework of exchange theory omits from consideration interactions that take place as a result of coercion or even normative constraints of the health agency system.

#### Limitations of past research

Several limitations of past research seem apparent. First, approaches to the study of interorganizational relations have tended to consist of only partial conceptualizations, focusing on only limited aspects of the phenomena. No "theory" of interorganizational relations exists as of yet. In particular it appears that these partial conceptualizations have not generally been related to the larger body of sociological theory. In addition, attempts to explain the occurrence of interorganizational relations have most often been limited to a few variables at a time. It is probable that the existence of interorganizational relations depends on intra-organizational characteristics, interorganizational relationships (e.g., the complementarity of one organization's needs with the other's goals), and the dynamics of the interaction process. It appears that no systematic attempt has been made to specify the many possible factors from each of these sources that could influence the existence of interorganizational relations. Individual studies have generally lacked the broad perspective which would lead to the systematic derivation of two variable hypotheses and then to multi-variate analysis.

Perhaps a reason that attention at any one time has generally been

focused on only a few of the possible influences on interorganizational relations is the lack of empirical tests on existing theoretical formulations. The lack of such tests is the third limitation to be discussed here. In general empirical support of hypotheses has been limited to qualitative examples provided by the authors in an illustrative sense. In order to advance the study of interorganizational relations a crucial need is for the adequate conceptualization of empirical studies. In particular measures of intensity and not just the occurrence of interorganizational relations need to be developed.

It is in the context of these recognized limitations of past research that the objectives for the present research have been formulated.

#### Objectives of the study

The present study is not so ambitious as to attempt to provide remedies for all or even most of the recognized deficiencies of past research. It too relies on a partial conceptualization. However, an attempt is made to build on past research and go beyond previous efforts in these ways:

1) to place the study of certain aspects of interorganizational relations on a sounder theoretical basis, relating it to the larger body of sociological theory, 2) to derive and empirically test hypotheses about the occurrence of certain types of interorganizational relations, and 3) to develop a measure of the intensity of interorganizational relations.

Formally stated, the specific objectives of this dissertation are as follows:

1. To develop a theoretical approach to the study of interorganizational relations.

2. To derive hypotheses relating the occurrence of interorganizational relations (dependent variable) to theoretically expected determinates (independent variables) of their occurrence.
3. To empirically test the two variable hypotheses.
4. To conduct multivariate analysis of the simultaneous affects of the independent variables on the occurrence of interorganizational relations.

## CHAPTER 2. THEORETICAL FORMULATIONS AND DEVELOPMENT OF HYPOTHESES

Interorganizational relations have been approached at a theoretical level in many different ways. Among the concepts that have been used to describe them are: cooperation, collaboration, competition, conflict, rivalry, coalition, bargaining and cooptation. The major or most visible feature of the total interorganizational phenomena has most often been used as the conceptual basis for description. Much less emphasis has been given to conceptually describing these relations in terms of their meaning to the functioning of the involved organizations.

In this study interorganizational relations are approached from the point of view of one of the participants. Following the terminology of Evan (1963), the organization of interest is specified as the focal organization. The organizations to which it relates in its environment, in other words the organizations which in some way make a difference to the functioning of the focal organization, are referred to collectively as the organization set of the focal organization. Interorganizationally the major interest of this study is placed on the manner and degree to which interactions between the focal organization and members of its set contribute to the operation of the former. Specifically, the intensity of the adaptive transactions of the focal organization with the respective members of its set will be examined.

This chapter might usefully be viewed as consisting of three sections. The first considers ways of conceptualizing the relations among organizations and has as its objective the theoretical justification of the

conceptualization to be employed in the present study. The second section focuses at a theoretical level on the identification of factors which may influence the intensity of adaptive transactions of a focal organization with members of its set. The third section consists of the development of the theoretical hypotheses which will be operationalized and tested in this dissertation.

### Interorganizational Relations as Interaction

At a very general level interorganizational relations can be described conceptually as interaction. The term, interaction, has been defined by Sorokin (1947, p. 40) as "... any event by which one party tangibly influences the overt actions or the state of mind of the other." As pointed out by Becker (1964, pp. 657-658), the essential characteristic of interaction is reciprocal influencing. When considered over time interaction consists of an action of one actor evoking a response from a second actor which in turn results in an effect on the first actor. Interaction has been dealt with primarily in terms of interpersonal relations, but there appears to be no inherent reason for not applying the concept to inter-organizational phenomena as well.

### Opposition and cooperation

Quite commonly interactions have been categorized according to which of two basic processes -- opposition or cooperation -- are dominant. For example, Young (1949) has viewed opposition as the struggle of units against each other for a good, goal or value. In contrast, cooperation is the joint striving of units with one another in pursuit of the same good, goal or value. Young's view of opposition and cooperation is accepted by

Sanders (1966) who points out that cooperative interaction involves more than activities that just contribute to each organization's goal achievement. It involves subordinating individual interests to common interests.

The major criterion for classifying interactions as opposition or cooperation is the type of interdependence which exists between organizations. Interdependence is interpreted as the existence of the condition that two organizations must take each other into account if they are to accomplish their goals (Litwak and Hylton, 1962, p. 401). Thomas (1957) has identified two basic types of interdependence -- competitive and facilitative. If a condition of competitive independence exists one organization can maximize its goals only at the expense of the other. But, under conditions of facilitative interdependence two or more organizations can simultaneously maximize their goals.

It may also be noted that the concepts of opposition and cooperation share much in common with the ecological concepts of symbiosis and commensalism. Symbiosis denotes relations of mutual dependence and advantage between unlike structures. Commensalism denotes competition between like structures for the scarce resources needed for survival and growth (Hawley, 1951, pp. 36-41). Resting the distinction on scarcity of needed resources suggests a reason for the existence of interorganizational relations of opposition or cooperation, an idea which will be developed later.

Opposition Young (1949) divides opposition into two forms -- competition and conflict. The distinguishing features are the level of violence and the focus of attention. Competition is a less violent form of opposition in which attention is focused chiefly on the reward (end) rather than the opponent.

Blau and Scott (1962, p. 197) go further in their definition of competition to state that it does not involve direct interaction. In support they cite George Simmel's statement that with regard to competition, "... the struggle consists only in the fact that each competitor by himself aims at the goal, without using his strength on the adversary." Thompson and McEwen (1958, pp. 25-26) also have noted the indirectness of competitive interaction, "[Competition is] ... that form of rivalry between two or more organizations which is mediated by a third party." However, they do not appear to question the appropriateness of considering competition as an interaction process. That competition is a form of mutual two way influence is suggested by their statement (1958, p. 28) that, "... [the competitor] is not only influenced in its goal-setting by what the competitors and their party may do, but also exerts influence over both." Both Davis (1949) and Bertrand (1967) conceptualize competition as an interaction process, but point out the secondary emphasis on the adversary as opposed to the goal.

With regard to conflict Young (1949) suggests that a definite effort is made to thwart, injure or destroy the opponent as a means to the achievement of the desired goal. Davis (1949), Bertrand (1967) and a well known conflict theorist, Coser (1968) appear to concur with Young's conception of conflict. Coser (1968, p. 232) defines conflict as:

... a struggle over values or claims to status, power and scarce resources, in which the aims of the conflicting parties are not only to gain the desired values but also to neutralize, injure or eliminate their rivals.

Davis (1949, p. 162) has probably gone further than the others mentioned here to distinguish competition from conflict and to point out the

linkage between them. He states that competition:

... implies that there are rules of the game to which the competitors must conform and that behind these rules, justifying and maintaining them, is a common set of values superior to the competitive interest.

Thus the rules of competition, the existence of which is noted by Nisbet (1968, p. 389) as well as Davis, limit the means acceptable to the achievement of ends. Means such as force and fraud are eliminated. The linkage between competition and conflict is that when the rules of competition break down conflict is the result. Thus competition is never an unrestricted form of oppositional interaction.

In addition to competition and conflict one sociologist, Bertrand (1967, p. 214), has distinguished a third form of opposition -- rivalry. It contains elements of both competition and conflict, but is distinguished as follows:

Rivalry begins as competition, but assumes a personalized nature, which is foreign to true competition. Instead of focusing completely on the goal for which they are competing rivals consciously strive to defeat one another.

Cooperation Cooperation has been conceptualized in a variety of ways under different labels. Common to most definitions appears to be the existence of joint striving for a goal desired by all of the involved parties. For example, Nisbet (1968, p. 384) has defined cooperation as:

... joint or collaborative behavior that is directed toward some goal and in which there is common interest or hope of reward .... Always there is a combination of efforts toward a specific end in which all the participants have a stake, real or imagined.

Although definitions by Davis (1949, p. 166) and Bertrand (1967, p. 209) do not appear to be substantively different, Sanders (1966, p. 312) goes further to suggest the existence of a certain degree of commitment to

common ends.

Cooperation implies that those involved in the interaction have common goals and the willingness to subordinate individual or narrow group interests for the achievement of a purpose or program greater than themselves.

Defining cooperation to include the subordination of self interests for a greater common purpose, as does Sanders, seems to place an unnecessary restriction on the concept of cooperation. The restriction seems unnecessary because under certain conditions two organizations might be able to work toward a common end without any subordination of their own interests. However, cooperation does impose restraints on the participant organizations; for example there are agreements on roles and resource contributions which are probably a part of the cooperative agreement. Even then, the contributions may come from a little or unused resource base so that self interests are not necessarily subordinated.

One of the varied forms which cooperation may take can be described as formal. Formal cooperation is deliberate and often contractual. The rights and obligations of the cooperators are spelled out and known to both of the involved parties. Bertrand (1967, p. 209) and Nisbet (1968, p. 385) have each specified a type of cooperation as formal. Bertrand has identified two other forms of cooperation -- informal and symbiotic. Informal cooperation is conscious and thus known to those involved. It is exhibited in matters of daily routine which involves mutual-aid practices. In contrast, symbiotic cooperation bears very little consciousness of cooperation tending to be involuntary rather than voluntary.

A term sometimes used to refer to cooperation which is likely to involve degrees of both formal and informal cooperation is collaboration.

Collaboration has been used, but not defined, by Lefton and Rosengren (1966). Leadley (1967) used collaboration to indicate interactions with mutual benefits for the participants that involved an exchange or transaction across system boundaries.

Cooperation need not always be direct. Litwak and Hylton (1962) for example, have used coordination to refer to any means of ordering the relations between two or more organizations using as their example an agency which acts as a mediator to relate other agencies together. Their empirical example was the Community Chest and its associated agencies. Caplan and Kohout (1966b, p. 4) defined coordination to include the idea of subordination in their study of the Cleveland welfare system.

... coordination implies the relinquishing of autonomy by sub-units to some super ordinate unit and a relatively high degree of compliance of the sub-units with demands of the superordinate unit.

A third use of the concept of coordination has been employed by Mott (1968). He uses it to denote the concerting of the behavior of interdependent individuals and groups for a particular purpose or end, whether direct or indirect. However, the predominant usage appears to be with reference to third party efforts at concerting behavior.

Ordering forms of opposition and cooperation      The forms of opposition and cooperation that have been discussed here are presented in Figure 2.1 in diagrammatic perspective so as to show relationships with one another. Differentiation of the concepts, as revealed by a review of past research, has been based on various criteria including: 1) focus of emphasis (partner vs. goal), 2) arrangement (formal vs. informal), 3) intent (assist vs. thwart), 4) voluntarism (voluntary vs. involuntary), and

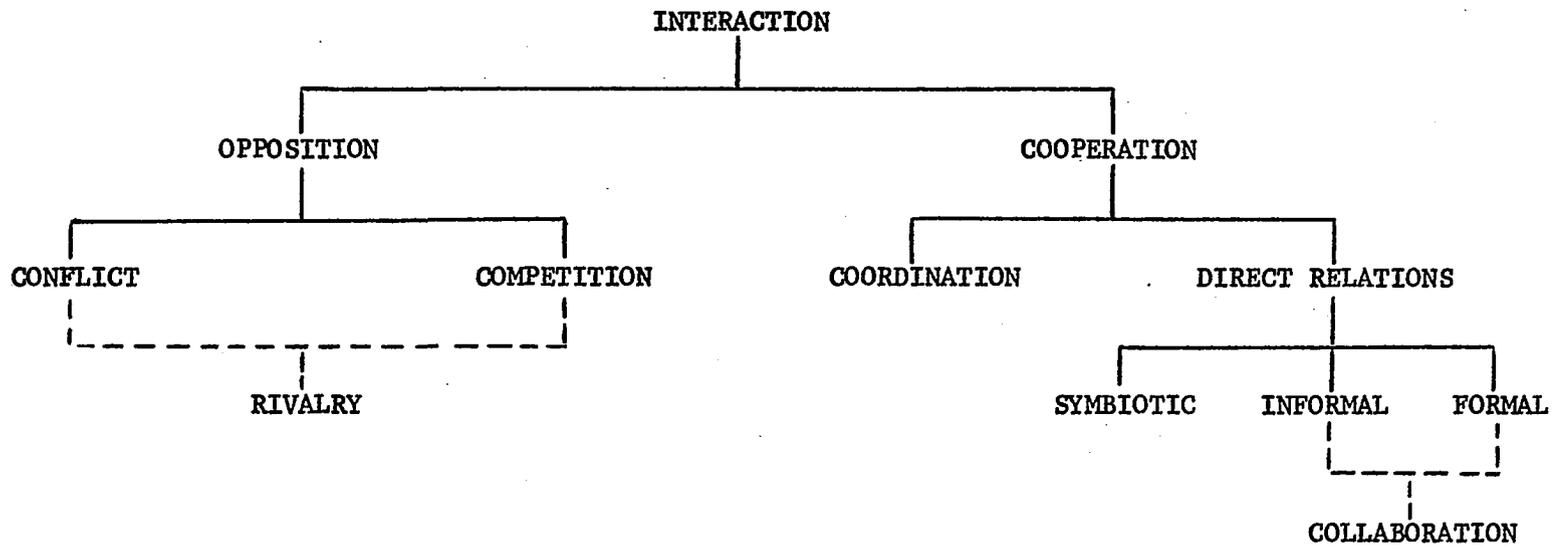


Figure 2.1. Forms of interaction in diagrammatic perspective

5) directness (direct vs. mediated through third party). The concepts presented in Figure 2.1 are not without several limitations with regard to their use for research on interorganizational relations as discussed below.

Limits of application      The concepts of interaction already discussed are considered inadequate for the present study of interorganizational relations for four reasons, each of which is discussed here. The first limitation is that certain interactions of much relevance to the operation of organizations are likely to be omitted from consideration. For example, organizations such as health and welfare agencies are likely to exchange information, loan equipment and personnel, refer clients to one another and yet not "jointly strive" for a common goal. These activities are likely to be undertaken for self benefit in many cases with the consequences for the other organization being quite incidental. To the extent a common goal could be considered as present, it is likely to be the intermediary goal of completing a transaction. This use of the idea of joint effort appears to go beyond the definitions of cooperation reviewed earlier.

A second limitation is that typically many forms of interaction are intermingled in a single interaction situation. Among those who have noted the intertwining of conflict, competition, and cooperation in a given interaction situation are Davis (1949, p. 167) Caplan and Kohout (1966b, p. 3) and Litwak and Hylton (1962, p. 399). Cooley (1918, p. 39) articulated a similar view many years ago.

The more one thinks of it the more he will see that conflict and cooperation are not separable things but phases of one process which always involves something of both.

Nisbet (1968, pp. 389-390) has noted the intertwining of cooperation and competition.

... the two rarely, if ever, occur separately .... In any event a purely cooperative or purely competitive relationship would be hard to imagine.

There are at least two major reasons that cooperation, competition and conflict tend to be intertwined. One is that interaction situations tend to be partial. It is probably a rare situation in which two separate organizations interact with each other in regard to all of their respective organizational activities. Roland Warren (1969, p. 17) has noted:

... two organizations may be interacting in a competitive fashion with respect to certain aspects of their domains, and in a cooperative fashion with respect to other aspects, and not at all with respect to still other aspects of their domain.

This in itself should not be too surprising. As Loomis (1960) has noted organizations, considered as social systems, are faced with the dual problem of maintaining relations with other organizations while protecting certain activities from the influence of others. The end result of cooperative interactions in all spheres of activities with a given partner would probably be a merger or the dissolving of one of them. Additional evidence for the partialness of interaction situations has been provided by Litwak and Hylton (1962). They point out that conflict is to be expected because in spite of cooperative activities organizations are trying to attain differing values (as reflected in goal structures). Although the values may be consistent resources are generally in scarce supply. Thus for example, the helping agencies of a community that cooperate in client programs are likely to be in competition for resources. Cooperation of a very "close" nature between organizations that have consistent and even complementary values may threaten either of the partners because the more closely their actions are articulated the more likely it is that the values of one will

predominate over those of the other. Consequently, maintaining interactions on a partial basis tends to be functional for goal attainment for at least one of the interaction partners.

The other reason oppositional and cooperative types of interaction tend to be intermingled is that motivation for interaction is likely to be based primarily on self interest. Although organizations may often strive jointly for common goals, it is expected that these efforts are most frequently seen by the participants as instrumental to their own goal attainment. Calculations of returns for contributions are likely to characterize joint efforts. In addition, it is probably rare that a given type or level of cooperation simultaneously maximizes the goals of both of the interaction partners. Under such conditions it seems quite likely that interaction situations would be characterized by both cooperative and oppositional processes.

The third limitation in the use of the previously reviewed concepts of interaction is that a given interaction activity may be interpreted by one partner as a cooperative venture, whereas the other views it as a competitive venture. For example, consider the efforts of two voluntary civic organizations to establish a city park. One organization might be concerned almost exclusively with achieving the goal of a city park, but the other organization may view it as an opportunity to make a contribution to the project that will allow it to gain prestige, possibly at the expense of the first organization. For example, by contributing the most money or carefully managing publicity, gains at the expense of the other organization might be made. In such cases where opposition is the dominant process of interaction, each organization probably approaches the situation with a

strategy. That strategy may be to hold the opponent to the norms of competition while it deviates in the direction of conflict (probably in a clandestine manner).

The fourth factor limiting the use of the concepts of conflict and cooperation for adequately describing interaction processes is the most crucial with regard to the present study. It is that knowledge of an organization's involvement in cooperation, conflict and/or competition does not in itself tell us anything about consequences for the involved partners. Whereas cooperation is often viewed in a "positive" sense and conflict in a "negative" sense, the accepted referent is the interaction itself and not the participants. Although conflict is normally thought of in terms of a winner and a loser it is conceivable that both of the involved organizations can benefit through increased internal solidarity which facilitates more effective operation and success (Coser, 1956). Similarly, organizations in competition with each other may benefit. On the other hand cooperation may result in a large resource drain on one or both of the organizational participants so that the overall effectiveness of each organization suffers. In short, to the extent one is concerned about the consequences of interaction for the participants, the reviewed concepts leave much to be desired.

#### Towards a reconceptualization of interaction processes

Input-output processes as organizational characteristics      The present study takes as its point of reference in defining interaction the organization and not the interaction per se. Organizations are conceived of as systems that require inputs to produce outputs. Interest is then

focused on the environmental transactions made to acquire resources (speaking in the most general sense) which will contribute to the organization's functioning. The research question is why varying intensities of environmental transactions occur between a focal organization and various members of its organization set.

Conceptualizing organizations as characterized by input-output processes is not unusual. Many sociologists have followed this procedure (Thompson, 1962, Levine and White, 1961, Dill, 1962, Katz and Kahn, 1966, and Yuchtman and Seashore, 1967). The fundamental assumption is that organizations are not self sufficient, but depend upon external elements for support. Organizations, in the pursuit of goals, acquire inputs (resources) which are transformed into products or outputs. Talcott Parsons (1956a, p. 65) puts it this way:

An organization is a system which, as the attainment of its goal, "produces" an identifiable something which can be utilized in some way by another system; that is, the output of the organization is, for some other system, an input.

Parsons also suggests the appropriateness of using specific goals as the referent point for analyzing the input-output processes. He states (1956a, p. 64) that the defining characteristic of an organization which distinguishes it from other types of social systems is "... primacy of orientation to the attainment of a specific goal ...." In the case of economic organizations the output is "sold" bringing in revenue which can be used to purchase new inputs. In the case of other kinds of organizations such as universities and health agencies the products are either given out gratuitously or at much below cost. That is, e.g., tuition costs or counseling fees are most likely not expected to cover the costs of

inputs and transformation costs. Thus the university and counseling agency are dependent upon legitimation with elements of the society so that they might acquire the costs of inputs from taxation or voluntary contributions.

Organizations may also become involved in exchanges of their inputs for other inputs. Levine and White (1961, pp. 586-587) have studied such a set of exchange as it exists among community health organizations, classifying inputs (elements) needed for functioning and suggesting a method of acquisition as follows:

To fulfill its functions without relation to other parts of the health system, an organization must be able to procure the necessary elements -- cases, labor services and other resources -- directly from the community or outside it .... Usually agencies are unable to obtain all the elements they need from the community or through their individual efforts, and, accordingly, have to turn to other agencies to obtain additional elements. The need for a sufficient number of clients, for example, is often more efficiently met through exchanges with other organizations than through independent case-finding procedures.

The acquisition of inputs is carried out as a part of the adaptive function of social systems. In Parson's (1961) schema adaptation is one of four system problems that must be solved in order for a system to maintain its equilibrium and/or continue in existence. In addition to adaptation these problems are: goal attainment, the problem of seeking a satisfactory relation between the system and its situation; pattern maintenance, the problem of stabilizing the system in the face of change so as to prevent a malintegration of units; and integration, the problem of maintaining solidarity and mutually supportive relations among actors in the system.

Simply defined the problem of adaptation is that of controlling the environment, i.e., obtaining facilities, for purposes of goal attainment. The relationship between goal attainment and adaptation is a close one.

Parsons places the four functional problems on an axis of differentiation which distinguishes external from internal functions. Goal attainment and adaptation are specified as the two functions concerned with interchanges between the system and its external situation. In some cases, that is where a system has only one goal, adaptation is simply an undifferentiated aspect of goal attainment. But in complex systems they are distinguished (Parsons, 1961, p. 40):

When there is only one goal, the problem of evaluating the usefulness of facilities is narrowed down to their relevance to attaining this particular goal. With a plurality of goals, however, the problem of 'cost' arises. That is, the same scarce facilities will have alternative uses within the system of goals, and hence their use for one purpose means sacrificing the gains that would have been derived from their use for another. It is on this basis that an analytical distinction must be made between the function of effective goal attainment and that of providing disposable facilities independent of their relevance to any particular goal. The adaptive function is defined as the provision of such facilities.

Goal attainment and adaptation may be further differentiated from each other on what Parsons (1959) calls the instrumental-consumatory axis. Adaptive functions are specified as instrumental, whereas goal attainment functions are specified as consummatory.

#### Adaptive transactions

A form of interaction      The interactions in which organizations become involved in relation to performing their adaptive functions, i.e., in relation to the securing of inputs are the ones of central interest in this dissertation. Conceptually these specialized interactions are specified as adaptive transactions. A transaction is differentiated as a particular type of interaction in which something changes hands (Parsons, 1951, p. 71). The accepted definition is one offered by Morse (1961) in his

discussion and interpretation of Parsons:

Transactions are processes that consist of flows between units or systems, together with the activities directly involved in settling the terms governing the flows.

Adaptive transactions, then are transactions which are instrumental to the attainment of an organization's goals. The referent organization was earlier specified as the focal organization, and the other party to the interaction was specified as one of its set organizations. Thus the adaptive transactions of a focal organization may be considered as interactions between it and a set organization in which something changes hands, the result of which is perceived (by the focal organization) to be instrumental to the attainment of its goals.

Adaptive transactions are not limited to flows of physical inputs and outputs. Also included are transfers of norms and values and supportive activities such as legitimation. Parsons (1951, p. 71) suggests that the something which changes hands in the course of a transaction may be, "... an agreement to do certain things in the future, positive as contributing to alter's goals, or negative as refraining from interfering with alter's goals." Transactions are adaptive so long as they are instrumental in nature.

Exchange and transfer components      Transactions may be classified as one or the other of two types, exchanges or transfers. The distinction is made by Morse (1961) based upon the work of Parsons. It is argued that every ego-alter relationship is not necessarily one that can be called an exchange in the technical sense of involving a "quid pro quo." Resources supplied to alter from whom nothing of equal value is expected in return are properly classified as transfers. Exchanges do involve such an

expectation.

The importance of the distinction between transfers and exchanges is that they are expected to occur under differing social conditions. As Morse (1961, pp. 108-109) notes in reference to Parsons:

... his analysis implies that exchanges occur, when, and only to the degree that, the transacting parties belong to what, for the purpose of the transaction in question are different solidary systems, that is, different 'collectivities', and that transfers occur when, and only to the extent that the parties regard themselves as belonging, for the purpose of the transaction, to the same solidary system. But otherwise exchange implies 'self-orientation' on the part of one or both parties, and transfer implies 'collectivity-orientation' on the part (at least) of the transferer. Thus, where transfers occur, diffuse claims and roundabout expectations of eventual sanction replace specific and direct sanctions ....

It is also noted that given concrete transactions may include both exchange and transfer elements in varying proportions. The occurrence of both exchanges and transfers in the adaptive transactions of a focal organization with a given member of its set is expected inasmuch as each may simultaneously view the other as a separate system and as a sub-part of the same system of which they are also a sub-part. The appropriateness of viewing systems simultaneously as independent entities and as parts of a larger system is also pointed out by Olsen (1968). He states (1968, p. 38) that although participation in a particular social relationship may involve a shift from self to collective orientation that the, "... participants may display a preponderance of either type or a balanced mixture of both."

The distinction between exchanges based on self orientations and transfers based on collective orientations suggests two distinct types of variables of potential explanatory value with regard to the intensity of a focal organization's adaptive transactions with members of its set. As noted by

Olsen (1968) self orientations are characterized by expedient calculations of the costs involved and benefits to be gained, so that in an interaction situation the actors are primarily interested in their own respective welfares. In contrast, collective orientations are characterized by moral concerns and the obligations and responsibilities in the interaction situation, or in the common welfare of all. To the extent an organization sees itself as an individual entity and as a part of a system of which its set is also a part, it may be expected that transactions will neither consist entirely of calculated investment or gratuity.

#### Factors Affecting the Intensity of Adaptive Transactions

##### -- Theoretical Perspectives

To briefly recapitulate, theoretical discussion to this point has focused on conceptualizing interactions between organizations for purposes of this study. The conceptualization accepted for this study focuses on the organizational participants rather than interaction per se, and emphasizes interactions oriented towards goal attainment of one of the participants (specified as the focal organization). The organizational interactions of interest were conceptualized as adaptive transactions of the focal organization with members of its organization set. Inasmuch as a focal organization and members of its set may simultaneously view one another as separate systems and parts of the same overall system, it was maintained that adaptive transactions consist of both exchanges and transfers. The major purpose of this study is to attempt to explain the intensities of the adaptive transactions between the focal organization and the various members of its set. Attention will now shift to theoretical considerations of what

factors affect the intensity of these transactions. These considerations provide the basis necessary for the development of hypotheses to be tested.

The approach taken here does not rest upon a single theoretical orientation, but draws from both exchange theory and value theory, the latter of which is considered in a social systems perspective. The reason for this somewhat eclectic approach is the author's perception that neither orientation in itself can sufficiently explain the intensity of a focal organization's adaptive transactions, yet both have something to contribute. A supportive rationale for such an approach is offered by Olsen (1968). He argues that most theories of social relationships tend to focus on social actors either as self oriented or collectively oriented, but not both. He further argues (1968, p. 39):

As an unfortunate consequence, the theories based on these two conceptual frameworks are often radically different. Theories utilizing ... [a self oriented] ... framework tend to see all cases of enduring social interaction as exchange relationships, in which each participant contributes something to the others, and in return receives something he desires or values .... In contrast theories utilizing a ... [collectively oriented] ... framework tend to view all social relationships in terms of mutual obligations in which each member assumes certain social responsibilities, as a result of which everyone benefits.

His distinctions between the two frameworks correspond closely to the basis for the distinctions between transfer and exchange aspects of adaptive transactions. One of the theoretical orientations to be utilized here, exchange theory, bases its explanation of interaction on a self benefit orientation. The other, value theory, bases its explanation on a collectivity orientation. Brief overviews of these theoretical orientations are presented to point out the limitations and possible explanatory value of each. However, the justification of specific variables based on these

theoretical orientations is reserved for the final section of this chapter.

### Exchange theory

A theoretical perspective that bases its explanation of interpersonal behavior on exchange relations among social actors has been elaborated by Homans (1958), Thibaut and Kelley (1959), and Blau (1964). It has been applied to the study of interorganizational relations by Levine and White (1961).

Social exchange is defined by Blau (1964, p. 91) as "... voluntary actions of individuals that are motivated by returns they are expected to bring and typically in fact bring from others." An actor initiates an attempt to gain some kind of benefit from another actor. Interaction occurs if the other actor believes that he will gain some benefit from the interaction.

The basic assumptions of voluntary exchange theory are these: 1) actors are motivated to interact with others in order to obtain rewards, 2) interaction overtime is contingent upon both parties to the interaction receiving rewards, 3) all interactions have a cost to the actors involved, 4) the actors seek to keep the costs of participation in interaction activities below the benefits received, and 5) interaction must cost less than the benefits received in order to be continued through time.

Social exchanges are to be differentiated from economic exchanges. The fundamental distinction is that in social exchange what is to be given in return for some "favor" or resource and when, are not necessarily or probably specified in an explicit manner. Rather, social exchanges tend to create diffuse future obligations for repayment. Typically, an exact price

cannot be put on social transactions as in the case of economic ones, and an element of "trust" is required for the continuance of social exchanges.

Exchange relations may explain the development of power differences among individuals and groups. Blau (1968, p. 455) suggests that persons who give important benefits to others make implicit claims to superior status by incurring obligation from the other. If the other actor can return benefits to fully discharge the incurred obligations then he has in effect denied the claim to superior status. Under certain conditions (Blau, 1968, p. 456) this recurrent unilateral supply of important benefits serves as a source of power to the benefactor.

Perhaps the major strength of exchange theory is that it can explain the initiation and development of interactions between actors in a new or unstructured situation where common norms and values are remote or do not apply. However, over time the exchanges based on self-interest develop into stable patterns of social order and cultural norms. Once these patterns of behavior have developed the exchange patterns become exceedingly complex and interdependent. Often a result of such development is that interactions between actors become governed less by expectations of what can be obtained from each other and more by the probability of rewards from third parties, e.g., superiors.

Levine and White (1961, p. 588) used a somewhat broader concept of exchange in their application of exchange theory to the study of inter-organizational relations. They define organizational exchange as, "... any voluntary activity between two organizations which has consequences, actual or anticipated, for the realization of their respective goals or objectives." This definition allows for the inclusion of seemingly unilateral

interactions that appear on the surface not to be exchanges at all, e.g., the providing of information by one agency to another or the referral of a client, so long as (Levine and White 1961, p. 588) "... the respective objectives of the two organizations are furthered by the action." Herein lies a particular limitation of their approach, i.e., that an activity must apparently benefit both parties to be called an exchange.

Most exchange theorists recognize the rather stringent limitations of exchange theory. For example, Levine and White (1961) and Blau (1968) omit interactions that are "involuntary" or brought about by coercion. The danger of calling all impersonal relations exchange is suggested by Blau (1968, p. 453):

The pervasiveness of social exchange makes it tempting to explore the fruitfulness of the concept by trying to apply it to all social conduct. But the concept of exchange loses its distinctive meaning and becomes tautological if all behavior in interpersonal relations is subsumed under it. Although much of social conduct is oriented toward expected returns from others -- indeed, more than we usually think -- not all of it is.

Perhaps the major criticism which can be leveled at exchange theory is its failure to directly consider the influence of values on behavior as mediated, for example, through system norms. Thus the preservation of systems of relationships and adherence to the beliefs and values characteristic of human collectivities are not considered as major motivations for interactions. Although Blau (1968, p. 457) notes that, "A prime determinant of social conduct is the institutionalized system of values in a society ...," he justifies placing major emphasis on exchange relations in the explanation of behavior because (1968, p. 457), "... social values and norms largely set broad limits on conduct without prescribing it in detail."

He (1968, p. 457) does, however, clearly recognize the need to supplement the tenets of exchange with other theoretical principles:

Both common values and exchange principles influence social conduct, and neither may be neglected in studying it ... Exchange theory is most directly concerned with face-to-face relations, and thus it must be complemented by other theoretical principles that focus on complex structures with institutionalized values. However, even in the study of complex structures, exchange theory has something to contribute.

The role of exchange theory in explaining the intensity of a focal organizations' adaptive transactions with members of its organization set will be pointed out more specifically in the conceptualization of the specific independent variables of this study. However, the types of variables it suggests considering may be pointed out here. Exchange theory suggests that emphasis be placed on understanding the benefits the focal organization expects to obtain from members of its set which will facilitate its goal attainment and its evaluations of the benefits received over time. More importantly it suggests that emphasis be placed on understanding the conditions under which it is desirable or necessary for the focal organization to obtain benefits from the organizations of the set, rather than from outside the set or by the reallocation of its existing resources. However, transactions may be instrumental to goal attainment because of the effects on relations with other set members and not just because of benefits directly received. Exchange theory may be inadequate for explaining interactions of this type. It is for this reason that attention is given next to a consideration of value theory in a social systems context.

Value theory in a social systems context

Value theory has been developed by a number of sociologists, including Parsons (1951) and Merton (1957). The discussion which follows is based in considerable part on the work of Parsons, and is drawn from various sources.

The basic premise of value theory is that there exist certain shared values which guide and control human behavior. Values are conceptions of what is desirable or undesirable in social life. At a societal level shared values are extremely broad and nonspecific. However, they serve the purpose of legitimizing norms -- standards by which the appropriateness of behavior is judged -- of concrete collectivities in the society. Compliance to norms is based upon their internalization into personalities of the actors. The norms also are enforced through the application of group sanctions as articulated through the authority structure of the collectivity. It is postulated then that the functioning and unity of collectivities (or social systems) can be explained by reference to values. As stated by Parsons (1960, p. 172):

That a system of value-orientations held in common by the members of a social system can serve as the main point of reference for analyzing structure and process in the social system itself may be regarded as a major tenet of modern sociological theory.

In this framework then, to the extent that social actors are members of the same social system it would be expected that interactions between them would be based at least in part on shared normative orientations. However, social systems also exhibit characteristics shared by member units, other than just norms. For example, Loomis (1960) has identified nine elements in terms of which the structure of a given social system may be

described and analyzed. Each of these elements is postulated to affect behavior within a social system. The place of elements in the study of interaction is, according to Loomis (1960, p. 5), "An explanation of social interaction between actors within a system calls for the examination of the elements of the social system." The nine elements delineated by Loomis are 1) belief (knowledge), 2) sentiment, 3) end, goal, or objective, 4) norm, 5) status-role (position), 6) rank, 7) power, 8) sanction and 9) facility. These nine elements are articulated by processes specific to the elements as well as six master processes which activate many or all of the elements. The six master processes are: 1) communication, 2) boundary maintenance, 3) systemic linkage, 4) social control, 5) socialization and 6) institutionalization.<sup>1</sup> Analytically then, it is expected that the elements and processes as delineated by Loomis may have explanatory power in explaining why interactions occur between units of a social system.

A crucial question is to what extent are the focal organization and its organization set systemically related to one another. In the present study, which focuses on a community alcoholism agency and other agencies of the same community that provide health and welfare services to clients, it seems appropriate to speak of the "helping" agency system. Or, as does Sanders (1966), one can speak of the social-welfare as a major system of the community. It must also be recognized however, that agencies participate in a social-welfare system only partially in two respects. That is,

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<sup>1</sup>For a definition and discussion of the elements and processes see Loomis (1960, pp. 1-56). For a specific application of them to the study of interorganizational relations among voluntary organizations conceptualized strictly in a social systems framework see Dillman (1966).

they 1) relate as individual entities to outside environments which are different for each agency, and 2) as discrete systems they are goal oriented and perform maintenance functions with respect to themselves that separate each of them from all other agencies.

#### Delineation of Variables Hypothesized to Influence the Intensity of Adaptive Transactions

Conceptual variables theorized to be related to the intensity of the adaptive transactions of a focal organization with its various set members are introduced in this section. However, before specifying these conceptual variables some prefatory comments are in order.

First, the intensity of a focal organization's adaptive transactions with various members of its organization set are not necessarily the result solely or mostly of the focal organization's individual efforts to relate to its environment, in the sense that it is the instigator. It is quite possible that set organizations may actively engage themselves in efforts to enter into transactions with the focal organization through which the latter gains resources for goal attainment. Which party instigates the transactions is not important for this study. The point of interest is the meaning of the transactions to the focal organization.

In the conceptualization of specific variables which affect the intensity of a focal organization's adaptive transactions attributes (e.g., goals, resources, and source of authority) of the focal organization are taken as given. They form a limiting condition for the analysis. Attributes of the members of the organization set, on the other hand, are of course expected to vary. However, this does not mean that all factors

associated with the focal organization are eliminated from consideration as variables. For example, perceptions held by actors in the focal organization about various members of the set are properly considered as variables in the analysis.

The variables hypothesized to affect the intensity of a focal organization's adaptive transactions are presented here in the form of a taxonomy. That is, although a theoretical rationale is developed for the relationship of each to the dependent variable, no effort is made to interrelate each independent variable with all other independent variables at the theoretical level. Systematically interrelating the independent variables in a theoretical fashion is considered both premature, due to the lack of theory and research, and beyond the scope of this dissertation.

Categorization of variables: a working model

The variables are, however, categorized and presented in the form of a tentative "model". This model (Figure 2.1) represents an effort to meaningfully distinguish between variables on the basis of the manner in which they enter into a position to influence the intensity of the focal organization's adaptive transactions with members of its set. It is postulated that the intensity of a focal organization's adaptive transactions with members of its set is a function of three distinguishable sets of factors. These categories of variables are: 1) preconditional variables, factors that are manifest independent of the interaction situation, 2) interorganizational situation variables, specified as relationships between the focal organization and members of its set, and 3) interorganizational dynamics variables that denote changes in aspects of the interorganizational

situation. Each of these categories of variables is discussed in more detail below.

Preconditional variables Factors which exist prior to and independent of the transaction situation, but which are expected to affect the intensity of a focal organization's adaptive transactions with members of its set, are defined as preconditional variables. The basis for distinguishing this category of independent variables is the assumption that set organizations are "predisposed" toward involvement in a focal organization's efforts at adaptation due to certain of their attributes. For example, one preconditional variable is defined as the size of the resource base. This variable may affect an organization's involvement in a focal organization's adaptive transactions inasmuch as the greater the resource base the more flexibility it is likely to have in expending resources to relate to other organizations, and the more likely it is to be the target of efforts by the focal organization to obtain resources. Regardless of specific considerations about a potential transaction situation, an organization may be limited in its ability to relate to its environment, and the adaptive needs of other organizations, because of its lack of resource base. Other preconditional variables considered here include organizational diversity and past transactions with other agencies.

Interorganizational situation variables It is expected that the tendency of organizations to become involved in relations that serve as adaptive transactions for at least one of them is dependent on factors in addition to their intraorganizational characteristics classified above as preconditional variables. Specifically it is postulated that the occurrence of a focal organization's adaptive transactions with a second

organization is affected by characteristics of the interorganizational situation. These characteristics are denoted by potential transactions partners serving as stimuli to one another with regard to involvement in transactions. A major distinguishing feature between preconditional variables and interorganizational situation variables may be cited. It is that preconditional variables are postulated to affect the propensity of an organization to become involved in transactions only with other organizations in general. The transaction partner is not specified. However, interorganizational situation variables are postulated to affect propensity for specific organizations to become involved in transactions with one another. An example may help to clarify the point. The size of an organization's resource base is clearly an intraorganizational characteristic and classified as a preconditional variable. However, the complementarity of one organization's needs with another organization's resources is an interorganizational characteristic that may partially explain why two organizations become involved in transactions (specifically) with each other.

The interorganizational situation variables are divided into two categories specified as 1) structural characteristics and 2) orientation characteristics. The structural characteristics concern particular correspondences between the organizational structures of potential transaction partners. The specific variables of this study which are included in this category are 1) the systemic relatedness of the external control structures, 2) the similarity of organizational professionalism and 3) complementarity of one's organizational needs with the other's goals.

The orientation characteristics are variables that specify the

social-psychological view organizational actors hold toward the other organization in the interorganizational situation. The two orientation variables examined in this study are 1) perceived interdependence and 2) perceived domain consensus.

Interorganizational dynamics variables This category of variables is distinguished to represent aspects of the interorganizational situation that tend to be subject to change and manipulation. They specify the potentially less constant aspects of the relationships between potential transaction partners. The specification of interorganizational dynamics as a distinct category of variables represents in part an effort to give recognition to the temporal dimension of the transaction process. Adaptive transactions occur over a period of time and are subject to continuous evaluations of worth. They are also subject to attempts to influence the behavior of the participants in a preferred direction. In a temporal sense these variables are seen as both potential precursors and potential effects of adaptive transactions. Recognition is given through them to the constant process of evaluation applied with respect to an organization's involvement in adaptive transactions with one another over a period of time.

Two conceptual categories of variables are considered as interorganizational dynamics variables in this study. They are 1) power relations, or attempts to control interorganizational transactions and 2) performance evaluations of the transaction partner.

#### Development of hypotheses

Rationales for the statement of hypothesized relationships between independent variables to be introduced and the intensity of the focal

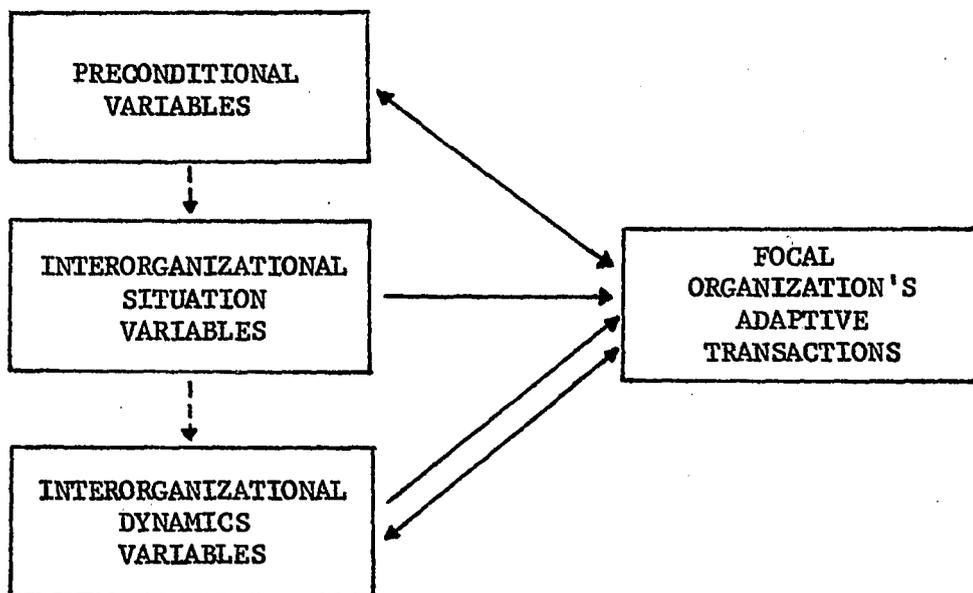
organization's adaptive transactions with set members are presented below. Variables are discussed in the order of numbered general hypotheses shown in Figure 2.2.

Preconditional variables

Size of resource base Resources may be defined as possessions valued for the contribution they are expected to make to goal attainment. An organization's resources consist of not only inputs to be transformed into outputs, but also the elements used to make such transformations. These elements include labor, physical equipment, and less tangible factors such as managerial capabilities. The size of an organization's resource base is specified as the quantity of all the possessions relevant to goal attainment under the control of the organization.

The relevance of the size of an organization's resource base to its involvement in interorganizational relations has been suggested by several sociologists. Levine and White (1961) base their entire theory of why an organization becomes involved in exchange relations with others on its need to obtain resources. They assume that few if any organizations have access to enough resources to allow them to achieve their objectives fully and that resources are in scarce supply. It is then argued that organizations turn to exchanges with other organizations to obtain desired resources. Other conditions being equal it is reasonable to expect that organizations will in their adaptive efforts turn to organizations that are most likely to be able to supply them with resources.

It has been suggested by Litwak (1969, p. 25) that, "... it is the organizations with 'extra' resources which are often best able to link with others." He cites the case of selected numbers of schools in the Detroit



PRECONDITIONAL VARIABLES	INTERORGANIZATIONAL SITUATION VARIABLES	INTERORGANIZATIONAL DYNAMICS VARIABLES
G.H.1 Organizational resource base	<u>Structure</u>	G.H.10 Authority
G.H.2 Organizational diversity	G.H.4 Systemic relatedness of external control structures	G.H.11 Influence by coercion (threat)
G.H.3 Past interactions	G.H.5 Similarity of professionalism	G.H.12 Influence by coercion (exercise)
	G.H.6 Complementarity of org.	G.H.13 Influence by inducement
	G.H.7 needs and goals	G.H.14 Performance evaluations
	<u>Orientation</u>	
	G.H.8 Perceived interdependence	
	G.H.9 Domain consensus	

Figure 2.2. Variables hypothesized to affect intensity of a focal organization's adaptive transactions with set organizations presented by categories and identified by number of the general hypothesis with which each variable is associated

system that were provided with extra funds. These schools had greater community participation rates than the schools without these funds. Aiken and Hage (1968, p. 915) have similarly suggested that organizations without surplus resources can hardly afford joint programs, and therefore suggest a surplus in the resource base as a necessary condition to allow cooperative ventures to occur.

It seems likely that a surplus of resources is not a common feature of most organizations. However, the ability to "free" resources to create an apparent surplus is likely to be a feature of organizations with large resource bases. It is thought that organizations with larger resource bases are better able to adjust resource allocations within the organization to facilitate new activities without affecting current activities in a deleterious manner. For example, an agency with 50 employees is probably better able to assign a person to perform an active linkage function with another agency than an agency with only five employees. Such a situation probably contributes to making an agency with a large resource base a target of the focal organization for purposes of securing resource transfers and exchanges.

The same internal flexibility provided by a large resource base that makes a set organization a target for exchanges may also affect the former's propensity to seek out profitable exchanges with other organizations, including the focal one. The large resource base, particularly as reflected in personnel, provides a greater opportunity to monitor the external environment and examine possibilities for profitable resource exchanges.

On the basis of the above considerations the first general hypothesis is stated as follows:

G. H. 1: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's size of resource base.

Goal diversity Organizational diversity denotes the extent to which an organization exhibits internal differences with respect to its structure and functions. Diversity may exist with respect to such factors as organizational goals, staff composition, the existence of subunits, and subunit functions. Aiken and Hage (1968) have conceptualized organizational diversity in terms of the occupational structure, i.e., the variety of occupational types that exist within an organization. The greater the number of different occupations that existed, the more diverse the organization was considered to be. They found that the number of occupations that existed in an organization was very closely associated with the extent of the organization's involvement in joint programs. The theoretical explanation of the strong association was that the internal differences, manifested as different philosophies, different competencies, different referent groups, and different activities, worked to create internal strains toward innovation and change. In addition, the occupational diversity helped to generate knowledge of the nature of changes in the organizational environment through such factors as participation in professional societies. This environmental awareness plus intraorganizational tendencies toward innovations combined to produce involvement in joint programs with other organizations for purposes of securing needed resources.

Organizational diversity is approached from a slightly different perspective in this study. The concern here is with goal diversity, or the extent to which an organization has a variety of goals. The existence of

numerous goals is likely to produce intraorganizational strain due to competition among them for priority with regard to resource allocations. The result may be increased interest in seeking other resources from the environment. In addition, a multiple goal structure probably is reflected in diversity of other aspects of the organization. For example, having many goals may produce a tendency towards a division of labor and the employment of varied types of persons with the effect on environmental relations suggested by Aiken and Hage (1968) as noted above. Finally, a diverse goal structure probably increases the ways in which an organization seeks to relate to its environment. Particular aspects of an environment are probably of relevance to only a few of an organization's goals. The more goals an organization has, the more aspects of its environment that are likely to become relevant with respect to the occurrence of exchanges and transfers.

The second general hypothesis of this study follows from this discussion and is stated as follows:

G. H. 2: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's degree of goal diversity.

Previous transactions with other organizations The third pre-conditional variable to be examined here is the set agency's previous transactions with other agencies. A set organization's transactions with others may from one perspective be viewed as a result of the same factors (e.g., size of resource base and organizational diversity) as the focal organization's adaptive transactions with it. Used as an independent variable, it may therefore appear tautological. However, it may be argued that regardless of why previous transactions with other organizations occurred,

the fact of their occurrences has a separate and distinct affect on transactions with the focal organization.

One reason for a separate effect is that the greater an organization's previous transactions with others, the more likely that internal adjustments have been made to facilitate and encourage relationships with others. In addition to procedural adjustments the existence of dependencies on others may itself become institutionalized. It may become normative for an organization to respond favorably to others' efforts to work with it. Such a norm is probably most likely to develop among organizations that identify themselves as a part of a system with overriding goals which transcend those of each of the component organizations. For example, the health and welfare agencies of a community may subscribe to the overall goal of serving individuals in need of social services. To the extent a particular agency has been the source or recipient of transfers with other agencies of the system that agency is probably also likely to become involved in transactions with other agencies in the future.

An additional reason that past interorganizational transactions may have a distinct effect on present transactions with a focal organization has been indicated by Aiken and Hage (1968, p. 916). They have suggested that communication linkages with new units result from interactions with others. This results from two tendencies. The first is the tendency for previous contacts to increase the visibility of that organization to others so it is more likely to be the object of efforts to secure resources. The second is the tendency of the organization to become more aware of new possibilities for it to relate to others because of its greater knowledge and awareness of others in its environment including newly emerged organizations.

The next general hypothesis is based on the above considerations.

- G. H. 3: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's extent of past transactions with other organizations.

Interorganizational situation variables

Systemic relatedness of external control structures      The first interorganizational situation variable to be introduced is the systemic relatedness of the external control structures of organizations. Many organizations such as local health and welfare organizations are individually subordinated to a higher authority that legitimates and provides for their existence. The local units, although related in various ways to superordinate units, must adjust operations to the needs and demands of the superordinates. The external control structure is defined as the formal arrangement for relating superordinate units to their subordinates for purposes of gaining conformity in the behavior of the latter with norms prescribed by the former. By systemic relatedness is meant the existence of a situation in which two or more organizations may on certain occasions be considered as parts of a common system. Systemic relatedness may be demonstrated through the existence of common sources of authority, shared values as reflected in norms and goals, and shared facilities or a common source of facilities.

Attention is focused here specifically on the degree to which the sources of control for the focal organization and the set organizations are systemically related. To speak of sources of control as being systemically related is not to imply administrative responsibility to the same authority

except in a somewhat remote sense. For example, government agencies theoretically all derive their authority, administratively, from the office of the chief executive, and some are related at slightly lower levels in the government administrative hierarchy. However, the sheer size of the governmental bureaucracy and the existence of many administrative levels between the level where agencies are administratively related and where services are offered make it appropriate to speak of separate organizations and interorganizational relationships rather than intraorganizational relationships. These same government agencies, however, are considered to be systemically related in the sense that they share common norms of operation, are subject to the same types of sanctions, are limited in the facilities available for their use and are related in other ways that permit one to distinguish between public agencies of government and private agencies. In general, private agencies are not inherently related to one another, systemically, as are public agencies. However, agreements may be worked out between and among private agencies that produce a degree of systemic relatedness. Public agencies may also be involved in such agreements with private agencies and with each other.

If the focal organization is a government agency, transactions with other government agencies might be expected to be more intense than transactions with private agencies. There are several reasons. One is that there is very likely to be greater visibility and knowledge of one another by government agencies so that opportunities for transactions are more likely to be explored. Also, one might expect that public agencies will each have interdependencies built into their existence. It is assumed that in the formation of agencies of government there is some attempt made to

make agency functions complementary rather than competitive. Stemming from the coexistence of agencies in the governmental system is another and probably the most important factor contributing to the development of transactions between them. It is that reward patterns are likely to encourage cooperation. Such patterns are to be expected in light of the necessity of each of the agencies to adapt to the political system to get funds. The existence of conflicts and the lack of cooperative efforts are quite likely to have deleterious effects on efforts to justify resource needs of the respective agencies. Thus, it is to be expected that superordinate organizations encourage their local units to cooperate with one another in their operations. Recognition of the mutual advantage of a cooperative norm may encourage the transfer of resources beyond what could be expected among organizations which are not systemically related.

Although the importance of the existence of systemically related sources of control has been illustrated using governmental organizations as an example, the argument can be extended. For example, it may be expected that agencies dependent upon the Community Chest for support might share a cooperative norm. Also, agencies whose sources of external control rest in the same community might be expected to become involved in transactions more often than if their sources of control were located in different communities.

On the basis of these considerations the following general hypothesis is stated:

G. H. 4: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent their external control structures are systemically related.

Similarity of organizational professionalism      Professionalism

is the bringing to bear of a high level of objective understanding and skill to the achievement of agency goals. It tends to be characterized by the employment of scientifically-based approaches to the development of solutions to agency problems. Blau and Scott (1962) have suggested that the underlying characteristics of professionalism include 1) actions governed by universalistic standards, i.e., objective criteria independent of the particular case under consideration, 2) specificity of professional knowledge such that the professional recognizes limitations of his competency, 3) relations with clients characterized by affective neutrality, 4) professional status is achieved and not ascribed, and 5) professional decisions are not based on the practitioner's self interests. Typically, professionals have undergone a considerable amount of training and have internalized professional norms that control their behavior and tend to replace or supplement bureaucratic control within organizations.

It has often been suggested that persons interact most often with persons like themselves. It would seem reasonable to expect that agency staff members would feel more "comfortable" and have greater confidence in the services of persons that had similar orientations with respect to professionalism. It may be useful to remember at this point that "trust" and "unspecified future obligations" are theorized to be an important condition to the continuation of organizational exchanges. A condition of similarity of professionalism would seem likely to contribute to the development of these conditions that would facilitate the occurrence of interorganizational exchanges. It would therefore be expected that transactions would be most prevalent between agencies with similar degrees of professionalism

and least prevalent were differences in professionalism were greatest. The next general hypothesis may now be stated.

G. H. 5: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent of similarity between the professionalism of their respective staffs.

Organizational needs      Organizational needs are defined in the framework of this study as resources valued for their perceived relevance to the goal attainment of the organization. The needs of organizations vary according to the extent to which they may contribute to goal attainment. Also, they vary according to the extent to which they may be substituted for by others.

The needs of organizations have often been pointed out as being of crucial significance to explaining the interactions among organizations. Guetzkow (1966) for example, has suggested that interorganizational relations are most likely to occur between organizations with different goals. Ried (1964) has suggested that interactions are most likely to occur between organizations with complementary resources. Aiken and Hage (1968, p. 915) have placed the need for resources at the central point in their study of interorganizational dependencies.

... organizations are "pushed" into interdependencies because of their needs for resources -- not only money, but also resources such as specialized skills, access to particular kinds of markets, and the like.

A strong statement regarding the place of organizational needs in a theory of interorganizational relations has been made by Levine and White (1961, p. 582). They conclude:

The exchange model leads us to explain the flow of elements between organizations largely in terms of the respective functions performed by the participating agencies. Indeed, it is doubtful whether any analysis of exchange of elements among organizations which ignores differences in organizational needs would have much theoretical or practical value.

It seems likely that a focal organization would center its adaptive efforts on set organizations whose goals and resources are complementary with the focal organization's needs. To the extent the set organization's needs complement the focal organization's goals chances for the occurrence of transactions seem even greater. One reason for expecting transactions to occur under these conditions stems from the considerations involved in committing resources to interorganizational transactions. It may be assumed that at least to a considerable degree organizations attempt to become involved in adaptive transactions, either as focal organizations or set organizations, where they may maximize gains and minimize costs. Chances for doing so are probably greatest where the goals and needs of each organization are complementary with those of the other.

On the basis of these considerations two general hypotheses are formulated as follows:

- G. H. 6: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the degree of complementarity between the focal organization's needs and the set organization's goals.
- G. H. 7: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the degree of complementarity between the focal organization's goals and the set organization's needs.

Perceived interorganizational dependence

Perceived inter-

organizational dependence is the first of two variables considered here that seek to describe the social-psychological orientation of organizational actors to the interorganizational situation. Perceived interorganizational dependence is defined as the perception by the relevant actors of one organization that another organization needs to be taken into account in order to achieve their organizational goals. Perceptions of interorganizational dependence may result from factors conceptualized here as preconditional variables and interorganizational structural situation variables.

Perceptions of interorganizational dependence should not be confused with the structural variable defined above as the complementarity of organizational needs and goals. The needs of one organization may be complementary with the goals of a second one from a rational point of view, but the relevant actors may not perceive that such a situation exists. Defining a situation of interorganizational dependence may rest on nonrational considerations, taking into consideration values other than those related to organizational goal attainment.

The concept of interorganizational dependence is similar to the concept of organizational interdependence as developed by Litwak and Hylton (1962, p. 401). They defined it as a situation in which "... two or more organizations must take each other into account in order to achieve their individual goals." The rigidity of the definition was relaxed in a more recent definition by Litwak (1969, p. 13) to read "... to best [underlining added] achieve their individual goals." It is hypothesized (1962, p. 400) that,

Coordinating agencies will develop and continue in existence if formal organizations are partly interdependent, agencies are aware of this interdependence, and it can be defined in standardized units of action.

The concept of interorganizational dependence introduced here is a unilateral concept and therefore contrasts with the bilateral concept used by Litwak and Hylton (1962). This modification is considered appropriate because of the distinction made in this study between focal and set organizational roles.

It is expected that efforts by the focal organization to instigate adaptive transactions would be greatest with the set organizations upon which it perceives it is most dependent. Chances for the occurrence of transactions might be greatest if the set organization perceives it is also dependent on the focal organization. However, attention is focused in this study primarily on the perceived dependence of the focal organization on others. It is considered appropriate to do this inasmuch as it seems likely that the focal organization can adjust the conditions for its adaptive transactions so as to secure resources regardless of the set organization's perceived dependence on it (the focal organization). If the set organization does not perceive it is dependent on the focal organization the focal organization is likely to be willing to incur considerable cost as an inducement to get resources. If the perceptions of dependence are bilateral then transactions are likely to take the form of transfers rather than exchanges. The strategy of the focal organization may serve as a compensating factor in the case where the set organization does not perceive it is dependent on the former. The intensity of the adaptive transactions may therefore depend more on the focal organization's perceived dependence on

the set organization and strategies for procuring resources, and less on the set organization's perceived dependence on the former.

The concept of perceived interorganizational dependence may be approached from both exchange theory and value theory perspectives. From an exchange theory point of view perceptions of dependence indicate the extent to which an organization expects to receive benefits from transactions with another organization. Considerations of the dependence organizations perceive they have on one another provides insight into the balance of exchange which may be expected. However, perceptions of dependence may also result from the systemic ties of organizations to one another as reflected in common norms and values that prescribe acceptable means of handling certain kinds of problems within, for example, a community "helping" agency system.

The general hypothesis formulated on the basis of the above discussion is as follows:

G. H. 8: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent of the focal organization's perceived dependence on the set organization.

Domain consensus      The second variable describing the social-psychological orientation of organizational actors to the interorganizational situation is domain consensus. According to Levine and White (1961, p. 599) an organization's domain:

... consists of the specific goals it wishes to pursue and the functions it undertakes in order to implement its goals. In operational terms, organizational domain in the health field refers to the claims that an organization stakes out for itself in terms of 1) disease covered, 2) population

served, and 3) services rendered.

It should be recognized that domain is not a synonym for the professed goal structure. Also a part of domain (in addition to goals) are the means used to attain goals. It is argued by Levine and White (1961) that the flow of resources between organizations in an exchange situation rests upon at least minimal agreement regarding the use of these resources. Acceptance of the organization's domain provides the legitimation necessary for exchanges to occur. Thus Levine and White (1961) specify domain consensus as a necessary condition to be met in order for exchange relations to develop.

Roland Warren (1969) has pointed out that organizations act so as to preserve their domains. Thus to each of the organizations in a transaction situation the relevance of resource transfers and exchanges to their respective domains is an important consideration. A set organization is likely to reject becoming involved in transactions that represent the efforts of a focal organization to adapt to its environment if those transactions will aid the maintenance of a focal organization's domain which is rejected by the set organization for some reason. There may exist many reasons for failing to be in a state of consensus over a focal organization's domain. They include such factors as the perception (by the set organization) that the focal organization's professed domain encroaches on its domain or the domain of another organization to which it is systemically related, rejection of the values on which the domain is based, and the rejection of the means by which goals are to be attained.

The next general hypothesis is as follows:

G. H. 9: The intensity of a focal organization's adaptive transactions

with members of its organization set is related positively to the set organization's consensus with the domain of the focal organization.

Interorganizational dynamics variables

Power relations Probably of crucial importance to the occurrence of a focal organization's adaptive transactions with set members are the efforts made to encourage and otherwise bring about the set organization's participation in them. Emphasis is placed here specifically on the exercise of power to bring about the occurrence of adaptive transactions.

Much confusion exists with respect to the ways to describe the phenomena of social power and the appropriate terminology to describe various aspects of its use. An adequate review of the concepts of power relations is considered beyond the scope of this study.<sup>1</sup> Attention is limited to selected concepts consistent with the theoretical orientations of this study and the empirical problem. Attention is placed on the exercise of power on set organizations to encourage their participation in the focal organization's adaptive transactions. Such efforts are probably not limited to the attempts of the focal organizations to exercise power. Outside units, e.g., superordinate units, other organizations of the set, and elements of encompassing social systems (e.g., community), may exert power in support of the focal organization's efforts.

Power is defined by Weber (1947, p. 152) as "... the probability that one actor within a social relationship will be in a position to carry out

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<sup>1</sup>For discussions of various ways of conceptualizing the study of social power the reader is referred to Weber, 1947, Loomis, 1960, Blau, 1962, Cartwright, 1965, Morris and Binstock, 1966, and Gamson, 1968.

his own will despite resistance." It has been defined more simply as the capacity or potential to control others' actions by both Katz and Kahn (1966), and Loomis (1960). Broadly speaking, if one possesses power he is often able to get others (those over whom he has power) to accede to his wishes in ways which they would otherwise not.

Authority relations One type of power which can be distinguished is legitimate power, or authority. Authority as defined by Weber (1947, p. 324) is "... the probability that certain commands (or all commands) from a given source will be obeyed by a given group of persons." Implicit in this conception of authority is a certain amount of voluntarism on the part of the one subjected to the exercise of power. Authority accrues to a person by virtue of his role or his position in an organized structure, and by its very nature is institutionalized into that structure. One's willingness to comply with directives from an "authority" in an organization is based on his acceptance as legitimate the arrangement of statuses and roles which exists. Thus the employer has authority over his employees with respect to their organizational roles.

Many organizations have a superordinate body which has authority over them. If a superordinate body encourages a subordinate to respond positively to the adaptive efforts of another organization the subordinate is probably more likely to respond in that manner than it would otherwise, particularly if discouraged from doing so. It should be recognized however, that authority relations may become institutionalized in various ways. Some subordinates may not give consideration to becoming involved in the adaptive efforts of other organizations unless they have explicit approval from their superordinate, whereas others might feel free to become

involved unless they have explicitly been advised not to by their super-ordinate. Based on these considerations the next hypothesis is stated as follows:

G. H. 10: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization receiving support from an authoritative source.

Influence relations Not all efforts to control the behavior of others are based on incumbancy in an authoritative role. As pointed out by Litwak and Hylton (1962) and discussed earlier in this work, one of the distinguishing characteristics of interorganizational relations is the lack of an overarching authority structure to control them. The capacity to affect actions in the interorganizational situation rests more on the qualities and capabilities of the would be influencer. The potential exercise of power which is not based on position in a social system will be referred to here as influence.

Many attempts have been made to categorize the bases of influence. Bennis (1965, p. 353) has identified coercive, traditional, expert, referent (identification) and value based forms of power (influence). Banfield (1961, pp. 4-5) has discussed five forms of influence:

... (a) influence which rests upon a sense of obligation ('authority,' 'respect'); (b) influence which depends upon the wish of the influencee to gratify the influencer ('friendship,' 'benevolence'); (c) influence which works by improving the logic or the information of the influencee ('rational persuasion'); (d) influence which works by changing the influencee's perception of the behavior alternatives open to him or his evaluation of them, and which does so otherwise than by rational persuasion (e.g., 'selling,' 'suggestion,' 'fraud,' 'deception'), and (e) influence which works by changing the behavior alternatives objectively

open to the influencee, thus either absolutely precluding him from adopting an alternative unacceptable to the influencer ('coercion') or inducing him to select as his preferred (or least objectionable) alternative the one chosen for him by the influencer ('positive or negative inducement').

Two bases for influence are focused on here. One is coercion as identified by both Bennis (1965) and Banfield (1961). The second is influence based on rewards. A distinction between them has been offered by Blau (1964). Blau refers to power based on making persons fear the loss of something as coercive power. Coercive power is characterized by the use of negative sanctions that have a deterrent effect. Blau contrasts this form of influence with that which is based on rewards or benefits that characterize exchange transactions. This distinction follows one made by Parsons (1963, pp. 43-45) of deterrence through negative sanctions and inducements through positive sanctions. More recently Gamson (1968) has developed a typology of means of influence in which he distinguishes between exercising influence through the "addition of disadvantages" to a situation and the "addition of advantages." The first method he defines as constraints and the latter as the use of inducements. The two types of influence discussed here which may serve as means to bring about adaptive transactions between a focal organization and members of its set are specified as influence by coercion and influence by inducement.

Influence by coercion      The exercise of influence by coercion implies a lack of willingness on the part of the object of the influence to act in a manner acceptable to the influencer. To be able to influence by coercion means that the influencee perceives the influencer may in some way harm him. Coercive influence need not derive only from the focal organization. Other organizations or individuals may threaten the

use of sanctions on a set organization to encourage involvement in the focal organization's adaptive transactions, particularly if these organizations or individuals are systemically related to the focal and/or set organization(s). For example, failure to adhere to cooperative norms of an agency welfare system is likely to bring threats of sanctions from members of the system to encourage transfer transactions.

Overt coercion need not be exercised for coercive influence to be effective. It is likely that organizations will act in such a manner so as to avoid being subjected to coercive influence. The threat may be sufficient to secure involvement in transactions. For this reason two general hypotheses are stated here. The first concerns potential coercive influence, and the second its actual exercise.

G. H. 11: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the perceived threat of coercive influence on the set organization.

G. H. 12: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the exercise of coercive influence on the set organization.

Influence by inducement      Influence by inducement is based upon possible rewards rather than threats of retaliation. This type of influence has been dealt with by some (Blau, 1964, and Gamson, 1968) as comprising part of the essential character of exchange relations. Gamson states that the basis of inducement influence is the providing of a good or service as a "quid pro quo" in an exchange situation. He further states:

An inducement may be a payment for services already rendered

or a deposit for future, unspecified actions. In other words, much inducement influence may involve a more generalized medium of obligations rather than the simple barter of resources for preferred outcomes.

It seems an unnecessary restriction however, to limit the exercise of influence by inducement to the exchange situation. Social systems tend to be characterized by the administering of positive sanctions as well as negative sanctions. Thus an organization may be "induced" into transactions with a focal organization to gain favors from or repay past favors to other organizations to which it and the focal organization are systemically related, and where no threat of negative sanctions is present. Such a situation may be an example of the development of third and fourth party exchanges referred to by Blau (1964) that evolve into complex patterns of relationships that are normatively regulated and which we may properly call a system of which the organizations are subunits.

The next general hypothesis may now be stated as follows:

G. H. 13: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the exercise of inducement influence on the set organization.

Level of favorable evaluation of the focal organization's performance Evaluation is a process which pervades much of social action. Simply defined evaluation is the process of assigning "worth" to past actions in terms of desired states of affairs. It serves the purposes, as suggested by Lewin (1958) of 1) seeing what has been achieved, 2) serving as a basis for the next plan, 3) serving as the basis for modifying the overall plan and 4) gaining new general insight.

The evaluations a set organization places on the actions of a focal

organization may be both a cause and consequence of the intensity of adaptive transactions that occur over a period of time. The evaluations of relevance may include ones that concern many aspects of the focal organization's operations. They are not limited specifically to evaluations of past and present adaptive transactions. However, the occurrence of adaptive transactions over a period of time provides much opportunity for evaluations of relative contributions, benefits received, and costs incurred. Any of these may produce changes in the willingness of set organizations to continue transaction relationships. From an exchange theory point of view it is the costs and benefits of the focal organization's adaptive transactions that are probably of greatest importance. However, from a value theory perspective evaluations about the focal organization's adherence to community norms, the appropriate use of facilities, and relations with other community organizations may be of greater significance.

The importance of evaluation to the continuation of exchange transactions is particularly evident. One of the conditions upon which the continuance of exchange relations is contingent is evaluation of benefits received in order to adequately judge what rewards must be repayed to discharge incurred obligations.

The more favorably the set organization evaluates the performance of the focal organization with regard to the adaptive transactions with the set organization, the more likely the set organization is to want to continue its involvement. And, over time, the greater will be the intensity of the transactions.

The final general hypothesis of this study may now be stated.

G. H. 14: The intensity of a focal organization's adaptive transactions

with members of its organization set is related positively to the level of favorable evaluation of the focal organization by the set organization.

### Chapter Summary

This chapter had as its objectives the statement of the theoretical orientations of the study and the development of hypotheses based on these theoretical orientations. Interorganizational relations were conceptualized as interaction processes. Emphasis in this conceptualization was placed on motivations for interaction rather than interaction per se. The organizational interactions studied here were defined as adaptive transactions of the organization of interest, i.e., the focal organization. A focal organization's adaptive transactions were defined as interactions between it and another organization in which something changes hands, the result of which is perceived to be instrumental to the attainment of its goals. Inasmuch as a focal organization and the organizations which are relevant to its functions, i.e., its set organizations, may simultaneously view one another as separate systems and as parts of the same overall system, it was maintained that adaptive transactions could consist of both exchanges and transfers.

Attempts to explain the intensity of the adaptive transactions of a focal organization with set members draws on two theoretical perspectives -- exchange theory and value theory. A conceptual model was presented in which three categories of explanatory variables were distinguished. The first category consisted of preconditional variables. They are factors which are expected to affect the tendency of organizations to become

involved in transactions irrespective of specific organizations. The second category consisted of interorganizational situation variables. These variables denote relationships between organizations that are expected to explain the tendency of specific organizations to become involved in transactions with one another. The third category consisted of interorganizational dynamics variables. These variables denoted aspects of the interorganizational situation that tended to be subject to change and manipulation.

Theoretical rationales were presented for the development of 14 general hypotheses which will be operationalized and tested in the following chapters. In abbreviated form these hypotheses are listed below. To be correctly understood, each hypothesis should be prefaced with the following: The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to ...<sup>1</sup>

- G. H. 1: ... the set organization's size of resource base.
- G. H. 2: ... the set organization's degree of goal diversity.
- G. H. 3: ... the set organization's extent of past transactions with  
other organizations.

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<sup>1</sup>It may be noted that with respect to each of the theoretical hypotheses formulated for this study it is in essence hypothesized that the independent variable affects (or produces or causes) a change in the dependent variable. Although one can hypothesize causal relationships at a theoretical level, hypotheses can be evaluated empirically only in terms of whether there is covariation in the independent and dependent variables. As a matter of notational convenience and consistency all hypotheses in this study, at both the theoretical and empirical levels, are stated in correlational terms, i.e., in terms of the variable being "related positively". However, it is appropriate at the theoretical level, to interpret "related positively" as meaning that the independent variable "positively affects" the dependent variable.

- G. H. 4: ... the extent their external control structures are systemically related.
- G. H. 5: ... the extent of similarity between the professionalism of their respective staffs.
- G. H. 6: ... the degree of complementarity between the focal organization's needs and the set organization's goals.
- G. H. 7: ... the degree of complementarity between the focal organization's goals and the set organization's needs.
- G. H. 8: ... the extent of the focal organization's perceived dependence on the set organization.
- G. H. 9: ... the set organization's consensus with the domain of the focal organization.
- G. H. 10: ... the set organization receiving support from an authoritative source.
- G. H. 11: ... the perceived threat of coercive influence on the set organization.
- G. H. 12: ... the exercise of coercive influence on the set organization.
- G. H. 13: ... the exercise of inducement influence on the set organization.
- G. H. 14: ... the level of favorable evaluation of the focal organization performance by the set organization.

## CHAPTER 3. METHODS AND PROCEDURES

The hypotheses developed in the preceding chapter were formulated at a general level. The effort was directed towards formulating them in a manner such that they could be operationalized and tested in various empirical arenas, i.e., with various kinds of focal organizations and organization sets. In the present study the concepts in the hypotheses are operationalized to an empirical level and the hypotheses tested under certain limiting conditions in one empirical arena.

The objectives of this chapter include 1) discussing the empirical arena and limiting conditions under which the hypotheses are tested, 2) describing the study methods used for collection of the data, 3) developing empirical measures of the theoretical concepts as a basis for the statement of empirical hypotheses, and 4) discussing the procedures used for testing the hypotheses.

#### Study Arena and Limiting Conditions for Tests of Hypotheses

Organizations and systems of organizations vary greatly, from automobile manufacturing companies to neighborhood social clubs, and from government bureaucracies to professional societies. Many attempts have been made to identify differences among organizations and to classify them accordingly (Blau and Scott, 1962, pp. 40-42). A classification based on who is the primary beneficiary of the organization has been offered by Blau and Scott (1962). Using this criterion they specify four types of organizations.

...(1) 'mutual-benefit associations,' where the prime

beneficiary is the membership; (2) 'business concerns,' where the owners are the prime beneficiary; (3) 'service organizations,' where the client group is the prime beneficiary; and (4) 'commonweal organizations,' where the prime beneficiary is the public-at-large.

The focal organization and set organizations reported on here may be categorized as the third type, i.e., service organizations. Specifically, they are community based social agencies concerned with meeting health and welfare needs of persons in the community. The focal organization of this study is a new agency established to provide alcoholism services to persons with drinking problems. The analysis of the alcoholism agency's adaptive transactions with members of its set is limited by inclusion of only some elements of its organization set. The "helping" agencies selected for inclusion in the study comprise a relatively homogeneous subset. The subset is considered homogeneous inasmuch as each agency offered services to clients and the services were judged by the researchers to be of potential importance to clients of the alcoholism agency. A potential was believed to exist for similar kinds of adaptive transactions of the focal agency to occur with each agency of the specified subset.

A detailed description of the focal agency is presented here. The description is needed in order to understand the conditions surrounding the creation and development of the agency and the nature of its adaptive transactions with its environment. Most importantly it suggests the circumstances of the focal agency's existence which affect the potential generalization of the findings in an effort to attain a clearer understanding of interorganizational relations. Particular emphasis is placed upon identifying expected points of dependence of the focal agency on specific agencies in the homogeneous set which has been delineated. These descriptions

provide an essential basis for the operationalization of the dependent variable of this study, i.e., the intensity of the focal agency's adaptive transactions with each set agency.

#### Description of the focal agency

The focal agency was named the Iowa Comprehensive Alcoholism Project (referred to hereafter as ICAP and pronounced "eye-cap"). It originated in mid 1966 as a 32 month demonstration project funded by the Federal Office of Economic Opportunity and an expansion grant from the Federal Vocational Rehabilitation Administration. The major purpose of the project was to demonstrate and test a particular method of treating and rehabilitating indigent alcoholics.

The description of the ICAP goals and methods presented here is based upon an analysis of the original demonstration proposal, internal communications among staff members (particularly from the state staff to local staff) during the first several months of operation, extensive interviews with a number of ICAP staff members, and field observations of the author and several co-workers. A more detailed description is presented elsewhere by the author in collaboration with others.<sup>1</sup>

The ICAP "treatment" method represented a departure from perhaps the most widely used method of treating alcoholics, i.e., institutional treatment. In the institutional approach to treatment emphasis is most often placed upon the use of medical help and psychiatric counseling in a controlled environmental setting. The treatment method promulgated by ICAP

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<sup>1</sup>See Klonglan, et al. (1969a), especially pp. 8-15 and 29-43.

was one in which treatment was conceptualized as a community process and the alcoholic generally received services in the community setting or natural environment. Treatment in the community was intended to in some cases substitute for institutionalization and in others to complement it. As a complement to institutionalization, the ICAP method emphasized reintegration of the alcoholic into community life through formulation and implementation of a long-range rehabilitation plan of services. The major premises and rationales surrounding the development of the ICAP and its treatment methods were these:

1. Drinking problems (alcoholism) do (does) not exist in isolation from other social, psychological and health problems; therefore, in order to resolve drinking problems attention must be given to financial needs, employment problems, possible vocational changes, personal and family counseling needs, and medical assistance, all in addition to the drinking problems per se. Treatment includes as objectives the resolution of these needs.
2. Community "helping" agencies offer or are capable of offering the basic treatment services needed for rehabilitation of alcoholics; however, these agencies tend to either avoid serving alcoholics altogether or only offer services in a disjointed manner which tends to be ineffective. Further, alcoholism tends to be more prevalent among persons who are economically deprived. Such persons are the ones least able to afford treatment services and the ones most likely to be denied them.
3. A way of resolving the problems of indigent alcoholics is to create a "coordinating" agency which would actively seek referrals

of indigent alcoholics, assess their needs, refer them to the appropriate agencies for services, work with other agencies' officials to formulate long-range rehabilitation plans, and then to follow through with the clients to assure contact and effective utilization of services of other agencies. Barriers to be overcome included the lack of coordination at both state and local levels and the lack of well-trained persons to staff the new program.

To accomplish the ICAP goals state and local bases of operation were established. First, the state staff was formed. It hired local staff, coordinated training programs for them, established bases of operation, and later functioned to link the local bases of operation to each other and to the state governmental system. Each community service center, of which there were seven major ones, was staffed by a community coordinator, a secretary, and one or more aides. The community coordinator was in charge of the service center. Each of the coordinators had completed or nearly completed a Bachelors degree and in most cases was an arrested alcoholic. The aides were in general arrested alcoholics with periods of sobriety ranging from a few weeks or months to several years. However, as a condition of employment in the case of each individual, there was to have been promise that a serious effort was being made to maintain sobriety. Their positions as aides were in most cases viewed as a part of their own long range rehabilitation plan.

The community coordinator and his staff were expected to be the linkage mechanism between the alcoholic and agencies which could satisfy the alcoholic's treatment needs. It was specifically intended that the ICAP

service centers would not provide services which could be obtained from other agencies. If needed treatment services were not available from other agencies, it was the prescribed ICAP role to instigate the development of them by other agencies. In the event services were available in other agencies but alcoholics were discriminated against, it was ICAP's role to change the discriminatory practices. Another ICAP role was the obtaining of community support for the provision of alcoholism services in the community after the termination of ICAP as a demonstration project. In all of its activities it was an objective of ICAP to complement community services rather than duplicate them.

Conceptually, the ICAP community service centers could perhaps be described as follows. Each service center was a focal organization with a very limited domain, alcoholism treatment and services. This domain was perceived to be neither claimed nor desired by other agencies in the community. The service centers were severely limited in the amounts of resources available to them so that a situation of interdependence with other community agencies would exist. It was envisioned that other agencies would become elements of ICAP's organization set. The ICAP could offer its expertise in understanding alcoholics and performing outreach and follow-through services; and in turn it would have to rely upon other community agencies for counseling, job training, job placement, physical maintenance, etc., for its alcoholic clients. The goal of the expected transactions with community agencies was the effective provision of all treatment services to alcoholic clients which in turn was the major ICAP goal.

Expected adaptive transactions

The focal agency's adaptive transactions with set agencies were expected to occur in many ways. Specified below are six ways in which all of the agencies delineated for inclusion in the homogenous subset of this study were expected to become involved in ICAP's adaptive transactions. Specification of these "expected" adaptive transaction activities is based on documents and instructions issued by the state staff to the community coordinators. These activities were viewed by ICAP officials as means to the achievement of ICAP's goal of rehabilitating alcoholics. The six areas are as follows:

1. Exchange information about the functions of ICAP and the other agencies. Such exchanges could serve as the basis for transactions to be made with respect to serving clients and seeking other ways to interact.
2. Utilize the set agencies as a source of clients. The set agencies were expected to serve as one of several sources of potential clients.
3. Obtain services for ICAP clients from the agencies when needed.
4. Obtain the services of a representative from each agency on the ICAP Advisory Committee. This Committee was established as a means of assisting ICAP in identifying and solving alcohol problems in the community.
5. Get a representative of each set agency to participate in case conferences sponsored by ICAP for purposes of discussing specific clients, formulation of a long range rehabilitation plan for them, and coordinating efforts in the application of their respective

services.

6. Use educational methods to change erroneous beliefs or unfavorable attitudes which might inhibit the providing of adequate services to alcoholic clients and/or joint efforts in the area of alcoholism services with ICAP and other agencies.

Although each set agency offered a service perceived to be relevant to the rehabilitation of ICAP clients, not all were relevant in the same way or to the same degree. Kinds of adaptive transactions expected to occur with specific agencies are mentioned in the discussion of set agencies which follows in a later section of this chapter.

#### Some limiting conditions

ICAP taken as a focal organization for the purpose of studying its adaptive transactions has some features that make it somewhat unusual. A major distinguishing feature is the great emphasis placed on transactions with organizations in the environment, both in terms of utilizing their services and making changes in them. However, it is considered appropriate to place the majority of these in the category of being adaptive transactions of the ICAP inasmuch as they were definitely intended as means to the accomplishment of the ICAP goal of treating and rehabilitating alcoholics. Another distinguishing feature of the ICAP was that it was formed as a temporary "demonstration" agency. As a result the study of its adaptive transactions represents an analysis of transactions of an agency that was a new member of the community agency system. As a consequence, there did not exist past transactions with set agencies which would serve as predispositional factors to the adaptive transactions studied here. The

temporary nature of the demonstration project represents another somewhat unique, but confusing issue. The service centers were expected to operate with temporary funds for a period of two years, but it soon became evident that definite attempts would be made to establish the ICAP as a permanent agency with state and local funds. The net result was that the ICAP's adaptive transactions were surrounded by considerable uncertainty regarding the future.

#### Development of the Field Study

The data analyzed in this report were obtained through personal interviews with set agency directors and selected other personnel approximately one year after the opening of the local ICAP service centers. The collection of these data and their analysis represent only part of a broadly based effort to study the implementation of the total ICAP program. The total research project was conceptualized and implemented by a team of sociologists in the Department of Sociology and Anthropology at Iowa State University, Ames, Iowa. The funds to conduct the research were made available through a contractual agreement between the Office of the Governor, State of Iowa, and the Iowa State University.<sup>1</sup>

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<sup>1</sup>The research was conducted under the direction of project co-directors, Gerald E. Klomglan, Associate Professor of Sociology, George M. Beal, Professor of Sociology, and Joe M. Bohlen, Professor of Sociology. Don A. Dillman, Research Associate in Sociology, served as associate director. The research was conceptualized and executed over an 18 month period from March 1, 1967, to August 31, 1968. This time period began almost two months after ICAP personnel had opened the seven local service centers to receive clients and terminated about six months prior to the scheduled end of the project. Three broad areas of emphasis were specified in the research efforts. They were 1) an exploratory inquiry into possible relationships between poverty and alcoholism; 2) a study of the establishment and maintenance of interagency cooperative (footnote continued on next page)

The collection of data was preceded by nearly a year of intensive field operations that concerned the entire research project. These operations consisted of meetings with ICAP officials, visits to local service centers, observations at staff meetings, etc. These activities supplied invaluable background data for designing the procedures for collection of the data analyzed herein. They also provided an interpretative context for this and other analyses. Attention here is focused on describing the specific methods used for collecting only the data to be analyzed in this dissertation. A detailed description of the preliminary field operations and other aspects of the field methods is provided elsewhere (Klonglan et al., 1969a, pp. 65-92).

#### Selection of study units

Data were collected from the ICAP service centers and set agencies in four communities. Fourteen different types of set agencies were studied. Neither the communities or agencies studied represent randomly drawn samples. Their selections were purposive in nature and each comprises a population of study units. Since not every type of agency had a local unit in each community the total number of agency units delineated for study in the four communities totaled only 44. Factors relevant to the selection of the communities and set agencies are discussed below. Descriptions of each are also provided.

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(footnote continued from previous page) relationships as instigated by the ICAP service centers and 3) a study of clients served by ICAP service centers emphasizing factors related to their rehabilitation outcomes. Three reports have thus far been published, one emphasizing each of the three areas just mentioned. (Klonglan, et al., 1969a, Klonglan, et al., 1969b, and Klonglan et al., 1969c).

Selection of communities ICAP service centers were located in a total of seven Iowa communities. Resources allowed for the inclusion of only four of the seven communities in the study. The four study communities were selected in an effort to meet certain conditions. First, it was desired to minimize possible differences due to certain stimulus variables. One of these was the length of time that each community coordinator had been in his community and thus the time for the treatment effect to be produced. It was deemed most preferable to study communities in which the same community coordinator had worked from the beginning of the project. The reason was that the presence of two or more community coordinators would have made it more difficult to get comparable perceptions of what had happened with regard to agency interactions from the agency respondents and the ICAP community coordinators. It was assumed the community coordinator's perceptions would most likely be formed on the basis of the time he served in the community, while the agency respondent's perceptions would have been formed on the basis of his interactions with that community coordinator and any predecessor(s) of that community coordinator.

A second major factor taken into consideration in the selection of communities was the likelihood that the service centers would be operating at the time of the agency field study and/or that the same community coordinators would still be there. It was deemed more desirable to have a community coordinator working in a community for several months, although not the entire period of the project, than to have a new community coordinator placed in a study community near the time of the field study.

On the basis of these criteria selection of the study communities was made with little difficulty. The original community coordinators were

still employed or appeared likely to be at the anticipated time of the study in only two of the seven communities. These two communities were selected for inclusion in the study. Two other service centers appeared to be in a state of considerable instability, the community coordinator having just left in one, and it appeared probable that the community coordinator would soon leave the other one. There was a distinct possibility that the latter would be permanently closed due to possible fund cutbacks in the ICAP program. It was decided to exclude these service centers from the study. Of the remaining three service centers each had had at least two community coordinators since the beginning of the project. One of the community coordinators came to his service center about three months after it had originally opened. It appeared that his predecessor had done very little towards instigating adaptive transactions with other agencies so that most such work had been done by the present community coordinator. It was decided to include this community as a third study community. Both of the remaining communities had undergone periods of considerable instability when community coordinators had been replaced but appeared to be functioning smoothly with the replacement community coordinators. It was decided to select one of these communities as a pretest for the interview instruments with the hope that the instruments would be sufficiently satisfactory to include data collected there in the analyses. The community selected for a pretest community was chosen because in comparison to the other remaining communities, considerably more background data were available from previous visits with the past and present community coordinators.

Description of study communities      The four cities selected for inclusion in the study are Eastland, Fairmont, Westcliffe, and Oakwood.<sup>1</sup> Oakwood was the pretest community. Different sizes of cities were represented. Eastland and Westcliffe were both among the five largest cities in Iowa and Fairmont and Oakwood both ranked in the top 15. The populations of the counties in which Eastland and Westcliffe were located were considerably in excess of 100,000 people in 1960. Fairmont and Oakwood were located in counties of about 50,000 people in 1960.

All four cities served as primary or secondary trade centers for large geographic areas encompassing several counties. In all four cases the study community was the largest city for at least a 60 mile driving radius extending out from that city. In only two of the cases did any other city within these 60 mile driving radii exceed a population of 15,000 people. All four study communities had relatively diversified industrial bases and were important railroad centers.

Selection of agencies      The major criteria for the selection of "helping" agencies to include in the homogenous ICAP set were 1) offering of direct services to clients, and 2) offering services of potential relevance to ICAP clients. A research criterion later specified was the existence of each kind of agency in at least two of the study communities. Agencies were identified through community health and welfare service directories and early contacts with ICAP personnel during observational visits to the local ICAP service centers.

The relevance of the services of each potential set agency was

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<sup>1</sup> The city names used here are pseudonyms.

evaluated against information from ICAP policy and procedural documents which discussed the expected needs of ICAP clients. Agencies thus included offered one or more of the following services: financial assistance, direct economic assistance, employment assistance (placement and/or training), legal services, family counseling services, medical assistance, and mental health services. The fourteen agencies specified as members of a homogenous organizational set of the ICAP were: County Relief, County Soldiers' Relief, Social Welfare, Employment Service, Division of Rehabilitation Education and Services (DRES), Legal Aid Society, Family Services, Catholic Charities, Lutheran Social Service, Visiting Nurses, Public Health Nurses, Mental Health Center, Community Action Agencies and the Salvation Army.

Each of these agencies is described in some detail below. These descriptions include specific mention of the potential relevance of their respective services to the ICAP agency.

#### Description of study agencies

Community Action Agency Community Action Agencies were set up under the guidance and financial assistance of the Federal Office of Economic Opportunity. Although funds were mostly from federal sources the local Community Action Agencies had direct responsibility to a local or regional board formed to establish the agency and secure financing for it.

The general objectives included mobilizing and utilizing both public and private resources in an attack on poverty. Considerable flexibility was provided in operations within local communities. In general their services included the operation of neighborhood centers, job training, head start programs, and counseling in a number of areas. Basic objectives

included making use of and supplementing the work of other community agencies. These agencies were expected to be relevant to ICAP clients because of expertise in working with hard core poverty problems.

Eligibility requirements for most services were that the individual or families have low incomes such that they could be classified as "living in poverty."

Expenditures of the three Community Action Agencies in this study ranged from less than \$200,000 to nearly \$2,000,000 per year. The number of employees ranged from about 25 to nearly 90. The number of persons reported to have been served in some way during the preceding year ranged from about 1,000 to nearly 20,000.

County Relief As the name implies, County Relief was a county agency with responsibility to an elected governing body of the county -- the three to five member board of supervisors. The work of this agency was financed entirely by county funds obtained through property and personal taxes. In some counties (two of which are included in this study) the work of this agency had been combined with that of the Office of Social Welfare, thus eliminating County Relief as a separate agency.

The services offered by County Relief included direct forms of relief in the form of food, rent, clothing, fuel, electricity, water, glasses, dentistry, nursing care, drugs, doctor bills and hospital bills. No direct financial assistance was provided. It was also an objective of this agency to provide limited casework and information services. Emergency assistance was often provided while requests for aid from federal assistance programs, e.g., Aid to the Disabled and Aid to the Blind administered by Social Welfare, were being processed. It was expected by ICAP that this agency could

provide emergency economic assistance to alcoholics and their families.

Eligibility requirements were not clearly specified but appeared to depend to a great extent on the discretions of the employees of this agency and the county board of supervisors.

The expenditures of the County Relief agencies included in this study during the previous year were about \$85,000 in each case. The number of employees ranged from two to twelve and the number of clients served was slightly over 2,000 in each case.

County Soldiers' Relief County Soldiers' Relief paralleled the structure of County Relief except in two important regards. Soldiers' Relief was responsible to a Soldiers' Relief Commission, a board appointed by the county board of supervisors. In addition, none of the Soldiers' Relief agencies had been combined with the Social Welfare offices.

The functions of the Soldiers' Relief agencies were the same as those of County Relief, except for eligibility requirements. Soldiers' Relief served only war veterans and their dependents. Other than this, eligibility requirements were not clearly specified, but appeared to be at the discretion of the agency personnel and the Soldiers' Relief Commission. It was expected by ICAP that this agency could provide emergency economic assistance to eligible alcoholics and their families although its funds were quite limited.

The four study County Soldiers' Relief Agencies had expenditures of between \$25,000 and \$160,000 during 1967. The number of personnel ranged from one to four and the number of clients served from about 100 to 6,000.

Iowa State Employment Service The Iowa State Employment Service was administered by the state of Iowa, but was affiliated with the

United States Employment Service and was federally financed. Offices were located in districts that served one or more counties. Administratively, personnel of the local offices had direct responsibility to state office personnel and not to any intervening board or other governing body.

The services offered varied by community but in general consisted of occupational testing, counseling, and job placement. Some employment service offices offered special veterans services, special services to the handicapped, manpower training under the Manpower Development and Training Act, and special job mobility services. All of these services appeared to be relevant to ICAP clients.

There appeared to be no eligibility requirements for the regular services of testing, counseling, and placement other than having a need for such aid. Eligibility requirements for special programs varied.

Information was not available on the expenditures of each of the study agencies because of the use of a state-wide record keeping system. However, salary expenditures alone were greater than \$75,000 for 1967. The number of employees ranged from about 10 up to 75. The number of clients served ranged from an estimated 6,000 up to around 20,000.

Public Health Nursing Service Public health nurses were employed by counties in cooperation with the State Department of Public Health. The nurses were responsible to the County Board of Health which was in turn responsible to their County Board of Supervisors. Salaries were paid jointly by the county and the State Department of Public Health. Regional nurses responsible to the State Department of Public Health performed certain supervisory responsibilities over the local Public Health Nurses.

The objective of the Public Health Nursing Service was to serve the

health needs of individuals in the community regardless of their financial standing. They offered adult services, school health services, communicable disease control, maternity, infant, and preschool service; and household services. Instruction and counseling in the area of health were also major functions. Where medical problems were a complicating factor in an alcoholic's home, the services of this agency could be of considerable relevance.

There did not appear to be specific eligibility requirements other than a need for the services they provided.

Expenditures during 1967 by the three Public Health Nursing Services included in the study were between about \$11,000 and \$30,000. The number of employees per local office ranged from three to five and the number of clients served ranged from over 500 to nearly 38,000.

Social Welfare      The Social Welfare agencies provided welfare assistance from county, state, and federal funds. Local agencies had responsibility to a welfare board appointed by the County Board of Supervisors and to regional representatives of the State Department of Social Welfare which recently became part of the new Department of Social Services of the state. Offices were organized on a county basis. In some counties the Office of Social Welfare had absorbed the functions of the County Relief Agency.

The main functions of the Social Welfare agencies included financial assistance, direct aid, casework, and counseling. Services of this agency were offered mainly within seven program areas; Aid to the Disabled, Aid to Dependent Children, Aid for the Blind, Old Age Assistance, Child Welfare Services, Medical Assistance, and the Work Experience Program. Major

responsibility for the Work Experience Program was in the process of being transferred to the State Employment Service Offices in some cases. It was expected that Social Welfare could in some cases provide financial assistance and limited counseling to the families of alcoholics.

Eligibility requirements for each of the services varied but in general were quite specific. They were spelled out in much detail in the written policies and regulations of the agency.

The expenditures of the Social Welfare agencies included in the study ranged from slightly less than \$3,000,000 to over \$7,500,000. The number of employees ranged from about 20 to 130. Estimates of the number of clients were not available from two agencies but were probably between no less than 4,000 to at least 20,000 clients.

Division of Rehabilitation Education and Services (DRES) Formerly titled the Division of Vocational Rehabilitation, this agency was a state agency financed primarily by federal funds but with some state matching funds. Offices were organized on a district basis, each district being composed of several counties. Local office personnel had direct responsibility to state supervisors and not to any intermediary boards or governing bodies.

The objectives of this agency were to help restore or develop the abilities to work of physically and mentally handicapped citizens to the extent they could become appropriately employed. Services available to eligible clients were these: medical and vocational evaluation, medical and psychiatric treatment, prosthetic devices, vocational guidance and counseling, training, maintenance and transportation while undergoing rehabilitation, occupational equipment, job placement, and follow-up services.

Alcoholism was defined as a disability by this agency. DRES was expected to provide medical evaluations and diagnostic services for ICAP clients. Eligible alcoholics could then receive training and/or educational opportunities from this agency.

Eligibility requirements included evidence of disability that was a vocational handicap, and in which case there was a reasonable expectation that services would result in appropriate employment.

Expenditures of the individual study agencies were not available due to the state-wide bookkeeping system but in all cases were well over \$100,000. The number of employees per office ranged from 11 to 22 and the number of clients served ranged from around 200 to 2,000 in 1967.

Catholic Charities Catholic Charities was a private agency which received its financial support from United Campaigns, fees, and religious sources. The local agencies were organized on a district basis, and the personnel were responsible to a board of directors.

They performed a wide variety of functions which included: family counseling, planning for unmarried parents, foster home services, evaluation services for emotionally disturbed children, and to a limited extent emergency financial and economic services. Counseling services and emergency services were thought to be of particular relevance to ICAP clients.

Eligibility requirements were not very specific but generally seemed to be evidence of need. Eligibility was not limited solely to Catholics.

The expenditures of the study agencies during 1967 ranged from around \$15,000 to \$150,000. The number of employees ranged from 2 to 11 and the number of clients from around 150 to over 2,000 for the study agencies in 1967.

Family Services      The three study agencies referred to as Family Services had the same generic name, but were organized separately. They were all private agencies. Two were responsible to local private boards; the other was responsible to a state "parent" organization. All three agencies received large proportions of their funds from the United Campaign and fees for their services; in addition, two received limited funds from governmental sources and one received funds from its parent organization. The agencies were grouped together in this study because of the great similarity of their roles in the respective communities.

Major services offered by each of the agencies included marriage and family counseling, children's counseling, and services for unmarried parents. Two of the agencies also provided travelers' aid services. The other agency provided adoption services. The services of all agencies were offered in close cooperation with professionals in other fields. Family counseling services were thought to be of much relevance to certain ICAP clients.

The 1967 expenditures of these agencies ranged from around \$35,000 to over \$125,000. The number of employees in 1967 ranged from about five to 15 and the number of clients from slightly over 200 to over 1500.

Legal Aid Society      The Legal Aid Societies were financed primarily by funds from the Federal Office of Economic Opportunity and had contractual relationships with that agency. The personnel of the local offices had direct responsibility to a local board of directors.

Quite briefly the objective of Legal Aid was to provide legal services to persons needing such services and who could not reasonably be expected to pay regular attorney's fees. Inability to pay was judged in accordance

with OEO poverty guidelines or the refusal of private attorneys to handle a case because of a perceived inability of the potential client to pay. It was expected that some ICAP clients would have legal problems but not be able to secure private assistance so could obtain help from Legal Aid.

The two Legal Aid Societies included in this study had 1967 expenditures of between \$80,000 and \$125,000. The number of employees was between five and ten. The number of clients served in 1967 ranged from around 8,000 to 13,000.

Lutheran Social Service      The Lutheran Social Service agencies were private agencies with direct responsibilities to a state parent organization. Their funds were obtained primarily from fees for services and religious organizations. One of the agencies also obtained some funds from governmental sources for special programs.

The functions of this agency included family counseling, services to unmarried parents, adoption and foster care services, and chaplaincy work. Family counseling services were thought to be of relevance to ICAP clients.

Eligibility requirements appeared to be based on perceived need. Services were not limited strictly to Lutherans.

Information was not available on the expenditures of each of the local agencies because of the centralized state-wide bookkeeping system. The number of employees was about five in each case, and the number of clients served during 1967 ranged from less than 400 to about 550.

Mental Health Centers      The Mental Health Centers were locally organized and had direct responsibility to a local board of directors. Their funds were obtained from various sources including United Campaign, and fees, but mostly were from the county government.

The Mental Health Centers provided out-patient mental health consultation services at the community level in the areas of diagnosis, treatment and consultation. Specific services included individual counseling and therapy, family counseling and therapy, medication therapy, and group therapy. Most services offered by this agency were potentially relevant to some ICAP clients.

Services were limited to those who could not be realistically expected to pay full fees for assistance from private sources.

One of the Mental Health Centers had only been in operation for about five months prior to the interview. Its projected first year budget was around \$50,000, whereas the other center had spent around \$120,000 during the previous year. The staff of each was about seven persons. The number of clients served by the center in operation only for five months was about 75. The other center had served about 1,100 during the previous year.

Salvation Army The Salvation Army was a private agency which received its funds mostly through their own fund-raising activities, although a small amount was received from the United Campaigns. The local agencies with one exception had direct responsibility to the state office of the Salvation Army. One of the local units had a Men's Social Center where transients could obtain residence and participate in a social program. This local unit had direct responsibility to a divisional office that administered activities in several states.

The functions of the Salvation Army were many and varied. They included welfare services, counseling, religious work, visitation and distribution of food, service to unmarried mothers, a missing persons bureau, emergency disaster services, organizational activities, alcohol

rehabilitation services, and youth work. The Salvation Army was considered relevant to ICAP because of emergency assistance services and limited aspects of its counseling and alcohol rehabilitation services.

Eligibility requirements included only evidence of need for the services and in some cases a desire to obtain them.

The 1967 expenditures of the Salvation Army units ranged from around \$30,000 to over \$90,000. The number of staff members ranged from two to five. The number of clients served ranged from less than 400 to over 6,000.

Visiting Nurses Association      The Visiting Nurses Associations were private agencies that performed many of the same functions as Public Health Nurses. They were responsible directly to a local board of directors. Funds were received from the United Campaign and fees plus in some cases the city government. In one case the Public Health Nurses were combined with the Visiting Nurses Association under the auspices of the latter and in this case some funds were received from the county government.

The functions were to a considerable extent the same as those provided by the Public Health Nurses. They provided medical and health services to individuals and families who needed such services. Specific examples of services were caring for sick persons in their homes, assisting in carrying out doctors' orders for patients, and advising on how to plan and prepare special diet meals. They also provided other health information. The services of this agency were of potential relevance to ICAP where medical problems were a complicating factor in the alcoholic's home.

The eligibility requirement appeared to be exhibiting a need for services. In two communities a person must have resided in the city in order to gain services. If they resided outside of the city limits it would be

the Public Health Nurses' responsibility to care for them. This did not hold for the combined agency mentioned above.

The 1967 expenditures of the Visiting Nurses Associations ranged from about \$15,000 to over \$230,000. The number of staff members ranged from three to nearly 40. The number of clients ranged from about 60 to over 18,000.

Summary of existence of agencies by community The 14 individual agencies studied existed in from two to four of the study communities; seven agencies existed in all four, two in three communities, and five in two communities. Agencies for which interviews were completed are indicated in Table 3.1.

#### Data collection procedures

Interview schedules Two interview schedules were developed for use in the agency field study; one was used in a semi-structured interview with the agency respondents, and the other was a counterpart of the first for use with the community coordinators.

The agency respondent interview schedule was devised not only to obtain data regarding alcoholism and interactions with the ICAP, but also to obtain information about the organizational structure and functions, characteristics and personnel, and descriptions of interactions with other agencies. Much attention was given to psychologically ordering the questions to avoid certain stimuli prior to some questions. For example, before the ICAP was even mentioned in the interview a considerable number of questions were asked about policies toward alcoholic clients.

The community coordinator interview schedule consisted primarily of

Table 3.1. List of agencies by community and whether interviews were completed [Code: Yes (interview completed); No (interview not completed); Dash (agency did not exist)]

Agencies	Communities			
	Eastland	Fairmont	Oakwood	Westcliffe
Community Action Agency (CAA)	Yes	Yes	No	Yes
County Relief	- <sup>a</sup>	Yes	- <sup>a</sup>	Yes
County Soldiers' Relief	Yes	Yes	Yes	Yes
Employment Service	Yes	Yes	Yes	Yes
Public Health Nurses	-	Yes	Yes	Yes
Social Welfare	Yes	Yes	Yes	Yes
Rehabilitation Education and Services (DRES)	Yes	Yes	Yes	Yes
Catholic Charities	Yes	Yes	-	No
Family Services	Yes	Yes	-	Yes
Legal Aid Society	Yes	-	-	Yes
Lutheran Social Service	Yes	-	-	Yes
Mental Health Center	-	-	Yes	Yes
Salvation Army	Yes	Yes	-	Yes
Visiting Nurses Association	Yes	Yes	-	Yes

<sup>a</sup>The functions of County Relief are performed by Social Welfare in this community.

adaptations of questions asked the agency respondents. Because of the similarity of questions and procedures followed in the use of the community coordinator schedule, this schedule will not be discussed further except in terms of implementing its use.

Pretests and revisions of agency respondent schedule After completion of the agency respondent interview schedule, a small scale pretest was completed with a Social Welfare agency director and a Community Action Agency director not located in a study community. These interviews were conducted with the full knowledge of the interviewees that they were being interviewed in a pretest situation. The interviews were conducted by two graduate research assistants who later conducted some of the study interviews in all four communities. Revisions were made on the basis of the results and the suggestions of the interviewees. In addition a pre-interview form was developed to give to the agency respondents prior to the interview so that collecting certain statistical information could be simplified. It could be prepared ahead of time by someone on the agency staff.

As already mentioned one of the four study communities (Oakwood) was designated as a pretest community. However, it was planned to include data from that community in the data analyses if the interview instrument and methods proved adequate. Consequently during this pretest every effort was made to follow the methods and procedures planned for use in the three other communities. After completion of the pretest interviews in Oakwood, some minor revisions were made, and the study was implemented in the remaining three communities. Although minor revisions were made after the Oakwood pretest, most of the data obtained were comparable to that obtained in the other communities so were included in the data analysis of this report.

The methods used to collect the data in all four communities are discussed below.

Legitimation procedures      Considerable attention was given to obtaining legitimation of the research study and establishing the identity of the researchers. The reason for these efforts was to attempt to make the interviews non-threatening in any way to the respondents.

It was known by all of the ICAP staff members that agency personnel in some of the communities where the ICAP service centers were located would be interviewed, but they did not know which communities. The community coordinators were not told until a few days before the interviewing began in the first community which communities would be studied. This was done to avoid the possibility of the community coordinators placing added emphasis on agency relationships just prior to the field study. Members of the research team met with the community coordinators of the study communities just prior to the beginning of the interviews to explain how the study would be conducted. The community coordinators were asked not to inform personnel of other agencies that they would be called on. Because of the number of questions about ICAP and alcoholism, it was anticipated that some agency personnel might ask ICAP personnel if they were aware of the research activities. The community coordinators were told that this might happen. They were asked to provide only specified information to any of the study agencies' personnel who might ask them about the research. This information was written in a memo to them and was stated as follows:

We (ISU) are professional researchers, employed by Iowa State University; we do not work directly for ICAP.

Both state and local ICAP personnel are aware that we are conducting research interviews in the community, and we

have the approval and support of the ICAP organization in relation to asking questions about alcoholism and ICAP.

With regard to the information they give us (or have already given us) we are bound by strict professional ethics and the information will be kept in strictest confidence. The names of people from whom we collect data will never be revealed in our research reports and conscientious efforts will be made to not reveal information that will make known the names and locations of the specific agencies in relation to specific information obtained from them.

A strong effort was made throughout the interviewing to avoid having the research effort directly associated with ICAP operations to avoid possible biased responses stemming from any inaccurately perceived association.

A second phase of legitimation was with state officials of the counterparts of certain local agencies. A state ICAP official acquainted with persons in these departments who had previously been assigned as liasons to ICAP personally talked to them and their state directors explaining the researchers' affiliations with Iowa State University, the nature of the research, and the researchers' desires to interview personnel of their local agencies. He also informed them that they would be contacted to be given an explanation of the nature of the study, answer any questions that they might have, and that they would probably be asked to send a letter to the local offices giving state-level approval and encouragement to their participation in the interviews.

At about the same time a letter was sent by the research study coordinator to each of the state ICAP liasons explaining his desire to meet with them. This was followed by a phone call to establish a meeting time. These meetings had two research purposes: 1) to collect data about contacts of these state agency persons with ICAP and to determine what communications,

if any, had been sent by the state agency to its local offices regarding relations with the ICAP and 2) to have a letter of legitimation sent to the local agency officials. The study coordinator gave each of the officials a copy of the information it was desired be sent to the local agency directors written in letter form. The state officials were asked to read it and indicate whether a letter of that type might be acceptable. In the case of at least two of the agencies, the letter sent to the local agency directors was a replication of the "suggested" letter. In all four cases agreement to fully cooperate was received.

Interviews with local agency personnel      The names and addresses of the directors of all the local agencies were obtained from three sources: 1) the community coordinators, 2) the state agency liasons previously interviewed, and 3) local phone directories. Letters were sent to each local agency director by the director of the research team explaining that the study coordinator would be contacting them to arrange a time when an interview might be completed. No mention was made of ICAP in this letter. From two to five days after letters were sent, the local agency directors were contacted. At that time an effort was made to explain in some detail the nature of the study and to secure from them a commitment to cooperate. From five to 30 minutes was spent attempting to build rapport, explain the significance of the research, state why their cooperation was needed, and alleviate any other concerns which they might have had. It was emphasized that the focus of the study was on how agencies functioned, their problems and their needs, and on efforts to combat alcoholism. The agency respondents were told that the interview would take two to three hours, and an interview appointment was set when the study coordinator or one of the two

graduate research assistants who assisted with the interviewing could complete the interview.

The director was not the only person interviewed in some agencies. The interview schedule consisted of four sections, only one of which dealt with alcoholism services and ICAP. The local director was asked to answer questions to the first section of the interview schedule which dealt with agency structures and functions. He was told that one section of the interview dealt with alcoholism, and after asking him if he had heard of ICAP, he was told there were also a number of questions which dealt with the relationships between his agency and ICAP. He was informed that the questions dealt with such things as client referrals and decisions regarding working with clients. He was asked if he preferred to answer these questions or if someone else in the agency was assigned to work with ICAP and would better be able to answer the questions. In a few cases the director unequivocally stated that he knew little or nothing about ICAP and suggested that this section of the interview be completed with another employee assigned to work with ICAP. In these cases his judgment was accepted. In general the decision was not difficult to make. In addition to the agency director's perception, discussions had been held previously with each ICAP community coordinator to determine whether meetings with personnel had involved only the director or other persons as well, and whether such other persons were assigned liaison responsibilities, etc. It was desired in all cases to interview the agency representative who had the most intimate contact with ICAP. Table 3.2 shows which respondent -- agency director or other employee -- was interviewed for each section of the schedule in the respective communities.

Table 3.2 Respondents from each agency (Code: X = director, XX = other respondent, and XXX = both)

Agencies	SECTION ONE: Agency Characteristics	SECTION TWO: Alcoholism Services & ICAP	SECTION THREE: Alcoholism Beliefs and Attitudes	SECTION FOUR: Personal Characteristics of Respondents
Community Action Agency (E)	X	X	X	X
Community Action Agency (F)	X	X	X	X
Community Action Agency (W)	X	X	X	X
County Relief (F)	X	X	X	X
County Relief (W)	X	X	X	X
County Soldiers' Relief (E)	X	X	X	X
County Soldiers' Relief (F)	X	X	X	X
County Soldiers' Relief (O)	X	X	X	X
County Soldiers' Relief (W)	X	X	X	X
Employment Service (E)	XXX	XX	XX	XXX
Employment Service (F)	X	X	X	X
Employment Service (O)	X	X	X	X
Employment Service (W)	X	X	X	X
Public Health Nurses (F)	X	X	X	X
Public Health Nurses (O)	X	X	X	X
Public Health Nurses (W)	X	X	X	X
Social Welfare (E)	X	X	X	X
Social Welfare (F)	X	X	X	X
Social Welfare (O)	X	X	X	X
Social Welfare (W)	X	X	X	X
Rehabilitation Ed. and Services (E)	XXX	XXX	XX	XXX
Rehabilitation Ed. and Services (F)	X	X	X	X
Rehabilitation Ed. and Services (O)	X	XX	XX	XXX

Rehabilitation Ed. and Services (W)	X	XX	XX	XXX
Catholic Charities (E)	XXX	XX	XX	XXX
Catholic Charities (F)	X	X	X	X
Family Services (E)	X	X	X	X
Family Services (F)	X	X	X	X
Family Services (W)	X	X	X	X
Legal Aid Society (E)	X	X	X	X
Legal Aid Society (W)	X	X	X	X
Lutheran Social Service (E)	X	X	X	X
Lutheran Social Service (W)	X	X	X	X
Mental Health Center (O)	X	XX	XX	XXX
Mental Health Center (W)	X	X	X	X
Salvation Army (E)	X	X	X	X
Salvation Army (F)	X	X	X	X
Salvation Army (O)	X	X	X	X
Salvation Army (W)	X	XX	X	XXX
Visiting Nurses Association (E)	X	X	X	X
Visiting Nurses Association (F)	X	X	X	X
Visiting Nurses Association (W)	X	X	X	X

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An attempt was made to complete interviews in a single community within a three or four day period to minimize possible discussions among agency personnel about the interviews. While in all communities the majority of the interviews were completed during this time, it was necessary to arrange a few of the interviews at a later time. The structured interviews with community coordinators were completed within a two day period following the completion of the agency respondent interviews in all four communities.

The interviews with agency personnel themselves varied greatly in length -- from less than an hour to as long as six hours. The majority were from 2½ to 3½ hours in length. Differences in length of interviews were primarily due to differences in the desire of the respondents to verbalize at length on certain questions rather than due to the number of questions which for some reason(s) did not apply to a given respondent.

#### Operationalization of Theoretical Concepts and Statement of Empirical Hypotheses

Data collected according to the procedures just outlined are used to empirically test the hypotheses stated in the previous chapter. Before the hypotheses can be empirically tested it is necessary to link the theoretical concepts of the hypotheses with the data used to test them. That is, the operational or empirical measures of the theoretical concepts must be specified. The objective of this section of the chapter is to develop these empirical measures. The dependent variable of the study, "intensity of the focal organization's adaptive transactions," is operationalized first. The various independent variables will then be operationalized and the empirical hypotheses stated in conjunction with discussions of each

of these variables.

Operationalization of the dependent variable

Adaptive transactions of a focal organization have been defined as interactions between it and another organization in which something changes hands, the result of which is perceived to be instrumental to the attainment of the focal organization's goals. The theoretical hypotheses were stated in terms of the "intensity" (degree or strength) of the adaptive transactions between two organizations, rather than simply their occurrence or lack of occurrence. The empirical measure of the intensity of adaptive transactions reported here is developed from responses to a number of indicators. The various indicators were developed in order to ascertain the extent to which adaptive transactions occurred in relation to as many areas of the focal organization's function as seemed feasible. The empirical measure of the intensity of the focal organization's adaptive transactions with each set agency is called the ICAP Adaptive Transaction Score. The steps in the development of this Score are outlined in detail below.

The ICAP Adaptive Transaction Score consists of component scores for seven different possible areas of ICAP adaptive transactions with set organizations. These areas are: 1) acquaintance and frequency of interaction, 2) service on the ICAP advisory committee, 3) referral of clients to ICAP from other agencies, 4) referrals of clients from ICAP to other agencies, 5) participation in ICAP staffing sessions, 6) training in the area of alcoholism provided to other agencies by ICAP, and 7) a residual category of "other" transactions. The goal of using numerous indicators of the occurrence of adaptive transactions was to be comprehensive in scope

and provide a valid measure of the intensity of the adaptive transactions.

The interview data from which the component scores were calculated were obtained about 12 to 13 months after the local ICAP service centers had first started operations. The measure of the intensity of adaptive transactions was intended to cover the entire period of time since the service centers had commenced operations.

Various weights were given to each area of adaptive transactions and levels distinguished within each area. The lack of previous efforts to measure the intensity of transactions over a period of time offered no guidelines with respect to the assignment of weights. Weights were assigned on the basis of perceived contribution to ICAP goals, as estimated by the researchers.

Component score 1: acquaintance and frequency of interaction The first component of the ICAP Adaptive Transaction Score is based on a general and indirect indicator of the occurrence of adaptive transactions. Basic to adaptive transactions in most if not all areas of ICAP functioning is acquaintance and interaction with the set organization. Acquaintance and interaction may serve as a direct indicator of the transfer and exchange of information about agency affairs. To the extent time is viewed as a scarce resource and interaction is evaluated in terms of its opportunity cost, it would be expected that the greater the frequency of interaction the more likely this time is perceived as instrumental to goal attainment.

Three questions were asked of the agency respondents regarding acquaintance and frequency of interaction with the ICAP, as follows:

Are you personally acquainted with any of the personnel who

work in the ICAP service center?

(If yes) Could you give me the names of the ICAP personnel whom you know?

Could you tell me about how often you have personally talked to the director that is the community coordinator of the ICAP service center using these categories: 1) never, 2) only once or twice, 3) more than twice, but less than once a month, 4) at least once a month, but less than once a week, 5) once a week or more.

The component acquaintance and frequency interaction was comprised of two parts scored as follows:

Acquaintance: 0 = Correctly identified no one  
 1 = Correctly identified one or more aides only  
 2 = Correctly identified community coordinator only  
 3 = Correctly identified community coordinator and one or more aides

Frequency of interaction: 0 = Never  
 1 = Once or twice only  
 3 = More than twice but less than once a month  
 5 = More than once a month but less than once a week  
 7 = Once a week or more

Component score 2: service on advisory committee      Securing the services of personnel from other agencies on the ICAP advisory committee was very clearly an adaptive activity. The organization and operation of the ICAP advisory committee was clearly specified by ICAP officials as a major means to the attainment of the ICAP goal of being able to provide needed alcoholism services in each community.

This component score takes into account the number of participants per agency, the frequency of attendance at advisory committee meetings, and service as an officer or committee chairman. The agency respondents were asked:

Have you ever been asked to serve on the ICAP advisory board?

(If yes) Did you decide to accept the request to serve on the board?

Has anyone else in your agency been asked by you or the ICAP people to serve on the advisory board? (If yes, the respondent was asked to explain who, and whether that person had served).

In addition to the responses to these questions attendance records for all advisory committee meetings were obtained from the ICAP community coordinators.

The service on advisory committee component score was composed of three parts, scored as follows:

Frequency of respondent's attendance at meetings:

- 0 = Never asked to serve or refused
- 1 = Accepted request; attended no meetings
- 4 = Attended 1/3 or fewer meetings
- 8 = Attended from 1/3 to 2/3 of meetings
- 12 = Attended more than 2/3 of meetings

Whether respondent served as officer or committee chairman:

- 0 = No
- 3 = Yes

Second staff member's service: 0 = None  
1 = Yes, member only  
3 = Member, also officer or committee chairman

Component score 3: referral of clients to ICAP Viewed in the framework of Levine and White (1961) as already discussed herein, clients are resources essential to functioning of an agency. Other agencies were one of the major sources from which ICAP expected to obtain its clients. The agency respondents were asked the following questions:

Has your agency ever referred clients to the ICAP service center?

(If yes) About how many clients were referred to ICAP by your agency during the past year?

In several cases where respondents were unable to specify the number of clients referred to ICAP from their agency, information obtained from ICAP community coordinators and/or service center records was (were) substituted.<sup>1</sup>

The referral of clients to ICAP component score was scored as follows:

Estimates of clients referred: 0 = None  
 3 = 1-10 clients (or clients referred but not estimate available)  
 8 = 11-25 clients  
 13 = 26-100 clients  
 16 = over 100 clients

Component score 4: referral of clients from ICAP ICAP service centers had very few resources under their control to use in providing services to their alcoholic clients. Thus it was necessary for ICAP to adapt to its environment by referring clients to other agencies in order to attain the ICAP goal of rehabilitation. Although the clients may in one sense be viewed as resources obtained by the other set agency for goal

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<sup>1</sup>Obtaining an exact report of the number of referrals between agencies is at best a difficult undertaking. When an agency worker in the referral agency confers with a worker in the agency to which the client is referred the task is eased. However, determination of the number of client referrals in some cases depends upon the willingness of the agency worker to attempt to find out that information and/or the willingness of the client to divulge it. In addition accurate knowledge of referral activity between agencies depends on the keeping of accurate, probably daily records, which few agencies keep. In response to the questions asked here some respondents were able to respond without hesitation with precise numbers. Certain other respondents indicated that while they knew there had been some referral activity they did not have any idea how many clients had been referred. In general these were the directors of larger agencies who were seldom involved in dealing directly with clients. In such cases the directors were not encouraged by the interviewer to "guess". An attempt was then made to supplement with records from the ICAP service centers. Thus, the reader is advised that responses obtained to these questions should only be considered as approximations of the actual number of referrals.

attainment, it is appropriate to view the referrals as means to ICAP's goal attainment so long as services are provided which aid in client rehabilitation. Thus the referral of clients may be considered a form of mutually adaptive transactions so long as the goals of each agency are furthered.

The information regarding client referrals from ICAP was obtained in the same manner as information about client referrals to ICAP, and is subject to the same limitations. The component score was calculated in the same manner, with the highest possible component score being 16.

Component score 5: participation in ICAP staffing sessions In addition to mutual client referral activity with set agencies, it was anticipated that the ICAP community coordinators would organize so-called "staffing sessions" to better plan and implement long-range client rehabilitation plans. Toward this end the community coordinators were expected to bring representatives from various agencies together to discuss clients being mutually served by the various agencies. Thus, while directly concerned with client services, participation in staffing sessions comprised a type of adaptive transaction involving a greater contribution on the part of the set agencies than client referral alone. The agency respondents were asked:

Have you ever been asked by an ICAP staff member to have yourself or one of your staff members participate in periodic meetings (other than advisory board meetings) with personnel from the ICAP staff and other agencies to discuss the needs of specific alcoholic clients of your respective agencies?

(If yes) How frequently have you (or one of your staff members) participated in these meetings?

The frequency of participation in the ICAP staffing sessions constituted the basis for this component score. The score was calculated as

follows:

Participation in staffing sessions: 0 = Never participated  
5 = Once or twice  
10 = More than once or twice

Component score 6: training for set agency personnel in area of alcoholism Providing direct training and other educational opportunities to persons in set agencies was one of the means used by ICAP in order to get other agencies to more adequately accept responsibilities for serving alcoholics. Through changes in beliefs, attitudes and levels of competency in working with alcoholics it was hoped that the agencies would do a better job of working with all alcoholic clients and ICAP clients in particular.

The ICAP was responsible for training others in either of two ways:

1) by directly providing training to the personnel of these agencies or 2) by encouraging, arranging, paying for, or otherwise facilitating the receipt of training from some other source. Agency respondents were asked:

During the past year have any of the personnel on your staff (including yourself) received any special training in the area of understanding and working with alcoholics?

(If yes) What kinds of training were they and how many persons were involved?

Was the ICAP organization (either state or local) in any way responsible for these persons in your agency receiving this training?

(If yes) In what ways was ICAP responsible?

The training component score was calculated as follows:

Training received for which ICAP was responsible:

0 = None

3 = In-service training provided by ICAP

Plus 3 for each experience = Each other experience for which ICAP was responsible

Plus 1 for each 20% = Each full 20% of staff that received training.

Component score 7: other transactions After questions had been asked about the six areas of adaptive transaction activities discussed above an attempt was made to ascertain other ways in which ICAP was dependent on agencies of its set. The agency respondents were asked the following questions:

Has your agency cooperated with ICAP in any way which involved exchanges in the use of facilities or other resources, e.g., use of physical facilities (such as meeting rooms or office space), duplicating equipment, supplies or personnel (such as secretaries, aides, or case workers)?

(If yes) What type of exchanges have taken place?

I have asked you several questions about relationships between your agency and the ICAP service center. Are there any other ways, which we have not discussed, in which your agency and the ICAP service center have worked with each other during the past year?

(If yes) Please explain.

The component score was based on the number of different transactions identified by means of these questions, and was calculated as follows:

Number of other interactions: 0 = None  
 4 = Mentioned one area  
 Plus 3 for each area mentioned =  
 Each additional area mentioned.

Operationalization of independent variables and statement of empirical hypotheses<sup>1</sup>

Size of resource base It was hypothesized that the intensity of the focal organization's adaptive transactions is related positively to the

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<sup>1</sup>For reasons of parsimony minimal rationales for the development of certain empirical measures will be presented in cases where the rationales would represent a repetition of discussions stated in conjunction with development of the general hypotheses in Chapter 2. The reader is referred to the appropriate section of Chapter 2 for further elaboration if desired.

set organization's size of resource base. There are several possible measures of size of resource base for agencies of the ICAP set. Agencies' resources include such factors as money available for client services, staff members, training received by the staff members, physical facilities, and clients themselves. Two measures of size of resource base are introduced here.

The first measure is the total expenditures of the set agency during the most recently completed year of its operation. This measure has the advantage of using a common unit (dollars) to place a value on the many different kinds of resources under the control of the agency. It takes into account many different aspects of an agency's resource base. The indicator of each agency's total expenditures was a question included in the pre-interview questionnaire given to each respondent prior to the actual interview. It was:

How much money was spent by your agency during 1967 (or the most recently completed fiscal year)? Please include all direct costs of programs and administrative costs.

This information could not be obtained for ten agencies. In eight of these cases it was not available due to statewide centralized bookkeeping systems. However, it was possible to make acceptable estimates based on complete salary information and client service information.

The first empirical hypothesis can now be stated as follows:

E. H. 1.1:<sup>1</sup> The ICAP Adaptive Transaction Score is related positively to

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<sup>1</sup>E. H. is an abbreviation for empirical hypothesis and is used throughout this dissertation. The identification number follows this format: digits to the left of the decimal indicate the number of the corresponding general hypothesis and digits to the right identify the specific empirical measure. See page 70 for brief discussion of hypothesis format used herein.

the set agency's total expenditures for the most recently completed year.

The second measure of size of resource base takes into account only a limited aspect of an agency's resources. The measure is the number of staff members. This aspect of the resource base is considered of particular importance inasmuch as the occurrence of interorganizational transactions is considered to be greatly encouraged in the presence of numerous staff members. This is because chances are greater that staff reassignments to facilitate transactions may be made without major detrimental effects on other activities as discussed earlier.

Data on the number of staff members were obtained on the pre-interview form. Respondents were asked to complete a personnel table for which a list of all staff positions and the number of full-time persons in each position was requested.

The second empirical hypothesis is as follows:

E. H. 1.2: The ICAP Adaptive Transaction Score is related positively to the set agency's number of staff members.

Degree of goal diversity It was hypothesized that the intensity of a focal organization's adaptive transactions with set members was related positively to the set organization's degree of goal diversity. The measurement of goal diversity takes into consideration the fact that each of the set organizations shares a common general goal, i.e., to provide services to clients. The measure of goal diversity is the number of different kinds of services offered to clients; the more services offered the greater goal diversity is considered to be.

To determine the number of different kinds of client services offered

each agency respondent was asked the following question with regard to ten different kinds of client needs for which services might be offered.

For each of these needs listed here I would like to ask you:<sup>1</sup>  
Do you offer a service aimed toward resolving this need?

The categories of services included: 1) direct financial assistance, 2) direct economic aid (e.g., food, clothing, and shelter), 3) medical services (e.g., physical therapy, immunizations, and corrective devices) 4) psychiatric services, 5) group psychotherapy or psychological services, 6) counseling for specific problems (e.g., financial, legal, marital and familial), 7) educational information, 8) vocational rehabilitation services, (e.g., testing, counseling, formal training, and on the job training), 9) employment service (help in seeking employment), and 10) referrals and commitments to institutions (e.g., mental health institutes, private sanitoriums, or children's homes). A Goal Diversity Score was calculated by scoring one point for each category of service offered by the agency.

The following empirical hypothesis is based on this measure of goal diversity.

E. H. 2.1: The ICAP Adaptive Transaction Score is related positively to the set agency's Goal Diversity Score.

Extent of past transactions with other agencies It was hypothesized that the intensity of a focal organization's adaptive transactions with set members was related positively to the extent of the set organization's past transactions with other agencies.

The measure of past transactions used here consists of a "Set

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<sup>1</sup>Offering a service was defined as the staff of the agency either performing the service or paying others to perform the service.

Transaction Score" for transactions with other agencies of the agency set delineated for this study. Each agency respondent was asked four questions about each other agency of the focal organization's set in that community. The responses to these questions were combined to provide a measure of the extent of transactions with other agencies. The questions were:

Have you met with the director of (name of agency) during the last six months at which time you talked about the affairs of your respective agencies?

Have you referred clients to (name of agency) during the last six months?

Have they referred clients to your agency during the last six months?

Have you cooperated with them in any other way during the past year? (If yes) Please explain.

A subscore was calculated for the interactions with each agency by scoring one point for a positive response to each of the first three questions listed above and a zero for each negative response. An additional two points were scored if it was indicated that cooperation occurred in response to the fourth question. A subscore of from zero to five could be received for past transactions with each other ICAP set agency.

The Set Transaction Score was calculated by 1) totaling the subscores for transactions with each set agency, 2) dividing that total by the number of agencies in the community to equalize scores for the different number of set agencies per community, and 3) multiplying by ten to remove decimals.

The empirical hypothesis to be tested is as follows:

E. H. 3.1: The ICAP Adaptive Transaction Score is related positively to the set agency's Set Transaction Score.

Systemic relatedness of external control structures It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent their external control structures are systemically related.

Two indicators of source of control are utilized here in the measures to be developed. They are 1) direct source of higher authority and 2) major source of funds. Both indicators are used inasmuch as those with direct authority over an organization often serve as administrators over funds obtained elsewhere. In this event it is expected that the issuance of funds is contingent upon accompanying restrictions that gives the unit issuing the funds a considerable voice in organizational affairs. An example of such an arrangement is the local Community Action Agency boards which are private boards composed of local citizens, but whose main source of funds is a federal agency.

To determine the source of external control the agency respondents were asked:

To what person or group of persons are you (the director) responsible, i.e., who do you report to directly as a higher authority?

Could you tell me about what percent of your 1967 expenditures came from each of the sources listed here? (federal government, state government, county government, city government, United Campaign, fees for services, religious organizations and other private sources).

The construction of the specific empirical measures took into consideration two dimensions of systemic relatedness to the ICAP source of authority, 1) public vs. non-public (private) authority, and 2) local vs. non-local based authority. The ICAP source of authority was public and non-local. Utilizing these dimensions of systemic relatedness and the two

indicators of source of authority, four empirical measures of the extent of systemic relatedness between the authority structures of ICAP and the set organizations were developed. The first two measures are based on the direct source of authority.

Direct source of authority      The first measure of systemic relatedness to ICAP is based on whether the set agency's direct source of higher authority is public or private. Because ICAP had a public source of authority agencies which similarly have a public source of authority are considered to have greater systemic relatedness. The measure of systemic relatedness is as follows:

- 1 = private
- 2 = private and public
- 3 = public

This measure is referred to as the Direct Source of Authority Score I, and is incorporated into an empirical hypothesis as follows:

E. H. 4.1: The ICAP Adaptive Transaction Score is related positively to the set agency's Direct Source of Authority Score I.

The second measure of systemic relatedness of the external control structures based upon the reported direct source of authority combines the two systemic relatedness dimensions of public vs. private and local vs. non-local. Cross classification of these dimensions results in four categories of systemic relatedness: non-local private, local-private, local-public, and non-local public.

ICAP is assumed to have the greatest systemic relatedness to the set agencies most like it with respect to sources of control, i.e., those whose sources of authority are public and non-locally based. It is further assumed that ICAP has the least systemic relatedness to private agencies

which have non-locally based sources of authority. Of intermediate systemic relatedness then are the public and private agencies whose sources of authority are based in the same community social system within which the ICAP service center's operations are conducted. The public agencies with a locally based source of authority are somewhat more closely related, systemically, to ICAP than are the corresponding private agencies. This is because local public sources of control are to a certain extent controlled by non-locally based arms of government. On the basis of these considerations the four categories of systemic relatedness of control structures are scored as follows:

- 1 = non-local private
- 2 = local private
- 3 = local public
- 4 = non-local public

This measure of the systemic relatedness of external control structures is the Direct Source of Authority Score II and is the basis for the next empirical hypothesis.

E. H. 4.2: The ICAP Adaptive Transaction Score is related positively to the set agency's Direct Source of Authority Score II.

Major source of funds      The two measures of the major source of funds were constructed in the same manner as the measures of source of authority. They are identified in a parallel manner as Major Source of Funds Score I and Major Source of Funds Score II.

To develop measures the specific sources of funds were categorized as follows:

- 1 = non-local private included funds from religious sources outside the community and from parent organizations outside the community,
- 2 = local-private included the United Campaign, religious sources within the community and some service fees,

- 3 = local-public included county and city government and  
 4 = non-local public included state and federal government.

The major source of funds was defined as that category which supplied more funds than any other category.

The two empirical hypotheses based on these measures of systemic relatedness of the external control structures are as follows:

E. H. 4.3: The ICAP Adaptive Transaction Score is related positively to the set agency's Major Source of Funds Score I.

E. H. 4.4: The ICAP Adaptive Transaction Score is related positively to the set agency's Major Source of Funds Score II.

Similarity of organizational professionalism It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent of similarity between the professionalism of their respective staffs. The indicators of professionalism used here are 1) educational attainment of agency staff members, 2) average salaries of the professional staff and 3) salaries of the agency directors.

Questions used to obtain data for these indicators of agency professionalism were included in the pre-interview questionnaire given to the respondent at the time an appointment was made for the actual interview. The education and salaries of all staff members were parts of the information requested in a table to be filled out prior to the interview.

The major task of developing empirical measures was to adequately measure professionalism similarity between ICAP and the agencies of its set. Measurement takes as its point of reference the degree of professionalism that exists within the ICAP organization. The ICAP service centers

were staffed with only one person considered to be "professional", i.e., the community coordinator in charge. Of the four community coordinators in the study communities, two had college degrees -- one a Bachelor of Arts and the second both a Bachelor of Arts and a Bachelor of Divinity. The other two coordinators had each completed over three years of college and lacked very few hours for completion. Their salaries were \$8,000 annually. In addition to the community coordinator each service center had a secretary and from one to several subprofessional aides. A nearly universal characteristic of the aides was the fact that they had previously experienced personal drinking problems. Periods of sobriety ranged from only a few weeks or months to several years. The ICAP philosophy of operation included the hiring of such persons with the objective of helping them to maintain their sobriety. Thus in many cases these aides were not considered to be permanent or "career" staff members. Their salaries were in general less than \$5,000 annually.

Because of the indefinite statuses of the ICAP sub-professional aides it is somewhat difficult to meaningfully incorporate them into the indicator of educational attainment of ICAP staff members as a referent for evaluating similarity. In addition the rather small size of the ICAP agency and the relegating of most linkage activities to the community coordinator complicate the efforts. It is in the context of these factors that the following is offered as a tentative measure of similarity of professionalism.

An agency is considered to be most similar to ICAP in its professionalism if from 25-75 percent of its staff members have Bachelor's degrees, and less than 25 percent of its staff members have Master's degrees. An

agency meeting these criterion is scored as four. Agencies are scored lower if either of two possible conditions exist: agency staffs have less education or more education than the above. The scores assigned for all levels of educational attainment are as follows:

- 4 = Bachelor's degrees, 26-75%; Master's degrees, less than 26%.
- 3 = Bachelor's degrees, 26-75%; Master's degrees, 26-75%, or Bachelor's degrees, 76% plus; Master's degrees less than 26%.
- 2 = Bachelor's degrees, 25-75%; Master's degrees, 51-75%, or Bachelor's degrees 76% plus; Master's degrees 26-50%, or Bachelor's degrees, none.
- 1 = Bachelor's degrees, 76% plus; Master's degrees 51% plus, or Master's degrees, 76% plus.

The resultant score is specified as the Staff Education Similarity Score, and is the basis for the next empirical hypothesis.

E. H. 5.1: The ICAP Adaptive Transaction Score is related positively to the Staff Education Similarity Score.

The second indicator of agency professionalism is the average salary of the professional staff. The importance of this indicator is that it takes into account the experience of professionals in the health agency field and gives recognition to the possible existence of a "market" for the movement of persons from one agency to another, assuming those that are most competent, professionally, tend to move toward positions with higher monetary rewards.

Persons considered to be professional staff members included all of those holding at least a Bachelor's degree. The definition was expanded to include a few others. In those agencies not having a person with a Bachelor's degree the top administrative officer (director) was included. In other agencies the definition was expanded to include staff who by reason

of position were responsible for or did equivalent work of persons having Bachelor's degrees. In all cases these persons had considerable longevity with their agencies. They received at least equivalent and usually higher salaries than did persons who had Bachelor's degrees.

The measure is developed in a manner similar to that for educational attainment of staff members. The salary of the only "professional" in the ICAP agency, i.e., the community coordinator, is used in the computation as the level indicating the greatest similarity. His salary in each case was \$8,000 annually. The scores assigned for various levels of salary are indicated below.

- 4 = \$7,001 to \$9,000
- 3 = \$6,001 to \$7,000 or \$9,001 to \$10,500
- 2 = \$5,001 to \$6,000 or \$10,501 to \$12,500
- 1 = less than \$5,001 or more than \$12,500

This score is specified as the Professional Staff Salary Similarity Score, and is the basis for the next empirical hypothesis.

E. H. 5.2: The ICAP Adaptive Transaction Score is related positively to the Professional Staff Salary Similarity Score

The third indicator of agency professionalism is the salary of the agency director. An agency Director Salary Similarity Score was developed by scoring the agency directors' salaries exactly as in the case of the entire professional staffs above. The empirical hypothesis based on this measure of similarity of professionalism is as follows:

E. H. 5.3: The ICAP Adaptive Transaction Score is related positively to the Agency Director Salary Similarity Score.

Organizational needs and goals It was hypothesized that the intensity of a focal organization's adaptive transactions with members of

its organization set was positively related to 1) the complementarity between the focal organization's needs and the set organization's goals and 2) the complementarity between the focal organization's goals and the set organization's needs.

Focal organization needs Attempts to measure the complementarity between the focal organization's needs and the set organization's goals posed numerous difficulties. Criteria were necessary by which to order the set organizations on the basis of the relevance of their needs to the ICAP goals. The existence of multiple goals of the ICAP complicated this task. Generally speaking the ICAP goals included working with alcoholic clients, developing agency relationships, and fostering other community relationships in the interest of alcoholism rehabilitation.

To develop a measure of the complementarity of agency goals with ICAP needs, attention is focused here specifically on the ICAP needs with respect to client services. This decision was made because first, ICAP had few resources with which to provide services to clients and was expected to rely on other agencies for these services. Second, the need for client services from other agencies was probably the most tangible need of the ICAP organization. Third, it seemed likely that goals in the areas of agency and community relationships would be viewed primarily in the context of their relevances to serving alcoholic clients, i.e., as means to that goal.

An ICAP Need Score was developed by scoring each agency on the basis of ICAP's need for its services. Normal procedure is deviated from here by presenting the ICAP Need Score first, followed by the complete rationale for the development of this empirical measure. This is done in hopes of providing greater clarity to the presentation.

Agencies were scored from 1 to 5 on the basis of the ICAP need for their respective services as explained below. A crucial assumption for the development of this ICAP Need Score is that the ICAP need for each type of agency's services is the same in each community so that, for example, the Employment Service can be scored the same in all four communities. An even more basic assumption is that the agencies of a given type provide essentially the same services in each community. The agencies were scored as follows:

- 5 = D.R.E.S. and Employment Service
- 4 = Social Welfare, County Relief, County Soldiers' Relief and Salvation Army
- 3 = Family Services, Catholic Charities, Lutheran Social Service, and Mental Health Center
- 2 = Community Action, Legal Aid
- 1 = Public Health Nurses, Visiting Nurses Association

The highest score (5) was assigned to agencies that had as their major function the offering of employment services, both job placement and training. The major reason for considering these services to be the most needed by ICAP was that of the 988 clients served by all ICAP service centers during a six month period in 1967, 77 percent were not working at the time of their intake interviews (Klonglan et al., 1969c). This finding points to the need for either employment or welfare services. When these same clients were asked what they perceived their immediate needs to be 209 mentioned the need for employment assistance. This was the most often mentioned need. It was followed by the mention of a need for welfare assistance or direct economic aid (e.g., food and clothing). Welfare aid was mentioned by 86 respondents. Employment and welfare needs were the

first and second most frequently mentioned needs by respondents in each of the four service centers included in the present study, as well as overall.

For reasons just mentioned, the second highest score (4) was assigned to those agencies which had as their major function to offer welfare services. Of the four agencies placed in this category, the inclusion of the Salvation Army is the only one that appears somewhat questionable. Its services are quite diverse and much less emphasis is placed on welfare services than in the other agencies. However, the Salvation Army serves as a source of clothing in particular as well as other minimal welfare aid.

The third highest score (3) was assigned to all of those agencies that dealt primarily with personal and family problems through counseling services. These agencies were ranked less important to ICAP needs than the employment and welfare agencies because over one-half (52%) of the ICAP clients were not married at the time of intake (Klonglan, et al., 1969c). It was therefore reasoned that fewer clients would need family counseling services (available from Family Services, Catholic Charities and Lutheran Social Service) than would need employment and welfare services mentioned above. In addition, the third most frequently mentioned need by clients at the time of their intake interviews in each of the four study communities was personal problems. These problems may or may not have included family problems. The Mental Health Centers were included in this category because of their capability to deal with personal problems, albeit a specialized type.

The fourth category (scored 2) consisted of two agencies. Legal Aid was placed in this category because of its specialized service for which it was expected only a small portion of the ICAP clients would have need.

The Community Action agencies were placed here because of their rather diverse services which did not point to a particular client need not met by other more established agencies. The Community Action Agencies would probably assume greater importance in identifying alcoholic clients in poverty.

Visiting Nurses and Public Health Nurses, scored as one, also provided a rather specialized service that was expected to be needed by only a small minority of ICAP clients, i.e., nursing services in the home. These agencies would also probably be more important with regard to identifying alcoholics and referring them to ICAP.

The following empirical hypothesis may now be stated.

E. H. 6.1: The ICAP's Adaptive Transactions Score is related positively to the ICAP Need Score.

Set organization needs Indicators of the set organizations' needs for services offered under the goal structure of ICAP focus on their needs for services to alcoholic clients. Three measures are developed, each based on a different indicator.

The first indicator is the number of clients served annually by the set organization. Each agency respondent was asked on the pre-interview form to indicate:

How many different persons were served by your agency during 1967 (or most recently completed fiscal year)?

Its use as an indicator of the set organization's need for alcoholism services from outside sources rested on two considerations. First, most of the set organizations did not have within their goal structures a major objective of working with alcoholics. Second, it was reasoned that the more clients they had the more likely that some of them would need

assistance for alcohol problems. The specific measure of the complementarity of set organization needs with ICAP goals based on this indicator is the number of clients served annually. The empirical hypothesis is as follows:

E. H. 7.1: The ICAP Adaptive Transaction Score is related positively to the set agency's number of clients served during the previous year.

The second indicator represented a more direct effort to determine the number of alcoholics within an agency's clientele. Each respondent was asked:

Could you estimate how many clients served by your agency during 1967 were alcoholics?

This response was converted to a percent of the agency's clients. The percentage is reported as the specific empirical measure. It, rather than the number, is used as the empirical measure inasmuch as it is theorized that the perceived need for alcoholism services is in part a function of the visibility of alcoholism problems among the agency clientele. And, visibility is expected to be in proportion to the percent of the clients with alcoholism problems. The empirical hypothesis based on this measure is as follows:

E. H. 7.2: The ICAP Adaptive Transaction Score is related positively to the percent of the clients served during the last year perceived to be alcoholics.

The third indicator of the need for alcoholism services from outside of a set agency is based on whether alcoholic clients are perceived to present particular problems to the agency in its work with them. The respondents were asked:

Do alcoholic clients present special problems in the effective application of your services generally not presented by other clients?

It was expected that the respondent would perceive a greater need for assistance in working with alcoholics if his agency's clients who had alcohol problems presented greater difficulty in the effective application of their services. A Service Problem Score was developed by scoring one point for a negative answer to the above question and two points for a positive response. The empirical hypothesis based on this measure is as follows:  
E. H. 7.3: The ICAP Adaptive Transactions Score is related positively to the set organization's Service Problem Score.

Perceived interorganizational dependence It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent of its perceived dependence on the set organizations. Attempts to measure this perceived dependence were based on questions asked of the community coordinators in each of the four service centers. Two measures are developed here, based on different but similar indicators. The question which served as the first indicator is as follows:

How much potential importance does each of these agencies have in your community for helping ICAP to achieve its goal of developing a comprehensive alcoholism program? 1) no importance, 2) slight importance, 3) considerable importance, or 4) much importance.

After reading the question it was emphasized to the community coordinators that the question was not intended to assess how important these agencies had actually been during the past year, but how important they could be considered in terms of the services they could currently offer. This clarification was made in order to eliminate responses which would indicate

less importance because of any conflicts which might prevent the attaining of services from that particular agency. The specific empirical measure was developed by scoring the responses as follows:

- 1 = no importance
- 2 = slight importance
- 3 = considerable importance
- 4 = much importance

This measure is referred to as Perceived Dependence on Set Agency Score I, and is the basis for the next empirical hypothesis.

E. H. 8.1: The ICAP Adaptive Transaction Score is related positively to the Perceived Dependence on Set Agency Score I.

The second indicator of perceived dependence consisted of asking the community coordinators to rank the agencies according to their potential importance to ICAP, immediately after answering the question upon which the first empirical measure was based. Development of the empirical measure took into consideration not only the rank but also the number of set agencies per community, which ranged from seven to 13. Without an adjustment for the number of agencies per community the community with 13 agencies would have had as many as six agencies ranking below the lowest ranked agency in the community with seven. The adjustment was made by scoring the highest ranked agency in each community as 13, and the lowest ranked as one. Ranks of each of the remaining agencies were adjusted to form equidistant intervals between each pair of ranks in each community. The empirical measure consisted of the modified ranks and is referred to here as the Perceived Dependence on Set Agency Score II. The next empirical hypothesis is as follows:

E. H. 8.2: The ICAP Adaptive Transaction Score is related positively to

the Perceived Dependence on Set Agency Score II.

It may be pointed out that the two empirical measures exhibit important qualitative differences. The method first reported above has an "absolute" quality about it inasmuch as none or all of the agencies could have been ranked in any given category. However, a possible shortcoming of that method is that the agencies could not be ranked in relation to each other except as the number of categories allowed. The latter method of numerical ranking corrected for the deficiency of relativity, but lacks any "absolute" qualities. That is, the latter method forces one of the agencies to be ranked first in each community, thus ignoring the possibilities of no agencies in a given community being very important. Also each agency must be ranked and is thus implied to have some importance to ICAP. In defense of the latter method, however, it may be pointed out that none of the set agencies were judged to be of "no importance" under the first measure.

Domain consensus      It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's consensus with the domain of the focal organization. It should be noted that the analysis of domain consensus in this study is partial in nature, for reasons discussed with respect to the development of the general hypothesis in Chapter 3. As used in this study domain consensus is used to refer only to the set agency's consensus with the ICAP's domain. Three empirical measures of domain consensus are developed here.

The first measure of domain consensus takes into consideration the "value" placed on the services offered by the focal organization. The agency respondents were asked about the need for the services of the ICAP

to be performed. This question was asked immediately after the respondent had identified the services he perceived ICAP was performing in the community.

With respect to the functions which ICAP is attempting to provide in this community, do you believe there is a need for all of these functions to be performed either by ICAP or by any other agency?

The responses to this indicator were scored by giving a "1" to a "no" answer and a "2" to a "yes" answer. The resulting score is referred to as the Value for Domain Consensus Score and is the basis for this empirical hypothesis:

E. H. 9.1: The ICAP Adaptive Transaction Score is related positively to the set organization's Value for Domain Consensus Score.

In the remaining two measures of domain consensus emphasis was placed upon ICAP itself, and acceptance of the activities included in its domain. The first measure is based upon considerations of whether the ICAP domain overlapped with that of other agencies in the community and concerned whether ICAP should give up part of its domain. The respondents were asked:

To the best of your knowledge are any of the same functions of the ICAP Service Center performed by any other agencies or groups (including yours) in this community?

If a positive answer was received, then the following question was also asked:

Assuming these services will continue to be provided in this community, would you like to see the present situation changed so that there would be less duplication of functions by these groups?

Respondents who answered affirmatively to this question were asked to explain which group should discontinue some of their services. A score was calculated by scoring "1" for suggesting that ICAP give up any of its

functions and "2" for all other responses. A score of "2" therefore indicates consensus on the present role and functions of ICAP whereas a score of "1" indicates lack of consensus. This score is referred to as ICAP Domain Consensus Score I, and is the basis of the next empirical hypothesis:

E. H. 9.2: The ICAP Adaptive Transaction Score is related positively to the set organization's ICAP Domain Consensus Score I.

The third measure of domain consensus was developed from responses to these questions:

In general, do you think you would favor or oppose the incorporation of ICAP services, which you believe need to be provided, into some other (than your own) agency in this community?

Would you favor or oppose the incorporation of ICAP services which you believe need to be provided into your agency?

A score was developed by scoring "3" for opposing incorporation into any agencies, "2" for favoring incorporation into either another agency or their own agency, and "1" for favoring incorporation into both another agency and their own agency. The higher the score the greater domain consensus was considered to be. This score is referred to as the ICAP Domain Consensus Score II and is the basis of the third empirical hypothesis concerning domain consensus.

E. H. 9.3: The ICAP's Adaptive Transaction Score is related positively to the ICAP Domain Consensus Score II.

Power relations Four general hypotheses were stated concerning various aspects of the power relations between the set organizations and their environment. It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to: 1) the set organization receiving support from an

authoritative source, 2) the perceived threat of coercive influence on the set organization, 3) the exercise of coercive influence on the set organization, and 4) the exercise of inducement influence on the set organization. One empirical measure is developed for each of the hypotheses.

Authoritative support      The indicator for whether the set organization received support from an authoritative source, specified as the body which served as its immediate superior, was the response to this question:

Have you received any communications either verbal or written from your superior regarding what the relationship between your agency and the ICAP service center should be?

If an affirmative answer was received to that question the respondent was probed to determine whether the communications were favorable or unfavorable, and whether written or verbal. All of the communications were reported as favorable. The responses were then scored as follows:

- 1 = no communication
- 2 = verbal communication only
- 3 = written communication
- 4 = both verbal and written communication.

It was judged that a written communication between organizations would have greater importance attached to it than would a verbal communication, and thus be more likely to be adhered to. The scored responses will be referred to as the Authoritative Support Score. The next empirical hypothesis is as follows:

E. H. 10.1: The ICAP Adaptive Transaction Score is related positively to the set organization's Authoritative Support Score.

Threat of coercive influence      The indicator for the perceived threat of coercive influence on the set organization was the response to

this question:

If you had decided not to cooperate with ICAP in the area(s) in which you indicated that you did work with them, do you believe it might have evoked reactions from some groups and/or individuals in this community that would have had unfavorable consequences for your agency?

This question was immediately preceded in the personal interview by an extensive series of questions concerning the ways in which transactions had occurred between the set agency and ICAP.

A Threat of Coercive Influence Score was developed by scoring "1" for a negative answer to the above question and "2" for a positive answer. The empirical hypothesis based on this Score is as follows:

E. H. 11.1: The ICAP Adaptive Transaction Score is related positively to the set organization's Threat of Coercive Influence Score.

Exercise of coercive influence      The indicator for the exercise of coercive influence was the response to this question:

Have you ever felt that you have been pressured in any way to cooperate with ICAP?

This question was asked following the question above which concerned the threat of coercive influence, and was scored similarly; a negative answer was scored as "1" and a positive answer as "2". The Exercise of Coercive Influence Score is the basis for the following empirical hypothesis:

E. H. 12.1: The ICAP Adaptive Transaction Score is related positively to the set organization's Exercise of Coercive Influence Score.

Exercise of inducement influence      Inducement influence is based on creation of diffuse future obligations in return for specific favors. Development of the indicator of the exercise of inducement

influence used here is based on this feature theorized to characterize exchange relations in particular. It represents a direct attempt to determine whether each set agency perceives it has obligations to act in a certain way towards the ICAP Service Center. Each respondent was asked:

Have you ever felt your agency has an obligation of any sort to cooperate with ICAP?

An Exercise of Inducement Influence Score was developed by scoring "1" for a negative answer and "2" for a positive answer. The empirical hypothesis based on this measure of inducement influence is as follows:

E. H. 13.1: The ICAP Adaptive Transaction Score is related positively to the set organization's Exercise of Inducement Influence Score.

Level of favorable evaluation of the focal organization's performance It was hypothesized that the intensity of the focal organization's adaptive transactions with members of its organizational set related positively to the level of favorable evaluation of the focal organization by the set organization.

Two measures of the level of favorable evaluation are reported here. The first is based on an effort to get a direct indication of how well ICAP was perceived to be performing its various activities in the community. The agency respondents were asked to identify what they considered to be all of the functions the ICAP service center was performing in that community. They were then asked this question:

How adequately do you believe the ICAP Service Center is performing these functions, using the following categories:  
1) very inadequately, 2) somewhat inadequately, 3) somewhat adequately, or 4) very adequately.

A score was developed by scoring the categories of responses from "1" to "4" as they are numbered above. This score is specified as ICAP Performance

Score I, and is the basis of the next empirical hypothesis.

E. H. 14.1: The ICAP Adaptive Transaction Score is related positively to the ICAP Performance Score I.

The second measure of the level of favorable evaluation differs considerably from the first. This measure considers ICAP's performance in direct relation to transactions with the set organizations. An attempt is made to measure judgments of ICAP's performance in relation to the costs or benefits derived by the set organization. The agency respondents were asked:

In terms of the goals your agency is attempting to achieve, would you say your past and present cooperative relationships with ICAP represent more of a benefit or more of a cost to your agency?

Responses were scored as follows:

- 1 = more of a cost
- 2 = neither
- 3 = more of a benefit.

This score, called the ICAP Performance Score II, is the basis of the last empirical hypothesis to be stated:

E. H. 14.2: The ICAP Adaptive Transaction Score is related positively to the ICAP Performance Score II.

### Hypothesis Evaluation Procedures

#### A perspective

Special consideration of the procedures used to test the hypotheses in this study is of more than minor importance. Characteristically the researcher empirically studies a sample and wishes to generalize to some larger specified population from which his sample was drawn. To test

hypotheses appropriate statistical tests of significance are made as a basis upon which to accept or reject hypotheses stated in the null form. Ability to reject the null hypotheses at an acceptable, predetermined, level of significance is interpreted as providing support for the empirical and general hypotheses.

This procedure is inappropriate in the present study. Strictly speaking, the focal agency (as it existed in four communities) and the set agencies represent a study population. They were in terms of Blau and Scott's (1962) prime beneficiary typology, service organizations. The focal agency was a demonstration agency newly established in Iowa. It was concerned with alcoholism services and thought to be the only agency (demonstration or otherwise) of its type operated by public funds on a comparable (large) scale in the United States. Although the focal agency operated in seven communities the four study communities were selected for research reasons that made them unrepresentative of the seven.<sup>1</sup> It is conceivable that similar programs do exist somewhere or may be developed in the future, but in any event, the existence of such at present is unknown to the author.<sup>2</sup>

Although there seems to be little point in applying statistical tests in order to generalize to an unknown population from which a probability sample could not have been drawn, it has been suggested by some that

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<sup>1</sup>The other three communities exhibited considerable operational instability that made it impossible to obtain meaningful data. They were inoperational for a time due to the lack of a community coordinator and/or it was feared that they would no longer be operational by the time the field study would be conducted.

<sup>2</sup>A major reason for the development of the ICAP was to "test" a method of providing alcoholism services that could be replicated elsewhere if it proved successful.

statistical tests may still have a place in this type of research.

Blalock (1960) has suggested two approaches to the hypothesis evaluation problem posed by the present study. He suggests first that in the case in which information has been collected from all of the cases available, the cases may be treated as a probability sample of some hypothetical universe. Tests of significance are made to generalize findings to other as yet nonexistent cases. This method may be acceptable if one recognizes the completely hypothetical nature of the operations, and thus the inability to make scientific conclusions. The main value of this approach is probably in exploratory work.

The second approach suggested by Gold (1969) as well as Blalock (1960) is to use tests of significance as an indication of the probability that a relationship could be generated by a random process. The probability question is one of determining whether differences obtained are larger than would have been expected on the basis of chance. Blalock concludes (1960, p. 270), "Obviously, if we have obtained differences which could very easily have arisen by chance, we cannot have too much faith in our conclusion ...." This assumption that relationships may be generated by random processes is accepted in this study and is central to the discussion which follows.

To devise a means of evaluating hypotheses in the present study it may be useful to reconsider the objectives of the study and the nature of variation in the relationships among variables. This study is recognized as exploratory. Consistent with this characteristic it is desired to evaluate hypotheses in regard to their utility for future research, i.e., the likelihood that they will hold when tested in other empirical arenas. One

basis for drawing such distinctions between the hypotheses developed herein is the "strength" of the association between the independent and dependent variables. As a basis for hypothesis evaluation, this method rests on certain assumptions about the nature of variation of social variables. It is assumed that substantive sociological hypotheses are intrinsically probabilistic. That is, to support a hypothesis it is not required that it be supported 100 percent of the time. Variations in behavior may be haphazard (random) or systematic. We do not expect that the same individuals under identical conditions will act in the same way all of the time. If the ICAP service centers could be established again with personnel of the same competence and individual characteristics under the same conditions it would not be expected that exactly the same level of adaptive transactions with set agencies would occur. Neither would it be expected that the intensity of their occurrence would necessarily be related to the same variables in an identical manner.

It is reasonable to expect, however, that behavior at different times under the same conditions would be similar. Therefore, if in a given study of a particular group we find a strong association between variables we should have greater confidence that the variation is systematic with respect to those variables rather than haphazard. Confidence that variation is systematic is the basis for suggesting further testing of hypotheses in other empirical arenas. A limitation to this approach must be understood, however. Special conditions may be present in any given population so that systematic variation within that population will not be present in others. For example, the present study exhibits such conditions as these potentially restraining factors: 1) consideration of only a homogenous organization

set, 2) concern with alcoholism services, 3) the fact that the focal agency was a new agency and its adaptive transactions were not subject to historical constraints, and 4) the fact that the focal agency was envisioned as temporary by some persons. Such conditions clearly pose limitations on using the findings as the basis for hypotheses in future studies. However, the effects of such conditions on variation remain open to question until further research is completed upon which to base such judgments. In short, if there is no variation that appears systematic in the present study there is no basis for suggesting specific hypotheses for future testing. If some variation does appear to be systematic then there exists "one" basis, albeit a tentative one, for recommending certain hypotheses for testing in future arenas. Hypotheses are evaluated here toward this end of recommending them for future testing.

#### Criteria for evaluation

The empirical hypotheses already developed will be subjected to the calculation of a product moment correlation. The  $r$  value obtained in each case may be taken as a measure of the strength of the association between the independent and dependent variables in the present sample of an undefined population. There is not direct and simple interpretation for  $r$  itself, except in a relative sense, i.e., to say for example that a .7 indicates a stronger relation than does a .5. However, it can be shown that  $r$ -square equals the ratio of the variation in the dependent variable explained by the independent variable to the total variation of the former. The  $r$ -square values are classified according to the strength of association indicated by them. The stronger the association, the greater the support

for the hypotheses is judged to be. Support for the hypotheses is categorized as moderate, strong, or very strong, according to these criteria:

$r^2 = .10 - .24$ ; moderate support (equivalent to  $r = .32 - .49$ )

$r^2 = .25 - .39$ ; strong support (equivalent to  $r = .50 - .63$ )

$r^2 = .40$  or more; very strong support (equivalent to  $r = .64$  or more)

The r-square value of less than .10 is considered as showing little or no support for the hypothesis.<sup>1</sup> Specification of r-square levels to indicate various levels of support for the hypotheses is arbitrary. However, it may be noted that the r-square value of .10 specified as the minimal level for hypothesis support is between the values corresponding to the .01 and .05 levels of significance under the assumptions of probability sampling. For semantical purposes it may be desirable to speak of hypothesis evaluation rather than hypothesis testing in light of the approach accepted for use in this study.

#### Special considerations

Evaluation of the hypotheses in the manner accepted for use does present a particular set of problems which must be considered. Data are obtained from four different communities. Thus an overall r value represents in one sense a "weighted" average of the correlations within each community.

The overall correlation value for the four communities may obscure intercommunity differences for three major reasons. First, there may be

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<sup>1</sup>For readers who might prefer to think of the agencies studied in a hypothetical sense as representing a random sample of some unspecified population as suggested by Blalock (1960) it may be noted that the .05 level of significance for a one-sided test is .257 (d.f. = 40). The comparable value at the .01 level of significance is .358. Comparable r-square values are .067 and .128, respectively.

different levels of adaptive activity on the part of the various community coordinators or responses of agencies in a particular community such that the average ICAP Adaptive Transactions Scores vary widely among the communities. This "community dependence" of specific agencies' Scores has the potential effect of lowering the overall correlations. It may be noted, however, that this appears to be a possible problem in only one of the four communities. Average Scores for three communities were within a two point range: 28.8 to 30.18. The average Score in the fourth community was 22.23. Ranges in the first three communities were 0 - 85, 0 - 73 and 0 - 66. In the fourth the range was 0 - 53.

A second factor which may obscure intercommunity differences is that factors associated with Adaptive Transaction Scores in some communities may not be associated in others. In this regard it may be noted that wide differences among communities have the effect of lowering the overall correlation, and thus weakens support for the hypotheses. If such wide variations do exist between communities one should have less confidence in recommending the hypotheses for further research than if it is similarly supported in all four communities. The major difficulty not taken into account, however, is that very high correlations (e.g., .75) when averaged with low correlations (e.g., .10) may average out to a value such as .45. Without knowing correlations for all communities it might just as easily be assumed that the hypothesis was similarly supported in all four communities. One should probably have more reservations in accepting support for a hypothesis at, e.g., the .35 level if variation between communities is wide than if it is small.

It is essential to recognize that the correlations among the four

study communities are not strictly comparable, and their presentation would not solve either of the two problems mentioned above. This is because the number of agencies per community varied from seven to 13 and only five of the 14 agencies existed in all four study communities. Four existed in three communities, and five in two.

The third major reason that overall correlation values may obscure differences among communities results from differences in the level of association of the independent variable with the dependent variable. This problem may perhaps best be explained by means of an example. It might be expected that with respect to one of the variables e.g., annual expenditures of agencies, the level of expenditures may be much higher for all or nearly all agencies of one community than for the same types of agencies in a second community. This seems to be a plausible assumption inasmuch as the population of the largest community is something over 200,000 as compared to less than 40,000 in the two smallest communities. The individual community correlations between this variable and the dependent variable may be similar in strength, but the same level of Transaction Score may be consistently associated with a higher level of annual expenditures in the larger community than in the smaller community. It is intuitively apparent then that combining data for the two communities will result in a lower correlation than exists for either of the individual communities.

To aid in discovering whether differences in the level of response in the various communities affects the overall correlation in the manner suggested above, a "community factor" may be introduced into the analysis by means of a dummy variable technique suggested by Draper and Smith (1967). Application of this technique consists of constructing a regression

equation which includes the independent variable of concern and the artificial community (dummy) variables. A multiple correlation coefficient is obtained and may be compared with the original overall correlation values. Increases in the multiple correlation coefficient over the individual correlation coefficient (or more accurately their square values) provide a quantitative indication of the existence of community differences in the level of response of the dependent variable to the independent variable due to as of yet unspecified community related factors. The existence of discrepancies between the  $r^2$  and  $R^2$  values of a substantial magnitude suggests the need to look for sources of community differences rather than relegating the independent variables to a place of less importance because of a low  $r^2$  value. Simply stated a discrepancy between an  $r^2$  and  $R^2$  value confirms the existence of community differences, but offers no explanation of why these differences exist.

In the evaluation of hypotheses which follows overall correlation coefficients for the relationship of each independent variable individually to the dependent variable are reported first. Individual community correlations are not reported for reasons already discussed. But, a multiple correlation coefficient which incorporates the community dummy variables is reported for each independent variable, and is identified  $R_c^2$  to indicate the incorporation of the "community" factor of variance accounted for by community related, but as of yet unknown, factors.

#### Additional comments on the interpretation of r-square values

In this study relationships between independent variables and dependent variables are assumed to be linear. This assumption is somewhat

dubious, but is considered justified in the context of the exploratory nature of this effort.

There are also clear limitations in the use of r-square to describe "explained" variation. "Explained" is justified for use in the mathematical sense only to indicate that the least squares linear line of best fit results in variation less by a certain amount than variation from the mean. It is highly unlikely (particularly in the social sciences) that two variables, each of which explains 50 percent of the variation will together explain 100 percent of it. If, for example, two variables together explain only 55 percent of the variation, then mathematically the variables are themselves probably highly correlated with each other. To understand which variable (if either one) is in reality explaining variation, the problem must be approached at the theoretical level.

The r-square values used to evaluate two variable hypotheses leave much to be desired from the standpoint of understanding. It may be quite useful to explore the combined ability of various variables to explain variation in the ICAP Adaptive Transaction Score through the use of multiple correlation techniques. This procedure is used in the present study, but discussion of its use is reserved for a later chapter.

#### Chapter Summary

In brief, this chapter has consisted of four major sections. First, the empirical arena for the test of hypotheses was described in conjunction with discussion of the limiting conditions associated with that arena. The focal agencies were specified as community based alcoholism service agencies formed under the auspices of a temporary demonstration agency, the Iowa

Comprehensive Alcoholism Project. The focal agency was one expected to place somewhat greater than "normal" emphasis on environmental transactions.

Secondly, the development and implementation of the field study was described. This study was conducted as one part of a research effort conceived for the purposes of studying the implementation of the ICAP. The ICAP's adaptive transactions with other community based health and welfare agencies were studied in four communities. Data were collected to describe the adaptive transactions which occurred over the entire first year of the local Service Centers' operations. These data were collected through semi-structured interviews with an interview schedule. Interviews were conducted at the close of the first year's operations. These data were supplemented with qualitative data collected through informal means throughout the preceding year.

Thirdly, concepts in the general hypotheses were operationalized and empirical hypotheses stated. One measure of the dependent variable was developed, called the ICAP Adaptive Transaction Score. A total of 26 empirical hypotheses were stated concerning the relationships between measures of the 14 independent variables and the single dependent variable.

Finally, procedures for evaluating hypotheses were discussed. The empirical hypotheses will be evaluated using correlational techniques as a basis for judging whether hypotheses are supported or not supported. R-square values will be used in the following chapter as an indicator of the probability that relationships between variables are due to haphazard or systematic variations.

## CHAPTER 4. EVALUATION AND DISCUSSION OF HYPOTHESES

The 26 empirical hypotheses developed in the preceding chapter are subjected to empirical evaluation in this chapter. Judgments of support for the 14 general hypotheses are made on the basis of the percent of variation in the dependent variable explained by each independent variable, as indicated by squared correlation coefficients. In an effort to attach greater substantive meaning to the findings each of the hypotheses will be discussed in greater detail based on an examination of frequency distributions.

Squared correlation coefficients provide one basis for judging support for hypotheses, but they provide little information about the distribution of the data, and therefore the empirical basis of the correlation coefficients. If an r-square value is small it could be for a number of reasons. Perhaps there is very little variation in the data, or perhaps the data form a curvilinear pattern. Or it may be that within a certain range of scores a definite relationship is evident, but not for the remainder of the range. The presence of only a very few extreme values may also have an effect on the correlation coefficients, producing either higher or lower coefficients that misrepresent overall trends. Furthermore, in the calculation of correlation coefficients it is sometimes necessary for the researcher to make certain judgments to supply missing data because of such things as "I don't know" responses from the interviewees. These judgments are obscured from view when only a correlation coefficient is presented in the evaluation of a hypothesis. Because of such judgments it is useful to examine the data for which high as well as low correlation coefficients

are presented. Even in the event of high correlation coefficients it is possible that the linear model assumed is not the model of best fit. A theoretically justified transformation might then be in order. In short, a single r-square value provides no information about why a hypothesis was supported or not supported. A statement by Blalock (1960, p. 291) seems very appropos, "... a single summarizing measure, no matter how superior it may be to other measures, can often be misleading." The presentation of frequency distributions and discussions of each empirical hypothesis are means used in the present chapter to attach greater meaning to the reported findings.

#### A Tabular Summary of Findings

A tabular summary of the variation in the ICAP Adaptive Transaction Scores accounted for by independent variables of each empirical hypothesis is presented in Table 4.1. Using criteria established in the preceding chapter support for each general hypothesis is appropriately indicated.<sup>1</sup> Additional variation accounted for by the "undefined" community factor is shown but interpretation is reserved for later comment in conjunction with the discussion of each individual variable. The intent in this section is to provide a concise but tentative overview of the statistical findings. Judgments of support are considered "tentative" subject to reevaluations based on analysis of the frequency distributions presented in the remainder of the chapter.

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<sup>1</sup>These criteria for support of hypotheses are as follows: no support,  $r^2$  = less than .10; moderate support,  $r^2$  = .10 - .24; strong support,  $r^2$  = .25 - .39; very strong support,  $r^2$  = .40 or greater.

Table 4.1. Tabular summary of findings for the 26 empirical hypotheses

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for ( $r^2$ ) <sup>b</sup>	Support for general hypothesis	Proportion of variation in ICAP Adaptive Transaction Score accounted for with dummy variables ( $R_c^2$ )
<b>PRECONDITIONAL VARIABLES</b>			
<u>Variable 1: Size of resource base</u>			
E.H. 1.1: 1967 expenditures	.25	Strong	.28
E.H. 1.2: Number of staff	.20	Moderate	.24
<u>Variable 2: Goal Diversity</u>			
E.H. 2.1: Number of services offered	.30	Strong	.33
<u>Variable 3: Past transactions with other agencies</u>	.13	Moderate	.27
<b>INTERORGANIZATIONAL SITUATIONAL VARIABLES</b>			
<u>Variable 4: Systemic relatedness of external control structures</u>			
E.H. 4.1: Direct Authority Score I	.29	Strong	.31
E.H. 4.2: Direct Authority Score II	.35	Strong	.39
E.H. 4.3: Source of Funds Score I	.17	Moderate	.19
E.H. 4.4: Source of Funds Score II	.32	Strong	.34
<u>Variable 5: Similarity of professionalism</u>			
E.H. 5.1: Staff Education Similarity Score	.02	None	.04

<sup>a</sup>Empirical hypotheses are identified by the empirical measure of the independent variable only. A positive relationship with the ICAP Transaction Score was hypothesized in each case.

<sup>b</sup>Unless otherwise indicated by an asterisk the "r" value was positive as hypothesized.

Table 4.1. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for ( $r^2$ ) <sup>b</sup>	Support for general hypothesis	Proportion of variation in ICAP Adaptive Transaction Score accounted for with dummy variables ( $R_c^2$ )
E.H. 5.2: Staff Salary Similarity Score	.14	Moderate	.18
E.H. 5.3: Director Salary Similarity Score	.02	None	.06
<u>Variable 6: Complementarity of focal org. needs and set org. goals</u>			
E.H. 6.1: ICAP Need Score	.30	Strong	.30
<u>Variable 7: Complementary of set org. needs and focal org. goals</u>			
E.H. 7.1: Number of clients served	.00	None	.02
E.H. 7.2: Percent of clients that are alcoholics	.00	None	.02
E.H. 7.3: Service Problem Score	.01	None	.04
<u>Variable 8: Perceived dependence on set organization</u>			
E.H. 8.1: Perceived Dependence Score I	.25	Strong	.28
E.H. 8.2: Perceived Dependence Score II	.50	Very Strong	.52
<u>Variable 9: Perceived domain consensus</u>			
E.H. 9.1: Value for Domain Consensus Score	.00	None	--
E.H. 9.2: ICAP Domain Consensus Score I	.00	None	.02
E.H. 9.3: ICAP Domain Consensus Score II	.01	None	.04

Table 4.1. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for ( $r^2$ ) <sup>b</sup>	Support for general hypothesis	Proportion of variation in ICAP Adaptive Transaction Score accounted for with dummy variables ( $R_c^2$ )
<b>INTERORGANIZATIONAL DYNAMICS VARIABLES</b>			
<u>Variable 10: Support from authoritative source</u>			
E.H. 10.1: Authoritative Support Score	.26	Strong	.27
<u>Variable 11: Threat of coercive influence</u>			
E.H. 11.1: Threat of Coercive Influence Score	.46	Very Strong	.49
<u>Variable 12: Exercise of coercive influence</u>			
E.H. 12.1: Exercise of Coercive Influence Score	.07	None	.10
<u>Variable 13: Exercise of inducement influence</u>			
E.H. 13.1: Exercise of Inducement Influence Score	.56	Very Strong	.59
<u>Variable 14: Level of favorable evaluation of focal organization</u>			
E.H. 14.1: Evaluation Score I	.06	None	.14
E.H. 14.2: Evaluation Score II	.01*	None	.02

It may be noted that of the 26 empirical hypotheses 15 were supported; four were moderately supported, eight were strongly supported and three were very strongly supported. The supported hypotheses included some for each category of variables, i.e., preconditional, interorganization situation, and interorganizational dynamics variables. The 15 supported

empirical hypotheses provided support for 10 of the 14 general hypotheses.

Considerable consistency existed with respect to whether hypotheses for which two or more measures have been used were supported or not supported. Of the seven hypotheses for which more than one measure is reported, only one was supported by one or more measures, but not by the other(s). Three were supported by all of their measures; three were supported by none of their measures.

#### ICAP Adaptive Transaction Scores

The dependent variable common to all of the empirical hypotheses is the ICAP Adaptive Transaction Score. The maximum possible score was approximately 95. The actual range was 0 to 85, with a mean of 27.1 and a median of 21.0.

For purposes of presentation the study agencies were divided into four categories on the basis of their ICAP Adaptive Transaction Scores. The nine agencies that had not reported transactions with ICAP were placed in a "none" category. The 33 agencies which had at least some interaction with ICAP were divided into three categories as follows: 11 agencies with scores 4 to 19 in a "low" category, 11 agencies with scores 21 to 40 in a "medium" category, and 11 agencies with scores 45 to 85 in a "high" category. The low and medium categories encompass ranges of about 20 points each, whereas the high category encompasses a range of nearly 40 points. Only three of the 11 agencies in the high category had a score of higher than 66 (which is itself 21 points higher than the lowest score in the category). This categorization of the dependent variable is the basis for all of the distributions presented in the present chapter.

The distribution of ICAP Adaptive Transactions Scores by study agency are presented in Table 4.2. Observation of this table reveals that two "kinds" of variation are present: 1) variation among agency types, and 2) variation within agency types or among communities. This finding suggests that attributes shared by agencies of the same type (e.g., services offered) as well as unshared attributes (e.g., number of staff members) may be relevant to explaining variation in the ICAP Adaptive Transaction Scores.

#### Preconditional Variables

##### Variable 1: size of resource base

It was hypothesized that a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's size of resource base. The empirical measures of size of resource base are 1) the set agency's total expenditures for the most recently completed year and 2) the set agency's number of staff members.

It was found that the set agency's total expenditures accounted for 25 percent of the total variation in the ICAP Adaptive Transaction Scores. Thus the first empirical hypothesis was strongly supported. The additional variation explained by the community dummy variables was not sufficient to warrant consideration.

Based upon the information presented in Table 4.3 some initial caution should be observed in accepting support for the present hypothesis. One reason is that it was necessary to estimate values for 10 agencies as noted in footnote "b" of the table. However, it is the author's perception that in relation to other values in the table, the estimates are in an ordinal

**Table 4.2. Distributions of agencies' ICAP Adaptive Transaction Scores by study agencies**

Agency	ICAP Adaptive Transaction Score Categories						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	NONE N=9	LOW N=11	MEDIUM N=11	HIGH N=11	TOTAL AGENCIES N=42	Mean ICAP Adaptive Transaction Score	Range of ICAP Adaptive Transaction Scores
Rehabilitation Education (DRES)	-	-	-	4	4	66.5	53-74
Social Welfare	-	-	2	2	4	51.5	34-85
County Relief	-	-	-	2	2	50.0	48-52
Employment Service	-	1	1	2	4	38.2	16-59
Family Services	1	-	1	1	3	25.7	0-46
Community Action Agency	-	2	1	-	3	24.0	19-34
Mental Health Center	-	1	1	-	2	17.5	12-23
Catholic Charities	-	2	-	-	2	16.0	15-17
Legal Aid	-	1	1	-	2	16.0	11-21
County Soldiers' Relief	1	1	2	-	4	15.5	0-23
Public Health Nurses	1	1	1	-	3	14.7	0-40
Salvation Army	2	1	1	-	4	11.3	0-28
Visiting Nurses	2	1	-	-	3	5.3	0-16
Lutheran Social Service	2	-	-	-	2	0.0	0
<b>Total Agencies</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>42</b>	<b>27.1</b>	<b>0-85</b>

Table 4.3. Distribution of ICAP Adaptive Transaction Scores by set agency total expenditures for most recently completed year

Total agency expenditure for most recently completed year <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
Less than \$24,999	2	2	-	-	4
\$25,000 - \$49,999	3	-	2	-	5
\$50,000 - \$99,999	2	3	3	3	11
\$100,000 plus	2	4	4	2	12
Information not available <sup>b</sup>	<u>-</u>	<u>2</u>	<u>2</u>	<u>6</u>	<u>10</u>
Total Agencies	9	11	11	11	42

$r^2 = .25$ ; Support for E.H. 1.1: Strong;  $R_c^2 = .28$

<sup>a</sup>The range of values was from \$10,000 to \$7,640,000.

<sup>b</sup>Eight of the ten agencies for which data were not available are Employment Service and Division of Rehabilitation Education (DRES) agencies. Information was not available because of statewide centralized bookkeeping systems. However, salary costs for each of these agencies ranged from about \$73,000 to over \$500,000 per year. For correlational purposes the salary expenditures were multiplied by a factor of 1.5 for the Employment Service and a factor of 4.0 for the DRES agencies. The difference in factors is because of the much larger expenditures for client services by the DRES agencies. Estimates for the other two agencies for which information was not available were made by averaging the costs of other agencies of the same type in the remaining communities.

sense quite acceptable. More critical is the existence of such a wide range of values with a clustering in the lower ranges. For this reason a second r-square value was calculated after the most "extreme" values were removed. All values over \$760,000 were discarded and an r-square value obtained for the remaining cases (N=35). The r-square value obtained was .46.

Thus an additional 13 percent of the variation was accounted for by limiting analysis to agencies with expenditures of \$760,000 or less. This finding and observation of the extreme values suggests that the relationship between amount of agency expenditures and the ICAP Transaction Score tends to be slightly curvilinear, concave with respect to the independent variable axis.

It is concluded that the empirical hypothesis that there is a positive relationship between the Transaction Score and amount of set agency expenditures is strongly supported whether or not there is control for extreme values. The overall amount of variation accounted for over the entire range of values for the 42 cases could, however, most likely be improved by a curvilinear transformation of the data on amount of expenditures.

It was found that the set agency's number of staff members accounted for 20 percent of the variation in the ICAP Adaptive Transaction Scores. Therefore this empirical hypothesis was moderately supported. The additional variation accounted for by the community dummy variables was not sufficient to warrant consideration.

The distribution of the number of staff members by the Transaction Scores is presented in Table 4.4. It may be noted in particular that the agencies with which ICAP had no adaptive transactions were considerably smaller than the agencies of other categories; all but one had less than eight employees, whereas about half or more in each of the other Transaction Score categories had at least that many staff members.

It may be noted from the information in Table 4.4 that extreme values are present. Although the range in number of staff members is 1-129 persons, four or fewer agencies have enough staff members to be in the top

Table 4.4. Distribution of ICAP Adaptive Transaction Scores by set agency number of staff members

Number of staff members <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 - 7	8	5	6	2	21
8 - 25	-	4	3	5	12
26 - 50	1	-	2	2	5
51 plus	<u>-</u>	<u>2</u>	<u>-</u>	<u>2</u>	<u>4</u>
Total agencies	9	11	11	11	42

$r^2 = .20$ ; Support for E.H. 1.2: Moderate;  $R_c^2 = .24$

<sup>a</sup>The range of values was from 1 to 129, with a mean of 17.7 and a median of eight.

half of the range. Consequently two attempts were made to remove extreme values and recalculate r-square values. First, the four highest values were removed, resulting in a range of 1 to 37 staff members (N=38) and a recalculated r-square of .15. Secondly, the next five highest values were removed, resulting in a range of 1 to 22 staff members (N=35) and a recalculated r-square value of .21. It would appear from an examination of these values that the strength of the relationship is not appreciably affected by the inclusion of the extreme values. There is no indication that a transformation of the data would increase the amount of variation in the ICAP Transaction Score accounted for by the set agency's number of staff members.

Variable 2: set organization goal diversity

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's goal diversity. The empirical measure of goal diversity is the number of different kinds of client services offered.

It was found that the number of client services offered accounted for 30 percent of the total variation in the ICAP Adaptive Transaction Scores. The empirical hypothesis was therefore considered to be strongly supported. The additional variation accounted for by the community dummy variables was not sufficient to warrant consideration.

The distribution of the Transactions Scores in relation to this independent variable is reported in Table 4.5, and appears to have no unusual features that warrant further consideration.

Variable 3: past transactions with other agencies

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the set organization's past transactions with other agencies. The empirical measure of past transactions developed in the previous chapter is the Set Transaction Score.

It was found that the Set Transaction Score accounted for 13 percent of the total variation in the ICAP Adaptive Transaction Score. The empirical hypothesis was therefore considered to be moderately supported. The community dummy variables accounted for a sizeable increase in the amount of variation accounted for, from 13 to 27 percent. This latter finding must be carefully interpreted. It means that differences existed among the

Table 4.5. Distribution of ICAP Adaptive Transaction Scores by the number of services offered, a measure of goal diversity

Number of services offered <sup>a</sup>	ICAP Transaction Score Categories				(5)
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	TOTAL AGENCIES N=42
1 - 2	-	1	-	-	1
3 - 4	7	3	4	2	16
5 - 6	2	4	4	3	13
7 - 8	-	2	2	2	6
9 plus	<u>-</u>	<u>1</u>	<u>1</u>	<u>4</u>	<u>6</u>
Total Agencies	9	11	11	11	42

$r^2 = .30$ ; Support for E.H. 2.1: Strong;  $R_c^2 = .33$

<sup>a</sup>The range of values was from 1 to 10, with a mean of 5.5 and a median of 5.0.

communities in the level of "response" of the dependent variable to the independent variable. The increased amount of variance accounted for should not be considered as variance "explained". Although it is known that it is due to differences among the communities, the reason for these differences is as of yet an open question for future consideration.

The distribution of the ICAP Adaptive Transaction Scores in relation to the Set Transaction Scores as reported in Table 4.6 appears to have no unusual features that warrant further consideration.

Table 4.6. Distribution of ICAP Adaptive Transaction Scores by set agency past transactions with other agencies scores

Past transaction score <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
0 - 8.9	2	-	-	-	2
9 - 17.9	2	3	3	1	9
18 - 26.9	2	4	3	2	11
27 - 35.9	2	1	2	4	9
36 plus	<u>1</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>11</u>
Total Agencies	9	11	11	11	42

$r^2 = .13$ ; Support for E.H. 3.1: Moderate;  $R_c^2 = .27$

<sup>a</sup>The range of scores was from 5.7 to 41.8, with a mean of 25.2 and a median of 26.0.

#### Interorganization Situation Variables

##### Variable 4: systemic relatedness of external control structures

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the systemic relatedness of their external control structures. Four empirical measures of the systemic relatedness of their external control structures were developed, based on whether the direct source of authority and the major source of funds were 1) public or private and 2) locally or nonlocally based. The four measures are: 1) Direct Source of Authority Score I, 2) Direct Source of Authority Score II, 3) Major Source of Funds

Score I, and 4) Major Source of Funds Score II.

The four measures accounted for, respectively 29, 35, 17 and 32 percent of the total variation in the ICAP Adaptive Transaction Scores. The empirical hypotheses were supported strongly in three cases and moderately in the fourth. In none of the cases did the community dummy variables account for sufficient variation to warrant consideration.

The distributions of the ICAP Adaptive Transaction Scores for each of the respective empirical measures are reported in Tables 4.7 and 4.8. None of the distributions appear to have any unusual features that warrant further consideration.

Variable 5: similarity of organizational professionalism

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the extent of similarity between the professionalism of their respective staffs. Three measures of the similarity of professionalism were developed: 1) the Staff Education Similarity Score, 2) Staff Salary Similarity Score, and 3) Director Salary Similarity Score.

The Staff Education Similarity Score accounted for only two percent of the variation in the ICAP Adaptive Transaction Score. Thus, the first empirical hypothesis was not supported. The additional variation accounted for by the community dummy variables was not sufficient to warrant consideration. The distribution of the ICAP Adaptive Transaction Scores for this empirical measure does not appear to have any unusual features that warrant further consideration (Table 4.9).

The Staff Salary Similarity Score accounted for 14 percent of the

Table 4.7. Distribution of ICAP Adaptive Transaction Scores by set agency's Direct Source of Authority Score I and Score II

Direct Source of Authority Score	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
<u>Direct Source of Authority Score I</u>					
1 = private	6	8	4	1	19
2 = private and public	1	-	1	-	2
3 = public	<u>2</u>	<u>3</u>	<u>6</u>	<u>10</u>	<u>21</u>
Total Agencies	9	11	11	11	42
$r^2 = .29$ ; Support for E.H. 4.1: <u>Strong</u> ; $R_c^2 = .31$					
<u>Direct Source of Authority Score II</u>					
1 = non-local private	5	2	1	-	8
2 = local private	2	6	4*	1	13*
3 = local public	3*	2*	4*	3	12*
4 = non-local public	<u>1*</u>	<u>2*</u>	<u>5*</u>	<u>7</u>	<u>15*</u>
Total Agencies	11 <sup>a</sup>	12 <sup>a</sup>	14 <sup>a</sup>	11	48 <sup>a</sup>
$r^2 = .35$ ; Support for E.H. 4.2: <u>Strong</u> ; $R_c^2 = .39$					

<sup>a</sup>This total adds to more than the number of agencies in the category because one or more of them had two sources of authority, and for purposes of presentation is scored in each category. Individual figures that reflect "double" scoring are denoted by asterisk (\*). The two scores for each of these agencies were averaged for purposes of computing the correlation coefficient.

Table 4.8. Distribution of ICAP Adaptive Transaction Scores by set agency's Major Source of Funds Score I and Score II

Major Source of Funds Scores	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
<u>Major Source of Funds Score I</u>					
1 = private	6	4	2	1	13
2 = private and public	-	-	-	-	-
3 = public	<u>3</u>	<u>7</u>	<u>9</u>	<u>10</u>	<u>29</u>
Total Agencies	9	11	11	11	42
$r^2 = .17$ ; Support for E.H. 4.3: <u>Moderate</u> ; $R_c^2 = .19$					
<u>Major Source of Funds Score II</u>					
1 = non-local private	2	-	-	-	2
2 = local private	4	4	2	1	11
3 = local public	3	3	4	2	12
4 = non-local public	<u>-</u>	<u>4</u>	<u>5</u>	<u>8</u>	<u>17</u>
Total Agencies	9	11	11	11	42
$r^2 = .32$ ; Support for E.H. 4.4: <u>Strong</u> ; $R_c^2 = .34$					

variation in the ICAP Adaptive Transaction Score. The empirical hypothesis was therefore moderately supported. The additional variation accounted for by the community dummy variables was not sufficient to warrant consideration. The distribution of the ICAP Adaptive Transaction Scores for this empirical measure does not appear to have any unusual features that

Table 4.9. Distribution of ICAP Adaptive Transaction Scores by Staff Education Similarity Score

Staff Education Similarity Score <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1	2	1	2	-	5
2	3	1	1	3	8
3	1	4	1	4	10
4	<u>3</u>	<u>5</u>	<u>7</u>	<u>4</u>	<u>19</u>
Total Agencies	9	11	11	11	42

$r^2 = .02$ ; Support for E.H. 5.1: None;  $R_c^2 = .04$

<sup>a</sup>Higher scores denote greater similarity. Individual score descriptions are not included due to their length, but can be examined in the appropriate section of Chapter 3.

warrant further consideration (Table 4.10).

The third measure of similarity of professionalism, the Director Salary Similarity Score, accounted for only two percent of the variation in the ICAP Adaptive Transaction Score. The empirical hypothesis was therefore not supported. The additional variation accounted for by the community dummy variables was not sufficient to warrant consideration. The distribution of the ICAP Adaptive Transaction Scores for this empirical measure does not appear to have any unusual features that warrant further consideration (Table 4.11).

Inasmuch as only one of three measures of the similarity of professionalism was supported it is of some interest to explore the question of why.

Table 4.10. Distribution of ICAP Adaptive Transaction Score by Staff Salary Similarity Score

Staff Salary Similarity Score	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 = less than \$5,001 <u>or</u> more than \$12,500	3	3	2	-	8
2 = \$5,001 to \$6,000 <u>or</u> \$10,501 to \$12,500	-	3	1	1	5
3 = \$6,001 to \$7,000 <u>or</u> \$9,001 to \$10,500	5	1	6	4	16
4 = \$7,001 to \$9,000	<u>1</u>	<u>4</u>	<u>2</u>	<u>6</u>	<u>13</u>
Total Agencies	9	11	11	11	42

$r^2 = .14$ ; Support for E.H. 5.2: Moderate;  $R_c^2 = .18$

Was it the better or poorer measures of the similarity of professionalism for which hypotheses were not supported? It may be suggested that the Director Salary Score was based on less information about the total agency staffs than were the other two measures. It might be expected that the agency director's salary would be based upon the amount of his responsibility including such things as the number of subordinates, scope of agency services and amount of funds administered in client services. Thus, many factors other than professionalism contribute to the determination of a director's salary. Regarding the two measures based upon total staff characteristics, if one accepts the idea that there are "market" factors at work that tend to encourage those who are professionally most competent to move to agencies with higher pay scales, then the Similarity of Staff

Table 4.11. Distribution of ICAP Adaptive Transaction Scores by Director Salary Similarity Score

Director Salary Similarity Score	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1)	(2)	(3)	(4)	
	NONE N=9	LOW N=11	MEDIUM N=11	HIGH N=11	
1 = less than \$5,001 <u>or</u> more than \$12,500	3	5	4	-	12
2 = \$5,001 to \$6,000 <u>or</u> \$10,501 to \$12,500	1	2	2	6	11
3 = \$6,001 to \$7,000 <u>or</u> \$9,001 to \$10,500	5	1	3	4	13
4 = \$7,001 to \$9,000	<u>-</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>6</u>
Total Agencies	9	11	11	11	42
$r^2 = .02$ ; Support for E.H. 5.3: None; $R_c^2 = .06$					

Salary Score is probably a more adequate indicator of professionalism than the Similarity of Staff Education Score. Accepting this assumption one would have greater confidence that the general hypothesis is supported by the present study. It is the author's judgment that the question of which is the most adequate indicator of professionalism is still an unsettled question, however.

Variable 6: complementarity between focal organization needs and set organization goals

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the degree of complementarity between the focal organization's

needs and the set organization's goals. Only one empirical measure was developed for this independent variable. It is the ICAP Need Score.

It was found that the ICAP Need Score accounted for 29 percent of the total variation in the ICAP Adaptive Transaction Score. The empirical hypothesis was therefore strongly supported. The additional variation accounted for by the community dummy variables was not sufficient to warrant consideration.

The distribution of the Transactions Scores for this variable does not appear to have any unusual features that warrant further consideration (Table 4.12).

Variable 7: complementarity between set organization needs and focal organization goals

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the degree of complementarity between the focal organization's goals and the set organization's needs. Three measures of this complementarity were developed here: 1) number of clients served by the set agency, 2) percent of the set agency's clients perceived to be alcoholics, and 3) the set agency's Service Problem Score.

It was found that the number of set agency clients accounted for none of the variation in the ICAP Adaptive Transaction Score. The empirical hypothesis was therefore not supported. Examination of the distribution of ICAP Adaptive Transaction Scores with respect to this variable suggests that the presence of extreme values may have had a considerable effect on the calculated r-square value, however (Table 4.13). It can be seen that

Table 4.12. Distribution of ICAP Adaptive Transaction Scores by ICAP Need Score

ICAP Need Score <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 = Public Health Nurses	3	1	1	-	5
2 = Community Action and Legal Aid	-	2	2	-	4
3 = Family Services, Catho- lic Charities, Lutheran Social Service and Mental Health Center	3	2	2	1	8
4 = Social Welfare, County Relief, County Soldier's Relief and Salvation Army	3	5	5	4	17
5 = DRES and Employment Service	<u>-</u>	<u>1</u>	<u>1</u>	<u>6</u>	<u>8</u>
Total Agencies	9	11	11	11	42

$r^2 = .29$ ; Support for E.H. 6.1: Strong;  $R_c^2 = .30$

<sup>a</sup>This score was based on set agency goals in relation to ICAP client needs, so types of agencies, rather than individual agencies, were assigned specific scores.

the agencies with Transaction Scores of zero have much smaller numbers of clients than the agencies of any of the other categories. There is an apparent positive relationship between the variables except for agencies with at least 8,000 clients. To examine the effect of the extreme values in this category a second r-square value was calculated after eliminating the seven values ranging from 10,000 to 54,000 clients. The recalculated

Table 4.13. Distribution of ICAP Adaptive Transaction Scores by number of clients set agency served

Number of clients served in most recently completed year <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 - 499	5	3	2	2	12
500 - 9999	2	1	1	-	4
1000 - 3999	1	2	3	4	10
4000 - 7999	-	1	2	2	5
8000 plus	<u>-</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>6</u>
Total Agencies	8 <sup>b</sup>	10 <sup>b</sup>	10 <sup>b</sup>	9 <sup>b</sup>	37

$r^2 = .00$ ; Support for E.H. 7.1: None;  $R_c^2 = .02$

<sup>a</sup>The range of values was 100 to 54,000 with a mean of 50.1 and a median of 15.0.

<sup>b</sup>Information was not obtained from additional agencies in this category. Values were obtained for correlational purposes by making estimates based on the numbers of clients served by the same kinds of agencies in the remaining communities.

r-square was .14 (N=35). Thus it is concluded that the original empirical hypothesis is supported for agencies with less than 8,500 clients. However, it must be recognized that this conclusion does rest on the assumption that the estimated values for the agencies for which information was not available are fairly accurate in relation to one another. It appears that a curvilinear transformation which is concave with respect to the axis of the independent variable would result in a significant increase in the amount of variation accounted for across the entire range of values.

The second measure of complementarity of set organization's needs with the focal organization's goals is the percent of the set agency's clients perceived to be alcoholics. It was found that it accounted for none of the variation in the ICAP Adaptive Transaction Score. The empirical hypothesis was therefore not supported. Examination of the distribution of ICAP Adaptive Transaction information presented in Scores with respect to this variable suggests that two factors may have had an effect on the size of the r-square value (Table 4.14). One is the rather large number (10) of cases for which information was not available. The second is the presence of some rather extreme values. For these reasons a second r-square value was calculated after eliminating the four values over 50 percent and the 11 estimated values. This procedure resulted in a new range of from 0 to 30 percent for 27 cases. The calculated r-square value was .23. Thus it is concluded that within a range of from zero to 30 percent and only for the agencies for which estimates were provided by respondents the empirical hypothesis is supported. It would appear that a curvilinear transformation which is concave with respect to the axis of the independent variable would result in a significant increase in the amount of variation accounted for across the entire range of values.

The third measure of complementarity of set organization's needs with the focal organization's goals is the set agency's Service Problem Score. This measure accounted for only one percent of the variation in the ICAP Adaptive Transaction Score. The community dummy variables did not account for sufficient variation to warrant consideration. It may be noted in Table 4.15 that a slight trend in the data is evident, i.e., the agencies with lower ICAP Adaptive Transaction Scores were more likely than agencies

Table 4.14. Distribution of ICAP Adaptive Transaction Scores by Set agency respondents' estimates of percent of their clients that were alcoholics

Percent of clients estimated to be alcoholics <sup>a</sup>	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
None	1	-	-	-	1
Less than 1%	2	2	3	1	8
1 - 5%	3	2	1	1	7
6 - 30%	1	2	1	6	10
Greater than 50%	1	1	2	-	4
Not sure how many, but some	<u>1</u>	<u>4</u>	<u>4</u>	<u>1</u>	<u>10</u> <sup>b</sup>
Total Agencies	9	11	11	9 <sup>c</sup>	40

$$r^2 = .00; \text{ Support for E.H. 7.2: } \underline{\text{None}}; R_c^2 = .02$$

<sup>a</sup>The range of values was from zero to 80 with a mean of 15.2 and a median of 5.0.

<sup>b</sup>In the calculation of the correlation coefficient, values less than one percent but more than zero were scored as one. The mean value (15.2) was substituted for the 10 agencies for which precise estimates were not made.

<sup>c</sup>Information not obtained from two agencies in this category.

with higher Scores to have a low Service Problem Score. This is consistent with the empirical hypothesis, as stated. However, a significant amount of variation could not be accounted for because so few agencies had a low Service Problem Score, i.e., there was so little variation in the dependent variable.

On the basis of a reanalysis of the three empirical measures of the

Table 4.15. Distribution of ICAP Adaptive Transaction Scores by set agency Service Problem Score

Service Problem Score	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 = Alcoholics presented no special problems to agency, not generally presented by other clients	3	3	1	1	8
2 = Alcoholics did present special problems	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>	<u>32</u>
Total Agencies	9	10 <sup>a</sup>	10 <sup>a</sup>	11	40
$r^2 = .01$ ; Support for E.H. 7.3: <u>None</u> ; $R_c^2 = .04$					

<sup>a</sup>Information not obtained from one agency in this category. The mean value was substituted for this agency.

complementarity between the set organization's needs and focal organization's goals it is concluded that considerable support is provided for the general hypothesis. Across the entire range of values none of the empirical measures accounted for more than one percent of the variation in the dependent variable. However, it was found that empirical hypotheses for the first two measures were moderately supported when extreme values were removed. Curvilinear transformations across the entire range of values seemed appropriate. The failure of the third empirical hypothesis to be supported appeared to be due to a lack of variation in the independent variable.

Variable 8: perceived interorganizational dependence

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is positively related to the extent of its perceived dependence on the set organizations. Two empirical measures of perceived dependence of the focal agency on the set agency were developed. They were specified as Perceived Dependence on Set Agency Scores I and II.

It was found that the empirical measures accounted for 25 and 50 percent, respectively, of the variation in the ICAP Adaptive Transaction Scores. In neither case did the community dummy variables account for sufficient variation to warrant consideration. It was concluded that the first empirical hypothesis was strongly supported, and the second very strongly supported.

The distributions of the ICAP Adaptive Transactions Scores with respect to each of the variables did not appear to have any unusual features that warrant special consideration (Table 4.16).

Variable 9: domain consensus

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is positively related to the set organization's consensus with the domain of the focal organization. Three empirical measures of domain consensus were reported: 1) Value for Domain Consensus Score, 2) ICAP Domain Consensus Score I and 3) ICAP Domain Consensus Score II.

The first empirical hypothesis could not be tested because there was no variation in the Value for Domain Consensus Score. All agency

Table 4.16. Distribution of ICAP Adaptive Transaction Scores by Perceived Dependence on Set Agency Score I and Score II

Perceived Dependence on Set Agency Scores	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1)	(2)	(3)	(4)	
	NONE N=9	LOW N=11	MEDIUM N=11	HIGH N=11	

Perceived Dependence  
on Set Agency Score I

1 = none	-	-	-	-	-
2 = slight	6	4	2	1	13
3 = considerable	3	3	2	3	11
4 = much	<u>-</u>	<u>4</u>	<u>7</u>	<u>7</u>	<u>18</u>
Total Agencies	9	11	11	11	42

$r^2 = .25$ ; Support for E.H. 8.1: Strong;  $R_c^2 = .28$

Perceived Dependence on  
Set Agency Score II<sup>a</sup>

1.0 - 3.0	6	3	-	-	9
3.1 - 5.0	1	1	3	2	7
5.1 - 7.0	1	4	2	-	7
7.1 - 9.0	1	3	1	-	5
9.1 - 11.0	-	-	3	4	7
11.1 - 13.0	<u>-</u>	<u>-</u>	<u>2</u>	<u>5</u>	<u>7</u>
Total Agencies	9	11	11	11	42

$r^2 = .50$ ; Support for E.H. 8.2: Very Strong;  $R_c^2 = .52$

<sup>a</sup>This score is an adjusted rank order of perceived dependence. To simplify analytic procedures the highest possible rank was specified as 13 rather than one.

respondents perceived there was a need for all of the functions of ICAP to be performed either by ICAP or another agency in their community, thus exhibiting consensus for the ICAP domain.

The second empirical measure also did not account for any of the variation in the ICAP Adaptive Transaction Score. In this case all but one of the agency respondents received a score indicating the maximum amount of domain consensus. Therefore, variation in the independent variable was virtually absent.

The third empirical measure accounted for only one percent of the variation in the ICAP Adaptive Transaction Scores. Thus the empirical hypothesis was not supported. It may be noted that about three-fourths of the agencies received the highest possible score, indicating a lack of variation in the independent variable. But it may be noted that among the remaining cases there appears to be no association between the variables (Table 4.17). Additional variation accounted for by the community dummy variables was not sufficient to warrant consideration in this study.

It is perceived that tests of the hypotheses concerning domain consensus are not too meaningful due to the consistently high consensus with the ICAP domain among most of the other agencies.

#### Interorganizational Dynamics Variables

##### Variable 10: support from authoritative source

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related to the set organization receiving support from an authoritative source. A single empirical measure was developed for this hypothesis, called the

Table 4.17. Distribution of ICAP Adaptive Transaction Scores by ICAP Domain Consensus Score II

ICAP Domain Consensus Score II	ICAP Adaptive Transaction Score Categories				(5)
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	TOTAL AGENCIES N=42
1 = Favored incorporation of ICAP activities in- to own agency and other agency	-	1	-	-	1
2 = Favored incorporation of ICAP activities in- to own agency or other agency	2	3	2	1	8
3 = Opposed incorporation of ICAP activities in any other agencies	<u>7</u>	<u>7</u>	<u>9</u>	<u>10</u>	<u>33</u>
Total Agencies	9	11	11	11	42
$r^2 = .01$ ; Support for E.H. 9.3: <u>None</u> ; $R_c^2 = .04$					

#### Authoritative Support Score.

It was found that the Authoritative Support Score accounted for 26 percent of the variation in the ICAP Adaptive Transaction Scores. Therefore the empirical hypothesis was judged to be strongly supported. Additional variation accounted for by the community dummy variables was not sufficient to warrant consideration.

Two limiting factors should be taken into consideration in the evaluation of the support for this hypothesis. One is that only one-sixth of the agencies received support from an authoritative source, as measured here (Table 4.18). Secondly, data were not obtained from the agencies which

Table 4.18. Distribution of ICAP Adaptive Transaction Score by Set Agency Authoritative Support Score

Authoritative Support Score	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 = No communications received from superior to encourage ICAP relations	(9) <sup>a</sup>	11	7	6	33
2 = Verbal communications only received	-	-	2	2	4
3 = Written communications only received	-	-	-	-	-
4 = Both verbal and written communications received	<u>-</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>3</u>
Total Agencies	(9)	11	10 <sup>b</sup>	10 <sup>b</sup>	40
$r^2 = .26$ ; Support for E.H. 10.1: <u>Strong</u> ; $R_c^2 = .27$					

<sup>a</sup>Data from agencies in this Adaptive Transaction Score category were assumed to fit here because of no or very little interaction and knowledge of the ICAP Service Centers.

<sup>b</sup>Information was not obtained from an additional agency in this category. The mean Authoritative Support Score was substituted for correlational purposes.

had a zero Transaction Score with ICAP. These nine agencies were scored as receiving no support. It was considered proper to do this inasmuch as a zero Transaction Score indicated no or virtually no interaction with anyone from the ICAP Service Centers and very little if any knowledge of the Service Centers operations. It was reasoned then that messages of support from an authoritative source were probably not received. Nonetheless the

manner in which data were substituted should be taken into consideration in evaluating support for this hypothesis.

Variable 11: threat of coercive influence

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the perceived threat of coercive influence. One empirical measure, the threat of Coercive Influence Score, was developed.

It was found that the Threat of Coercive Influence Score accounted for 46 percent of the variation in the ICAP Adaptive Transaction Scores. The empirical hypothesis was judged to be very strongly supported. Additional variation accounted for by the community dummy variables was not sufficient to warrant consideration.

Support for this hypothesis is subject to one limitation. Data were not obtained from agencies which had zero ICAP Adaptive Transaction Scores (Table 4.19). All of these agencies were considered for correlational purposes as perceiving no threat existed. It was considered appropriate to classify these agencies in this manner because of their lack of knowledge and contact with the ICAP Service Center in their respective communities.

Variable 12: exercise of coercive influence

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the exercise of coercive influence. An empirical measure, the Exercise of Coercive Influence Score is reported here.

It was found that the Exercise of Coercive Influence Score accounted for only seven percent of the variation in ICAP Adaptive Transaction Scores.

Table 4.19. Distribution of ICAP Adaptive Transaction Scores by Threat of Coercive Influence Score

Threat of Coercive Influence Score	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 = Perceived no threat	(9) <sup>a</sup>	6	5	1	21
2 = Perceived threat existed	<u>-</u>	<u>3</u>	<u>3</u>	<u>10</u>	<u>16</u>
Total Agencies	(9)	9 <sup>b</sup>	8 <sup>b</sup>	11	37

$r^2 = .46$ ; Support for E.H. 11.1: Very Strong;  $R_c^2 = .49$

<sup>a</sup>Data from agencies in this Adaptive Transaction Score category were assumed to fit here, because of no or very little knowledge and contact with the ICAP Service Centers.

<sup>b</sup>Information was not obtained from additional agencies in this category. The mean Threat of Coercive Influence Score was substituted for correlational purposes.

Therefore, the empirical hypothesis was not supported. Additional variation accounted for by the community dummy variables was not sufficient to warrant consideration.

A possible reason for this hypothesis not being supported is that less than one-eighth of the agency respondents perceived that coercive influence had been exercised (Table 4.20). In this regard it may be noted that the five agencies subject to coercive influence were all from the higher Transaction Score categories.

Support for this hypothesis is subject to the same limitations as support for the two immediately previous empirical hypotheses. Data were not obtained from agencies involved in adaptive transactions with the ICAP

Table 4.20. Distribution of ICAP Adaptive Transaction Scores by Exercise of Coerceive Influence Score

Exercise of Coercive Influence Score	ICAP Adaptive Transactions Score Categories				(5) TOTAL AGENCIES N=42
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	
1 = Perceived coercive influence not exercised	(9) <sup>a</sup>	11	8	8	36
2 = Perceived coercive influence exercised	<u>-</u>	<u>-</u>	<u>2</u>	<u>3</u>	<u>5</u>
Total Agencies	(9)	11	10 <sup>b</sup>	11	41

$r^2 = .07$ ; Support for E.H. 12.1: None;  $R_c^2 = .10$

<sup>a</sup>Data from agencies in this Adaptive Transaction Score category were assumed to fit here because of no or very little knowledge and contact with the ICAP Service Centers.

<sup>b</sup>Information was not obtained from one additional agency in this category. The mean Exercise of Coerceive Influence Score was substituted for correlational purposes.

Service Centers. All of these agencies were considered for correlational purposes as not being subject to the exercise of coercive influence. It was considered appropriate to classify these agencies in this manner because of their lack of knowledge or a contact with the ICAP Service Center in their respective communities.

Variable 13: exercise of inducement influence

It was hypothesized that the intensity of a focal organization's adaptive transactions with members of its organization set is related positively to the exercise of inducement influence. One empirical measure,

the Exercise of Inducement Influence Score is reported here.

It was found that the Exercise of Inducement Influence Score accounted for 56 percent of the variation in the ICAP Adaptive Transaction Scores. Therefore the empirical hypothesis was very strongly supported. Additional variation accounted for by the community dummy variables was not sufficient to warrant consideration. Support for this hypothesis is subject to the same limitations as are the three previous hypotheses (Table 4.21). Data were not obtained from agencies which were not involved in adaptive transactions with the ICAP Service Centers. All of these agencies were

Table 4.21. Distribution of ICAP Adaptive Transaction Scores by Exercise of Inducement Influence Score

Exercise of Inducement Influence Score	ICAP Adaptive Transaction Score Categories				(5)
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	TOTAL AGENCIES N=42
1 = Perceived inducement influence not exercised	(9) <sup>a</sup>	11	2	1	23
2 = Perceived inducement influence exercised	-	-	8	10	18
Total Agencies	(9)	11	10 <sup>b</sup>	11	41
$r^2 = .56$ ; Support for E.H. 13.1: Very Strong; $R_c^2 = .59$					

<sup>a</sup>Data from agencies in this Adaptive Transaction Score category were assumed to fit here because of none or very little knowledge of and contact with the ICAP Service Centers.

<sup>b</sup>Information was not obtained from one additional agency in this category. The mean Exercise of Inducement Influence Score was substituted for correlational purposes.

considered for correlational purposes as not being subject to the exercise of inducement influence. It was considered appropriate to classify these agencies in this manner because of their lack of knowledge and contact with the ICAP Service Center in their respective communities.

Variable 14: evaluation of focal organization's performance

It was hypothesized that the intensity of the focal organization's adaptive transactions with members of its organizational set was positively related to the level of favorable evaluation of the focal organization by the set organization. Two empirical measures of the level of favorable evaluation are reported here: ICAP Performance Scores I and II.

The first measure accounted for only six percent of the variation in the ICAP Adaptive Transaction Scores. Therefore the empirical hypothesis was not supported. It may be noted however, that the community dummy variables accounted for an additional eight percent of the variation. The reason for the increase is quite apparent from further analysis of the data. All five of the agency respondents who perceived that ICAP was doing a less than adequate job in performing their functions were from the same community.<sup>1</sup>

It should also be noted that data were not obtained from all of the respondents from agencies with zero Transaction Scores (because of little or no knowledge of ICAP) and from four other agencies (Table 4.22). Therefore variation in the independent variable is based upon data from only 29 of the 42 study agencies.

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<sup>1</sup>Possible reasons for this community difference are discussed in some detail elsewhere (Klonglan, et al., 1969a, pp. 216-217).

Table 4.22. Distribution of ICAP Adaptive Transaction Scores by Evaluation Score I and Score II

Evaluation Score	ICAP Adaptive Transaction Score Categories				(5)
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11	TOTAL AGENCIES N=42
<u>Evaluation Score I</u>					
1 = Perceived ICAP performed functions very inadequately	-	1	-	1	2
2 = Perceived ICAP performed functions somewhat inadequately	-	3	-	-	3
3 = Perceived ICAP performed functions somewhat adequately	-	4	4	4	12
4 = Perceived ICAP performed functions very adequately	-	-	6	6	12
Total Agencies	0 <sup>a</sup>	8 <sup>b</sup>	10 <sup>b</sup>	11	29
$r^2 = .06$ ; Support for E.H. 14.1: <u>None</u> ; $R_c^2 = .14$					
<u>Evaluation Score II</u>					
1 = ICAP relations more of a cost	-	1	1	1	3
2 = ICAP relations neither cost or benefit	-	2	1	1	4
3 = ICAP relations more of a benefit	-	6	7	9	22
Total Agencies	0 <sup>a</sup>	9 <sup>b</sup>	9 <sup>b</sup>	11	29
$r^2 = .01$ ; Support for E.H. 14.2: <u>None</u> ; $R_c^2 = .02$					

<sup>a</sup>Information was not obtained from agencies in this category due to little or no knowledge of the ICAP Service Centers. The mean Evaluation Score was substituted for correlational purposes.

<sup>b</sup>Information was not obtained from the remainder of the agencies in this category. The mean Evaluation Score was substituted for correlational purposes.

The second measure of the level of favorable evaluation of ICAP accounted for only one percent of the variation in the ICAP Adaptive Transaction Scores. Therefore the empirical hypothesis was not supported. Community dummy variables did not account for sufficient additional variation to warrant consideration. It should be noted that information was not obtained from agencies with zero Transaction Scores for the reasons previously discussed.

#### Summary of Findings

The r-square values upon which evaluation of the empirical hypotheses was initially based were presented in Table 4.1, pages 151-153. This table may be referred to for summary purposes.

Multiple correlation coefficients were calculated for the relationship between each independent variable and the dependent variable in the presence of community dummy variables. Addition of the dummy variables revealed the existence of community differences in the level of association between independent and dependent variables in only two cases. The dummy variables increased the amount of variation in the dependent variable accounted for in conjunction with the measure of past transactions with other agencies from 13 to 27 percent. The variation accounted for in conjunction with a measure of the level of favorable evaluation of the focal organization increased from .06 to .14 when dummy variables were added. Other differences between the r-square values and the R-square values which included the dummy variables were .04 or less.

Frequency distributions of the dependent variable in relation to each independent variable were presented in an effort to further evaluate the

empirical hypotheses. These further analyses revealed that in certain cases extreme values existed which could potentially have a sizeable effect on the r-square values reported in Table 4.1. Extreme values appeared to exist for these variables: size of resource base, number of staff members, number of clients served, and percent of clients estimated to be alcoholics. Elimination of extreme values for size of resource base resulted in a change in the r-square value from .24 to .46. Elimination of the extreme values did not, however, effect the relationship between number of staff members and the dependent variable. Empirical hypotheses containing the other two variables were not supported in the original evaluations of the r-square values, but were supported within limited ranges when extreme values were eliminated. These variables were both measures of the complementarity of set organization needs with focal organization goals. The number of clients served was supported at the .14 level within a limited range of values and the percent of clients estimated to be alcoholics was supported at the .23 level within a limited range of values.

It was concluded that only two general hypotheses were not supported by any of their measures within at least limited ranges. They were the hypotheses concerned with domain consensus, and the level of favorable evaluation of the set organization. However, the hypotheses concerned with domain consensus could not be put to an adequate test in the present study inasmuch as there was very little variation in the responses. Assuming the measures were adequate most agencies exhibited a high level of domain consensus with the focal organization.

## Additional Discussion

Findings reported in this chapter have quite limited meaning inasmuch as nothing is as of yet known about the interrelationships of the independent variables. Although many variables individually accounted for a considerable amount of variation in the ICAP Adaptive Transaction Scores it is not yet known whether they are accounting for substantially the same or different variation in the ICAP Adaptive Transaction Scores. In recognition of this limitation of the findings thus far reported, consideration of the combined ability of the independent variables to account for variation in the ICAP Adaptive Transaction Scores is the topic of the next chapter.

With respect to the two variable hypotheses two suggestions for future analyses do appear warranted at this time. First, where extreme values are evident, consideration should be given to theoretically justifying and making appropriate transformations for the data. Superficial examination of the data suggested in some cases that curvilinear transformation might be appropriate. Second, where community differences existed as indicated by the use of community dummy variables it may be useful to explore reasons for the existence of such differences.

Additional comments on further analysis of these data will be made at the close of the next chapter.

## CHAPTER 5. MULTIPLE VARIABLE ANALYSES

Consideration of the effect of only one independent variable at a time on the dependent variable, as in the previous chapter, provides rather limited insight into the extent to which the independent variables of this study influence the intensity of a focal organization's adaptive transactions. Insight is limited because no consideration is given to the possible relationships between the independent variables. Certain independent variables may affect others in such a manner that the combined effect on the dependent variable is not much greater than any of the individual effects. The purpose of this chapter is to conduct a limited multiple variable analysis in an effort to provide additional insight into the combined ability of the independent variables to influence the occurrence of adaptive transactions between a focal organization and members of its set.

Multiple variable analyses can be approached from two different points of reference. One point of reference is the relationships between and among the various independent variables. Special consideration might be given to what variables are temporally prior to others and how their effects on one another culminate in a certain effect on the dependent variable. On the other hand one can look at the individual relationships between each independent variable and the dependent variable in terms of the combined ability of the former to account for variation in the latter. Little emphasis in such an analysis may be given to interrelationships among the independent variables. Either of the two points of reference suggested here may be a meaningful one depending upon the research objectives.

Various methods may also be used to conduct multiple variable analyses. One approach is to use cross-break frequency tables to observe possible trends. However, this method becomes quite cumbersome when more than two independent variables are shown in relation to the dependent variable. The approach also requires a large number of observations or cases when more than one or two independent variables are used. A related problem is that the data must be categorized into more inclusive categories as the number of variables to be included increases in order to retain manageability of the data.

A second approach is partial correlation analysis. Partial correlations are commonly used to observe the effect of one independent variable on a dependent variable while holding one or more other independent variables constant. It is particularly useful when the point of reference in an analysis is the interrelationships of the independent variables. It does, however, become quite difficult when one wishes to control on more than two or perhaps three independent variables at a time.

A third approach is multiple correlation. It is commonly used to determine how much of the total variation in the independent variable can be explained by all of the independent variables acting together. The multiple correlation can be thought of as the zero-order correlation between the actual values obtained for the dependent variables and those values predicted from the least-squares equation. The technique is convenient for assessing the effects of large numbers of variables on a single independent variable. Although some insight is provided into relationships among independent variables, such insight is generally implicit. The technique is most useful when one is interested in the combined ability of

certain variables to account for the variation in a dependent variable and somewhat less useful when one is interested in exploring the individual relationships between independent variables.

A technique for multiple variable analysis closely related to multiple correlation is multiple regression. This technique is most useful when one has identified the relevant variables and is interested in the amount of change in the dependent variable that can be accounted for by each independent variable. Multiple regression is probably less appropriate than multiple correlation for exploratory research where one is most interested in the explanatory power of a number of independent variables taken together, rather than the form of the relationships of each independent variable to the dependent variable. The form of a relationship is not too important unless it has already been established that a relationship exists.

The selection of the most appropriate technique for analyzing the relationships between several independent variables and an independent variable rests on a number of considerations, including the nature of the data, the theoretical basis for the analysis, and the objectives of the analysis. These factors will now be discussed.

#### Procedures Followed in the Present Study

The present study is quite exploratory. Major emphasis is placed on delineating variables for consideration in future research. A major concern then, is the combined ability of the variables examined here to account for the variation in the dependent variable. If little variation can be accounted for then a high priority should probably be placed on searching for other variables. If most of the variation can be accounted for then

perhaps it would be more meaningful to place a higher priority on examining the interrelationships among the independent variables already developed. In this regard it should be noted that no attempt was made to interrelate independent variables of previous theoretical and empirical research. This study has relied on a taxonomy of concepts developed with regard to two diverse theoretical orientations -- exchange theory and value theory.

Thus it is considered appropriate in the present study to explore the combined ability of the independent variables to account for the variation in the dependent variable. The major point of reference accepted for this study is the relationships between the independent and dependent variables rather than relationships among the various independent variables.<sup>1</sup> Multiple correlation techniques will be used in this analysis.

The procedure used in this chapter combines theoretical and empirical considerations in exploring the combined ability of various sets of variables to account for variation in the dependent variable. Alternative models to be examined will be based on theoretical considerations presented with each model. However, an important empirical consideration is that only the independent variables from empirical hypotheses supported according to criteria already discussed will be included in the multiple variable models.

In this regard it may be noted that empirical support was found for 10 of the 14 general hypotheses. The variables for which empirical support were found and which therefore may be considered for inclusion in the

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<sup>1</sup>The author wishes to add, however, that the examination of relationships among independent variables, both theoretically and empirically, is considered to be a high priority for future research efforts.

multiple variable models are as follows, listed here by identification number, title, and empirical measure.<sup>1</sup>

- Variable 1: Size of resource based (measured by 1967 expenditures)
- Variable 2: Goal diversity (measured by number of services offered)
- Variable 3: Past transactions with other agencies (measured by Set Transaction Score)
- Variable 5: Similarity of professionalism (measured by Staff Salary Similarity Score)
- Variable 4: Systemic relatedness of external control structures (measured by Direct Authority Score II)
- Variable 6: Complementarity of focal organization needs and set organization goals (measured by ICAP Need Score)
- Variable 8: Perceived dependence on set organization (measured by Perceived Dependence Score II)
- Variable 10: Support from authoritative source (measured by Authoritative Support Score)
- Variable 11: Threat of coercive influence (measured by Threat of Coercive Influence Score)
- Variable 13: Exercise of inducement influence (measured by Exercise of Inducement Influence Score)

An intercorrelation matrix of all ten of the above independent

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<sup>1</sup>In the cases of Variables 1, 4 and 8, more than one empirical hypothesis was supported for each variable. In the absence of any strong reasons for selecting one empirical measure for inclusion in the multiple variable analyses over another it was arbitrarily decided to include only the measure from the empirical hypothesis which was most strongly supported for each of the variables.

variables and the dependent variable comprises Table 5.1. The r-square values for all possible pairs of variables are presented. Variables are identified by the model in which they will first be considered in the ensuing discussion.

All of the models considered here are linear additive models of the form:

$$Y = b_0X_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k.$$

Each of the models and selected variations of them will be discussed and evaluated. Evaluation will be based on the magnitude of the R-square values and variable composition of the models.

#### Presentation and Discussion of Models

##### Model 1

The first model to be evaluated is one which includes only the variables previously categorized as preconditional variables. This model is presented in order to determine what proportion of the variation in the dependent variable can be accounted for by factors which were developed as theoretically existing prior to and independent of the transaction situation. Conceptualization of these factors was based upon the assumption that organizations are "predisposed" toward involvement in a focal organization's efforts at adaption due to certain of their attributes.

All of the empirical hypotheses for the individual preconditional variables were supported. The three variables were 1) size of resource base, 2) goal diversity and 3) past transactions with other agencies.

Individually these variables accounted for from 13 to 30 percent of the variation in the ICAP Adaptive Transaction Score (Table 5.1). Together

Table 5.1. The r-square values for all combinations of variables in the multiple variation models

Variable number and name	r-square values											
	Variables in model 1			Variables added for model 2			Variable added for model 3	Variables added for model 4			ICAP Adaptive Transaction Score	
	1	2	3	4	5	6	8	10	11	12		
1. Size of resource base	-	.31	.07	.06	.02	.03	.19	.04	.11	.02	.25	
2. Goal diversity		-	.06	.09	.05	.14	.29	.20	.20	.06	.30	
3. Past transactions with other agencies			-	.03	.11	.00	.07	.00	.07	.10	.13	
4. Systemic relatedness of external control structures				-	.23	.12	.22	.19	.31	.22	.35	
5. Similarity of professionalism					-	.04	.14	.08	.05	.08	.14	
6. Complementarity of focal org. needs and set org. goals							-	.15	.17	.30	.21	.30
8. Perceived dependence on set organization								-	.23	.15	.22	.50
10. Support from authoritative source									-	.17	.06	.26
11. Threat of coercive influence										-	.17	.46
13. Exercise of inducement influence											-	.56
ICAP Transaction Score												-

they account for 40 percent of the variation (Table 5.2). Multiple correlation coefficients for the three possible two variable combinations of variables were also calculated. Two combinations of variables (size of resource base with goal diversity and goal diversity with past transactions) each accounted for 36 percent of the variation. A lesser amount was accounted for by the third combination of variables. It is concluded that the combined ability of the three variables to account for variation in the dependent variable is somewhat greater than any of the individual variables, or two variable combinations, but not greatly so. Well over half of the variation in the dependent variable remains unaccounted for by the preconditional variables acting together.

### Model 2

The second model retains the preconditional variables and adds to them three of the interorganizational situation variables. It may be remembered that the major distinguishing factor between interorganizational situation variables and preconditional variables is that the latter are expected to

Table 5.2. Squared multiple correlation coefficients for versions of Model 1

Version of Model 1	Variables included	Variation accounted for in the dependent variable (R <sup>2</sup> )
All variables	1, 2, 3	.40
Best two variables <sup>a</sup>	1, 2 or 2, 3	.36
Best one variable <sup>a</sup>	2	.30

<sup>a</sup>By "best" is meant those variables of the general model that account for the greatest amount of variation in the ICAP Adaptive Transaction Score.

influence whether organizations become involved in others' adaptive transactions in general, without reference to any specified organizations.

The concern of the interorganizational situation variables is with which organizations transactions occur. Two types of interorganizational situation variables were delineated, structural characteristics and orientation characteristics. Attention in Model 2 is focused only on the structural characteristics classified as interorganizational variables and the preconditional variables already discussed.

This model thus is unique in that it considers all of the "structural" factors included in the present study, and does not include non-structural variables. The question to be considered is what is the combined ability of structural characteristics, only, to account for the variation in the adaptive transactions of a focal organization. The three structural interorganizational situation variables added to the preconditional variables to comprise Model 2 are: 1) systemic relatedness of external control structures, 2) similarity of professionalism and 3) complementarity of focal organization needs and set organization goals.

Together the six variables account for 65 percent of the total variation in the ICAP Adaptive Transaction Score, or an additional 25 percent to that accounted for by Model 1. To gain some insight into possible relationships among the variables included in Model 2, all possible multiple correlation coefficients were calculated to determine which combinations of variables accounted for the greatest proportion of variation, when from two to five variables were included. It was found that exclusion of Variable 11, similarity of professionalism, from the model does not decrease the amount of variation accounted for (Table 5.3). Thus, the similarity

Table 5.3. Squared multiple correlation coefficients for selected versions of Model 2

Version of Model 2	Variables included	Variation accounted for in the ICAP Adaptive Transaction Score ( $R^2$ )	Additional variation accounted for over comparable Model 1 version
All variables	1,2,3,4,5,6	.65	+.25
Best five variables <sup>a</sup>	1,2,3,4,6	.65	+.25
Best four variables <sup>a</sup>	1,3,4,6	.61	+.21
Best three variables <sup>a</sup>	1,4,6	.59	+.19
Best two variables <sup>a</sup>	1,4	.49	+.13 <sup>b</sup>
Best one variable <sup>a</sup>	4	.35	+.05 <sup>c</sup>

<sup>a</sup>By "best" is meant those variables of the general model that account for the greatest amount of variation in the ICAP Adaptive Transaction Score.

<sup>b</sup>Comparison is with two variable version of Model 1.

<sup>c</sup>Comparison is with best one variable version of Model 1.

of professionalism does not account for any variation unaccounted for by the other five variables. The amount of variation unaccounted for by the various versions of Model 2 does not significantly decrease until Model 2 is reduced to two variables. Elimination of the similarity of professionalism, goal diversity and past transaction variables results in a decrease of only six percent (from 65 to 59) in the total variation accounted for. But, elimination of the next variable, complementarity of focal organization needs and set organization goals, results in a decrease of 10 percent (from 59 to 49) in the total variation accounted for.

In conclusion, the structural variables of the study are able to account for almost two-thirds of the variation in the ICAP Adaptive Transaction Scores. Most of this variation can be accounted for by three variables -- size of resource base, systemic relatedness of external control structures, and complementarity of focal organization needs and set organization goals.

### Model 3

In Model 3 the variables from the previous two models are retained and the interorganizational situation variable classified as an orientation characteristic is added. This orientation variable is the perceived dependence on the set organizations. The procedure followed is to allow the basic structural variables to account for all of the variation which they can, and then to see if the added orientation variable can account for any additional variation. The rationale for this approach is as follows. Perceptions of dependence can be assumed to follow rather than precede in a temporal sequence the structural variables considered in this study. Perceptions of dependence on others probably result from considerations of certain structural attributes, either directly or indirectly. For example, with reference to the structural variables of this study it might reasonably be expected that actors in a focal agency are more likely to perceive dependence on organizations with larger resource bases and organizations for which complementarity of the focal organization needs with set organization goals exists. Furthermore, if one is to attempt to explain the intensity of adaptive transactions with perceptions of dependence the result is to answer one question with another question; i.e., the question

of why is dependence perceived to exist. Recognition that perceptions of dependence may result either directly or indirectly from structural features of organizations considered here, then, is the basis for the procedure followed in the construction and evaluation of Model 3.

Perceived dependence on the set organization by the focal organization plus the six structural variables already discussed together account for 71 percent of the variation in the ICAP Adaptive Transaction Score (Table 5.4). An equal amount of variation is accounted for when two of the structural variables -- similarity of professionalism and goal diversity -- are omitted from the model.

The additional amounts of variation accounted for by the addition of the perceived dependence variable to the six versions of Model 2 are from six to 14 percent. They represent substantial additions. It may be noted that of all the variables in Model 3 the new variable accounts for more variation (50 percent vs. 35 percent) individually than any of the other variables. But, it can be seen from the analysis that a large proportion of the variation accounted for by this variable can be accounted for by the structural variables. This suggests the need in future research to explore relationships between organization structural characteristics and perceptions of organizational dependence.

#### Model 4

The final model to be considered here builds upon previous models retaining all of the variables from them and adding variables conceptualized as aspects of power relations among organizations. The variables to be added are 1) support from an authoritative source, 2) threat of coercive

Table 5.4. Squared multiple correlation coefficients for versions of Model 3

Version of Model 3	Variables included	Variation accounted for in the ICAP Adaptive Transaction Score ( $R^2$ )	Additional variation accounted for over comparable Model 2 version
All variables	1,2,3,4,5,6,8	.71	+.06
Best five variables of Model 2 plus new variable <sup>a</sup>	1,2,3,4,6,8	.71	+.06
Best four variables of Model 2 plus new variable <sup>a</sup>	1,3,4,6,8	.71	+.10
Best three variables of Model 2 plus new variable <sup>a</sup>	1,4,6,8	.68	+.09
Best two variables of Model 2 plus new variable <sup>a</sup>	1,4,8	.63	+.14
Best one variable of Model 2 plus new variable <sup>a</sup>	4,8	.59	+.10
Best one variable of Model 3 <sup>a</sup>	8	.50	+.15

<sup>a</sup>By "best" is meant those variables of the general model that account for the greatest amount of variation in the ICAP Adaptive Transaction Score.

influence and 3) exercise of inducement influence. These independent variables were all classified as interorganizational dynamics in the present study. It is considered more appropriate to add these variables to those considered in the previous models than to consider their combined ability to account for variation in the ICAP Adaptive Transaction Scores separately.

The reasons are similar to those advanced in the development of Model 3. Temporally the exercise of power does not precede the structural characteristics. Nor does it in some cases precede the occurrence of adaptive transactions. In addition it is assumed that attempts to exert authority or influence are not made independently from organizations' attributes. Organizations may become the subject of attempts to exercise power, e.g., because they have large resource bases. To meaningfully account for variation in the dependent variable by means of the power relations one needs to also consider the place of organization structural characteristics in determining whether organizations are subjected to the exercise of power.

The addition of the three new variables to the seven variables of previous models results in 87 percent of the variation in the ICAP Adaptive Transaction Score being accounted for (Table 5.5). It may be noted that elimination of one variable, support from an authoritative source, did not result in a decrease in the proportion of variation accounted for. It may also be noted that elimination of three structural variables -- similarity of professionalism, goal diversity, and past transactions -- did not decrease the amount of variation accounted for when the three power relations variables had been added. Adding the power relations variables accounted for an additional 11 to 25 percent of the total variation. Thus their addition to the previous models appears warranted.

It may be noted that the three power relations variables can, by themselves, account for 77 percent, or all but 10 percent of the variation accounted for by the 10 variables discussed in this chapter. The ability of the structural independent variables to account for a large proportion of this variation should also be noted, however. These findings suggest

Table 5.5. Squared multiple correlation coefficients for selected versions of Model 4

Version of Model 4	Variables included	Variation accounted for in the ICAP Adaptive Transaction Score ( $R^2$ )	Additional variation accounted for over comparable Model 3 version
<u>All variables of Model 3</u>			
Plus all three new variables	1,2,3,4,5,6,8,10,11,12	.87	+ .16
Plus best two new variables <sup>a</sup>	1,2,3,4,5,6,8,11,12	.87	+ .16
Plus best one new variable <sup>a</sup>	1,2,3,4,5,6,8,12	.83	+ .12
<u>Six variable version of Model 3</u>			
Plus all three new variables	1,2,3,4,6,8,10,11,12	.87	+ .16
Plus best two new variables <sup>a</sup>	1,2,3,4,6,8,11,12	.87	+ .16
Plus best one new variable <sup>a</sup>	1,2,3,4,8,12	.83	+ .12
<u>Five variable version of Model 3</u>			
Plus all three new variables	1,3,4,6,8,10,11,12	.87	+ .16
Plus best two new variables <sup>a</sup>	1,3,4,6,8,11,12	.86	+ .16
Plus best one new variable <sup>a</sup>	1,3,4,6,8,12	.82	+ .12
<u>Four variable version of Model 3</u>			
Plus all three new variables	1,4,6,8,10,11,12	.87	+ .16

<sup>a</sup>By "best" is meant those variables of the general model that account for the greatest amount of variation in the ICAP Adaptive Transaction Score.

Table 5.5. (Continued)

Version of Model 4	Variables included	Variation accounted for in the ICAP Adaptive Transaction Score ( $R^2$ )	Additional variation accounted for over comparable Model 3 version
Plus best two new variables <sup>a</sup>	1,4,6,8,11,12	.86	+.16
Plus best one new variable <sup>a</sup>	1,4,6,8,12	.82	+.12
<u>Three variable version of Model 3</u>			
Plus all three new variables	1,4,8,10,11,12	.87	+.16
Plus best two new variables <sup>a</sup>	1,4,8,11,12	.86	+.15
Plus best one new variable <sup>a</sup>	1,4,8,12	.81	+.11
<u>Two variable version of Model 3</u>			
Plus all three new variables	4,8,10,11,12	.84	+.21
Plus best two new variables	4,8,11,12	.83	+.20
Plus best one new variable <sup>a</sup>	4,8,12	.75	+.11
<u>One variable version of Model 3</u>			
Plus all three new variables	8,10,11,12	.84	+.25
Plus best two new variables	8,11,12	.83	+.24
Plus best one new variable <sup>a</sup>	8,12	.70	+.11
<u>Model 4 new variables only</u>			
All three variables	10,11,12	.77	--
Best two variables	11,12	.73	--
Best one variable	12	.56	+.06

the need in future research to explore relationships between organizational structural characteristics and power relations variables.

#### Summary of Findings

Multiple variable analyses of this chapter had as their objective to explore the combined ability of selected independent variables to influence the occurrence of adaptive transactions between a focal organization and members of its set. Alternative models incorporating as many as ten variables were posited and evaluated using squared multiple correlation coefficients.

Model 1 consisted of all three of the preconditional variables included in this study. These variables together accounted for 40 percent of the variation in the ICAP Adaptive Transaction Scores.

Model 2 consisted of all of the organization structural variables included in the study. They were previously categorized as preconditional or interorganizational situation variables. The six variables together accounted for 65 percent of the total variation in the ICAP Adaptive Transaction Scores. However, all but six percent of this variation could be accounted for by only three of these variables -- size of resource base, systemic relatedness of external control structures and complementarity of focal organization needs with set organization goals.

Model 3 consisted of all of the structural variables from the preceding models plus an interorganization situation orientation variable, perceived dependence on the set organization. The seven variables together accounted for 71 percent of the total variation in the ICAP Adaptive Transaction Scores. The additional variation accounted for by adding the

perceived dependence variable to the six versions of Model 2 was from six to 14 percent. It was noted that this variable could by itself account for 56 percent of the variation in the ICAP Adaptive Transaction Scores.

Model 4 consisted of all the variables from the preceding models plus three power relations variables. The addition of these variables resulted in a total of ten variables accounting for 87 percent of the variation in the ICAP Adaptive Transaction Scores. The additional variation accounted for by adding these three variables to those from previous models was from 11 to 21 percent. It was also noted that the three variables could by themselves account for 77 percent of the total variation in the ICAP Adaptive Transaction Scores.

#### Additional Discussion

The fact that various combinations of variables can account for well over half of the variation in the ICAP Adaptive Transaction Scores is judged to be of much significance. This set of findings suggests that further theoretical and empirical work conducted with respect to these variables is warranted. Such work could advance along several lines.

One is to give explicit theoretical consideration to interrelationships among the independent variables. Examination of the manner in which the independent variables of this study affect one another may suggest the introduction of variables which affect the intensity of adaptive transactions indirectly through other independent variables. The extremely strong relationships of both perceived dependence variables and power relations variables to the intensity of adaptive transactions in particular, raises questions of why. A relevant question, as of yet unanswered, is do

other independent variables considered in this study affect adaptive transactions both directly and indirectly.

Methodologically the application of path analysis as developed by Boudon (1965) and Duncan (1966) seems called for in order to examine both direct and indirect relationships between variables. As a cautionary note, the application of such techniques must first be warranted by theoretical advances as discussed above.

It should be noted that none of the 42 observations were omitted from the multiple variable analysis. No attempt was made to eliminate extreme values as reported in the preceding chapter, or make appropriate data transformations. Either of these procedures might produce higher correlations between actual ICAP Adaptive Transaction Scores and those predicted by the regression equations of this chapter.

Perhaps the greatest research need is for similar studies to be conducted in other empirical arenas. Evidence from this study suggests that most of the present variables should be included in such studies. However, empirical measures from the present study could undoubtedly be improved in many cases. Ideally, attention should be given to expanding measures from nominal to at least ordinal scales. The reliance on single measures and the development of measures from single questions (e.g., measures of power relations) could definitely be improved upon.

## CHAPTER 6. SUMMARY

Sociological research in the area of interorganizational relations is justified for several related reasons. One reason is the existence of vast numbers of organizations that penetrate all areas of life. A second reason is the growing division of labor among organizations that results in ever increasing and more complex environmental dependencies for most organizations. A third, sociological reason, is the possible differences between interorganizational relations and intraorganizational relations.

Increasing recognition has been given to the need for interorganizational studies and growing numbers of them are being conducted. However, few studies adequate at both the theoretical and empirical levels have been completed. In addition, most past studies have dealt with relatively few variables in attempts to account for the occurrence of interorganizational relations. Those studies that are empirically oriented have relied mostly on qualitative examples for support of their conceptual content. Few attempts at multiple variable analysis have been made. Measures of the occurrence of interorganizational relations of various types have relied mostly on nominal measurement, with no attention given to the varying intensities of particular instances of interorganizational relations.

The present study has been conceptualized and executed in response to some of these research needs. The specific objectives may be formally stated as follows:

1. To develop a theoretical approach to the study of interorganizational relations.
2. To derive hypotheses relating the occurrence of interorganizational

relations (dependent variable) to the theoretically expected determinates (independent variables) of their occurrence.

3. To empirically test the two variable hypotheses.
4. To conduct multiple variable analyses of the combined effects of the independent variables on the occurrence of interorganizational relations.

Special emphasis was given to placing the study of interorganizational relations on a sounder theoretical basis and to the development of a measure of the intensity of interorganizational relations.

#### Theoretical Formulations

Interorganizational relations were conceptualized as interaction processes. Various concepts used to describe interactions between organizations were reviewed and found inadequate for the present study. These concepts included conflict, competition, rivalry, coordination, cooperation and collaboration. Interactions were defined in the present study from a unilateral point of view in terms of motivations for the occurrence of interactions, thus removing emphasis from description of the interaction per se. Interactions were conceptualized here as adaptive transactions of the organization of central interest, i.e., the focal organization. Adaptive transactions of the focal organization were defined as interactions between it and other organizations in which something changes hands the results of which are perceived to be instrumental to the attainment of its goals. The organizations with which the focal organization's adaptive transactions occurred were collectively described as the organization set. Inasmuch as a focal organization and set organizations may simultaneously

view one another as separate systems and parts of the same overall system, it was maintained that adaptive transactions consist of both exchanges and transfers. An adaptive transaction in which a resource is supplied to another organization is properly called a transfer adaptive transaction when nothing of equal value is expected in return. Exchange adaptive transactions do involve such a "quid pro quo."

The distinction between exchanges and transfers was the basis for relying on two theoretical perspectives in an attempt to account for the occurrence of adaptive transactions between organizations. Exchange theory and value theory are the theoretical orientations incorporated into the study. A conceptual model was presented in which three categories of explanatory variables were distinguished. One was the preconditional variable category. Variables in this category are factors expected to affect the tendency of organizations to become involved in transactions with other organizations in general. In contrast interorganizational situation variables, the second category of variables, denote relationships between potential transaction partners and were expected to account for the tendency of specific organizations to become involved in transactions with one another. The remaining variables were classified as interorganizational dynamics variables. These variables denote aspects of the interorganizational situation subject to change and manipulation. Temporally they both precede and follow from adaptive transactions.

Theoretical rationales were presented for the development of 14 general hypotheses which were operationalized and tested. The hypotheses are listed below in abbreviated form. Common to each hypothesis is the following, which should be read prior to each of the partial statements below:

The intensity of a focal organization's adaptive transactions with members of its organization set is related positively to ...

Preconditional variables

- G. H. 1: ... the set organization's size of resource base.
- G. H. 2: ... the set organization's degree of goal diversity.
- G. H. 3: ... the set organization's extent of past transactions with other organizations.

Interorganizational situation variables

- G. H. 4: ... the extent their external control structures are systematically related.
- G. H. 5: ... the extent of similarity between the professionalism of their respective staffs.
- G. H. 6: ... the degree of complementarity between the focal organization's needs and the set organization's goals.
- G. H. 7: ... the degree of complementarity between the focal organization's goals and the set organization's needs.
- G. H. 8: ... the extent of the focal organization's perceived dependence on the set organization.
- G. H. 9: ... the set organization's consensus with the domain of the focal organization.

Interorganizational dynamics variables

- G. H. 10: ... the set organization receiving support from an authoritative source.
- G. H. 11: ... the perceived threat of coercive influence on the set organization.
- G. H. 12: ... the exercise of coercive influence on the set

organization.

G. H. 13: ... the exercise of inducement influence on the set organization.

G. H. 14: ... the level of favorable evaluation of the focal organization by the set organization.

#### Methods and Procedures

The organizations which provided the empirical arena for evaluation of the hypotheses were community based health and welfare agencies. The focal agency in each study community was the local service center of the Iowa Comprehensive Alcoholism Project (referred to as ICAP, pronounced "eye-cap"). This state agency originated in mid 1966, funded as a demonstration project by federal funds. The major purpose of the project was to demonstrate and test approaches to the treatment and rehabilitation of indigent alcoholics.

The organization set of the ICAP was defined to include community "helping" agencies which provided services of potential relevance to the rehabilitation of alcoholics. The services offered by these agencies included one or more of the following: financial assistance, direct economic assistance, employment placement and/or training, legal services, family counseling, medical help and mental health services. Fourteen agencies were included in the ICAP organization set.

Four of eight communities in which ICAP service centers were established were included in the study. Some of the set agencies did not exist in every community so the number of study agencies per community was 11, 11, 8 and 14, respectively. The field study was conducted in early 1968,

almost exactly one year after the local service centers were opened. The study was preceded by nearly a year of periodic observations and meetings with state and local ICAP officials.

Representatives from the study agencies were interviewed with an interview schedule in a semi-structured situation. Careful procedures were followed to assure obtaining respondents most involved in relationships with ICAP, usually agency directors. Additional data were obtained from personnel assigned in some agencies to work with ICAP. Efforts were made to legitimate interviewee contacts with higher authorities. Each interview was conducted in the privacy of the interviewee's office and ranged in length from two to four hours. Interviews were successfully completed in all but two of the study agencies with the result that 42 study agencies from four communities were included in the final analyses.

#### Measurement and Description of the Dependent Variable

A measure of the intensity of the ICAP Service Centers' adaptive transactions with their respective set members was developed. It was called the ICAP Adaptive Transaction Score. To develop this score numerous indicators were used in an attempt to assess the occurrence of adaptive transactions with respect to all ICAP goals. Specific areas for which attempts were made to assess the occurrence of adaptive transactions included: 1) acquaintance and frequency of interaction, 2) service on the ICAP Advisory Committee, 3) referral of clients to ICAP from the set agency, 4) referral of clients from ICAP to the set agency, 5) participation in ICAP staffing sessions, and 6) training in the area of alcoholism provided to the set agency by ICAP. Other questions were used to identify possible

transactions in unspecified areas. Weights were given to each adaptive transaction area and levels of performance within each area on the basis of potential contribution to the attainment of ICAP goals. Subscores for each area were added together to form the ICAP Adaptive Transaction Score.

The maximum possible ICAP Adaptive Transaction Score for a study agency was approximately 95. The actual range was 0 to 85, with a mean of 27.1 and a median of 21.0. Observation of the distribution of the Scores in a categorized form revealed the probable existence of two "kinds" of variation (Table 6.1). Variation appeared to exist 1) among the different types of agencies and 2) across communities within agency types. This finding suggests that attributes shared by agencies of the same type (e.g., services offered) as well as unshared attributes (e.g., number of staff members) are of possible relevance to explaining variation in the Transaction Scores.

#### Hypothesis Evaluation Procedures

From one to three empirical measures were developed for each of the 14 independent variables. A total of 26 two variable empirical hypotheses were generated. Selection of the procedures for evaluation of the hypotheses was based in large part on the nature of the study sample. The study sample can be described as a non random sample of an undefined population. Therefore the use of statistical difference tests in order to generalize the findings was not considered meaningful. The procedure used to evaluate hypotheses consisted first of the calculation of product moment correlations. Mathematically the square of the r-value is equal to the ratio of the variation in the dependent variable accounted for by the independent

Table 6.1. Distribution of study agencies' ICAP Adaptive Transaction Scores

Agency	ICAP Adaptive Transaction Score Categories				(5) TOTAL AGENCIES N=42	(6) Mean ICAP Adaptive Transaction Score	(7) Range of ICAP Adaptive Transaction Scores
	(1) NONE N=9	(2) LOW N=11	(3) MEDIUM N=11	(4) HIGH N=11			
Rehabilitation Education (DRES)	-	-	-	4	4	66.5	53-74
Social Welfare	-	-	2	2	4	51.5	34-85
County Relief	-	-	-	2	2	50.0	48-52
Employment Service	-	1	1	2	4	38.2	16-59
Family Services	1	-	1	1	3	25.7	0-46
Community Action Agency	-	2	1	-	3	24.0	19-34
Mental Health Center	-	1	1	-	2	17.5	12-23
Catholic Charities	-	2	-	-	2	16.0	15-17
Legal Aid	-	1	1	-	2	16.0	11-21
County Soldiers' Relief	1	1	2	-	4	15.5	0-23
Public Health Nurses	1	1	1	-	3	14.7	0-40
Salvation Army	2	1	1	-	4	11.3	0-28
Visiting Nurses	2	1	-	-	3	5.3	0-16
Lutheran Social Service	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>0.0</u>	<u>0</u>
Total Agencies	9	11	11	11	42	27.1	0-85

variable to the total variation of the former. Accepting the assumption that social behavior is intrinsically probabilistic, support for the hypotheses was considered to be greater the larger the r-square value. The larger the r-square value then the more confident one can be that a relationship between an independent and the dependent variable within the study sample is not generated by random processes. For purposes of comparisons, r-square values were categorized according to the relative amount of support provided the hypothesis as moderate (.10 to .24), strong (.25 to .39) or very strong (.40 plus). A hypothesis was considered to not be supported if an r-square of less than .10 was obtained.

#### Findings: Two Variable Analysis

Findings from the correlational analysis, qualifications to these findings, and conclusions from any further analyses are summarized in Table 6.2. It may be noted that of the 26 empirical hypotheses 15 were supported; four were moderately supported, eight strongly supported, and three very strongly supported. Ranges of the values and frequency distributions of the cross-breaks between the independent and dependent variables were examined for each hypothesis and further analyses made if they appeared warranted. Because of the inclusion of agencies from four study communities, squared multiple correlation coefficients which included community dummy variables to account for differences in the level of response of the dependent variable to the independent variable were routinely calculated. Results from all of these further analyses are reported in Table 6.2. It was found that where extreme values existed their removal resulted in a higher level of support for one hypothesis. Two others not previously

Table 6.2. Tabular summary of findings for complete analyses of the 26 empirical hypotheses

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for (r <sup>2</sup> ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
<b>PRECONDITIONAL VARIABLES</b>				
<b>Variable 1: <u>Size of Resource base</u></b>				
E.H. 1.1: 1967 expenditures	.25	Strong	Extreme values present	Seven extreme values removed. Range reduced from \$10,000-\$7,640,000 to \$10,000 - \$760,000. r <sup>2</sup> = .46. <u>Very strong</u> support for hypotheses within this limited range.
E.H. 1.2: Number of staff	.20	Moderate	Extreme values present	Four extreme values removed. Range reduced from 1-129 to 1-37. r <sup>2</sup> = .15. <u>No change in support</u> for hypothesis. Five additional extreme values removed. Range reduced 1-22. r <sup>2</sup> = .21. <u>No change in support</u> for hypothesis.

<sup>a</sup>Empirical hypotheses are identified by the empirical measure of the independent variable only. A positive relationship with the ICAP Transaction Score was hypothesized in each case.

<sup>b</sup>Unless otherwise indicated by an asterisk the "r" value was positive as hypothesized.

Table 6.2. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for (r <sup>2</sup> ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
<u>Variable 2: Goal diversity</u>				
E.H. 2.1: Number of services <u>offered</u>	.30	Strong	None apparent	---
<u>Variable 3: Past transactions with other agencies</u>				
E.H. 3.1. Set Transaction Score	.13	Moderate	None apparent	Addition of community dummy variables increased r <sup>2</sup> to .27. Differences in level of response of dependent variable to independent variable existed among communities.
INTERORGANIZATIONAL SITUATION VARIABLES				
<u>Variable 4: Systemic relatedness of external control structures</u>				
E.H. 4.1: Direct Authority Score I	.29	Strong	None apparent	---
E.H. 4.2: Direct Authority Score II	.35	Strong	None apparent	---

Table 6.2. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for (r <sup>2</sup> ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
E.H. 4.3: Source of Funds Score I	.17	Moderate	None apparent	---
E.H. 4.4: Source of Funds Score II	.32	Strong	None apparent	---
<u>Variable 5: Similarity of Professionalism</u>				
E.H. 5.1: Staff education similarity score	.02	None	None apparent	---
E.H. 5.2: Staff salary similarity score	.14	Moderate	None apparent	---
E.H. 5.3: Director salary similarity score	.02	None	None apparent	---
<u>Variable 6: Complementarity of focal org. needs and set org. goals</u>				
E.H. 6.1: ICAP Need Score	.29	Strong	None apparent	---
<u>Variable 7: Complementarity of set org. needs and focal org. goals</u>				

Table 6.2. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for (r <sup>2</sup> ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
E.H. 7.1: Number of clients served	.00	None	Extreme values present	Six extreme values removed. Range reduced from 100-54,000 to 100-8,500. r <sup>2</sup> = .14. <u>Moderate support</u> for hypothesis within limited range.
E.H. 7.2: Percent of clients that are alcoholics	.00	None	Extreme values present. Independent variable mean substituted for eleven agencies from which no estimate received	Four extreme and eleven substituted values removed. Range reduced from 0-80 to 0-30. r <sup>2</sup> = .23. <u>Moderate support</u> for hypothesis within limited range for responding agencies.
E.H. 7.3: Service Problem Score	.01	None	Lack of variation in independent variable	Trend evident in hypothesized direction.
<u>Variable 8: Perceived dependence on set organization</u>				
E.H. 8.1: Perceived dependence Score I	.25	Strong	None apparent	---

Table 6.2. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for (r <sup>2</sup> ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
E.H. 8.2: Perceived dependence Score II	.50	Very strong	None apparent	---
<u>Variable 9: Perceived domain Consensus</u>				
E.H. 9.1: Value for Domain Consensus Score	.00	None	No variation in independent variable	---
E.H. 9.2: ICAP Domain Consensus Score I	.00	None	Virtually no variation in independent variable	---
E.H. 9.3: ICAP Domain Consensus Score II	.01	None	Lack of variation in independent variable	No trend evident in any direction.

INTERORGANIZATIONAL DYNAMICS VARIABLES

Variable 10: Support from authoritative source

Table 6.2. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for (r <sup>2</sup> ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
E.H. 10.1: Authoritative Support Score	.26	Strong	Lack of variation in independent variable. Necessary to estimate responses for agencies with no ICAP transactions	---
<u>Variable 11: Threat of coercive influence</u>				
E.H. 11.1. Threat of Coercive Influence Score	.46	Very Strong	Necessary to estimate responses for agencies with no ICAP Transactions	---
<u>Variable 12: Exercise of coercive influence</u>				
E.H. 12.1: Exercise of Coercive Influence Score	.07	None	Lack of much variation in independent variable. Necessary to estimate responses for agencies with no ICAP transactions.	---

Table 6.2. (Continued)

Variable and empirical measure <sup>a</sup>	Proportion of variation in ICAP Adaptive Transaction Score accounted for ( $r^2$ ) <sup>b</sup>	Support for general hypothesis	Qualifications to which initial findings are subject	Conclusions from any further analyses
<u>Variable 13: Exercise of inducement influence</u>				
E.H. 13.1: Exercise of Inducement Influence Score	.56	Very strong	Necessary to estimate responses for agencies with no ICAP transactions	---
<u>Variable 14: Level of favorable evaluation of focal organization</u>				
E.H. 14.1: Evaluation Score I	.06	None	Mean independent variable score substituted for agencies with no ICAP transactions	Trend in hypothesized direction. Addition of dummy community variables increased $r^2$ to .14. Differences in level of response of dependent variable to independent variable existed among communities.
E.H. 14.2: Evaluation Score II	.01	None	Lack of variation in independent variable. Mean independent variable score substituted for agencies with no ICAP transactions.	No trend apparent.

supported were supported within limited ranges after the extreme values were eliminated. In the cases of six hypotheses there was a lack of variation in the independent variable that made the tests of those hypotheses somewhat inadequate in the present study. For only two hypotheses did the addition of dummy variables result in more than an additional four percent of the variation being accounted for.

#### Multiple Variable Analyses

Limited multiple variable analyses were conducted with the objective of exploring the combined ability of selected combinations of independent variables to account for the intensity of adaptive transactions between a focal organization and members of its set. The method used for these analyses was multiple correlation. Four basic models and versions of these models were posited and evaluated by means of the R-square values obtained from the multiple correlation analyses. Variables included in these analyses were those for which at least moderate support was received for the hypotheses based on that variable. The models presented were all linear additive models (Table 6.3).

#### Findings: Multiple Variable Analyses

Versions of the first two models included only the structural variables from the study. The six structural variables accounted for 65 percent of the variation in the ICAP Adaptive Transaction Scores. It was found that three of the structural variables could be discarded with a decrease of only six percentage points in the amount of variation accounted for. The structural variables which together accounted for 49 percent of the variation were size of resource base, systemic relatedness of external

Table 6.3. Summary of selected findings from multiple variable analysis

Model and variables included identified by name and number	Variation accounted for in ICAP Adaptive Transaction Score		
	Individual variable	New variables added, combined	All variables in model, combined
<u>Model 1</u>			
1. Size of resource base	.25		
2. Goal diversity	.30	.40	.40
3. Past transactions	.13		
<u>Model 2</u>			
All variables from Model 1, plus:			
4. Systemic relatedness of external control struc- tures	.35		
5. Similarity of profession- alism	.14	.49	.65
6. Complementarity of focal org. needs and set org. goals	.30		
<u>Model 3</u>			
All variables from Model 2, plus:			
8. Perceived dependence on set organization	.50	.50	.71
<u>Model 4</u>			
All variables from Model 3, plus:			
10. Support from authorita- tive source	.26		
11. Threat of coercive in- fluence	.46	.77	.87
13. Exercise of inducement influence	.56		

control structures, and complementarity of focal organization needs with set organization goals.

Addition of other variables to the structural variables to form the remaining two models resulted in as much as 87 percent of the variation in the ICAP Adaptive Transaction Scores being accounted for. It was found that various combinations of the ten variables included in one or more of the four models and versions thereof could account for well over half of the variation.

#### Suggestions for Future Research

It was concluded that where extreme values were present consideration should be given to theoretically justifying and making appropriate transformations of the data. Superficial examination of the data suggested that in some cases curvilinear transformations might be appropriate. In the multiple variable analysis no data transformations were made and the existence of extreme values were not taken into consideration. It is possible that remedies for these limitations would produce higher multiple correlation coefficients.

It was concluded that attention should also be given to considering the interrelationships among the independent variables. Path analysis may be appropriate inasmuch as many of the independent variables are themselves related to one another, and it seems justified theoretically.

It was concluded that similar research in other empirical arenas is needed. Inasmuch as the variables included in this study accounted for such a large proportion of the variation in the dependent variable, it was suggested that future research which includes many of the present

variables is warranted. Improvements in measurement and development of multiple measures for each variable may be fruitful in future research efforts.

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