The Coordination Dimensions Scale: A Tool to Assess Interorganizational Relationships

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A TOOL TO ASSESS INTERORGANIZATIONAL RELATIONSHIPS

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ABSTRACT

   This article describes a tool--the Coordination Dimensions Scale (CDS)--for use by human service organizations in assessing the viability of a coordinated relationship. A working definition of coordination is presented, followed by a description of the components of coordination: types, structural forms, medium, and auspices. Based on this framework, the writer presents fifteen Dimensions of coordination, each of which is placed on a scale-- the total is the CDS Score--which can be used to provide structure to the decision-making process. Suggestions are made for use of the CDS in assessing an existing or proposed coordinated relationship.

   Human service organizations are increasingly faced with an environment in which resources are decreasing, as demands for services increase. It appears that this trend will continue for the intermediate-range future, and, at best, may stabilize within a decade, but will probably not return to a period of expansion in the human services, as was seen in the 1960's. This trend is coupled with a general agreement among professionals in the human service field that, in order to provide needed services to individuals and families, there is a need to coordinate the array of public and private organizations that deliver services. From the days of the Charity Organization Societies in the late 19th century, through recent efforts at "services integration" at the state level, there is recognition of the necessity for independent organizations to jointly provide the range of services that are needed by many individuals in the society, e.g., health, mental health, corrections, public welfare, employment services, etc.

   For the most part, administrators in the human services, faced with this need to establish relationships with other organizations, frequently make decisions based on little or no data. Yet, an extensive amount of research (cited throughout this article) has been conducted on interorganizational relationships. It has, however, not been organized in a framework that is useful as a tool for the administrator concerned with the operational problems in an organization. In order to make the most effective and efficient use of diminishing resources, the administrator needs a means of organizing relevant data on which

to base decisions regarding whether or not to enter into an interorganizational relationship with one or more specified organizations, and, secondly, whether or not previously established relationships can, or should be maintained.

This article proposes a tool that is a decision-making model for use by human service organizations, and is derived from the findings that have come from the work of a number of researchers. This tool--the Coordination Dimensions Scale (CDS)--is not intended as an end product, but is proposed as a way of organizing one's thinking in the decision-making process. It is intended as a means of assisting an organization to identify the key variables in a given situation, and to then make some assessment of each of these variables. The framework on which the CDS is constructed includes a Definition of Coordination, and the Components of Coordination: types, structural forms, the medium, and the auspices. Based on this, the Dimensions that comprise the CDS are identified, with recommendations for use of the CDS in the assessment of existing or proposed relationships.

The CDS has been used by a number of administrators to assess current interorganizational relationships in which their organizations are engaged. It was employed in a variety of settings, including a health facility, a mental health center, a state correctional facility, a county-wide planning agency in mental health, a United Way agency, a university, a child care agency, and a county department of public welfare, among others. There was general agreement that the CDS performed the major functions for which it was designed: (1) it provides a framework for the administrator to identify data on which to focus attention, as well as data which is not relevant to this decision, and (2) it provides a means of assessing which of the Dimensions require attention in order to facilitate the relationship.

Definition of Coordination

An administrator of a large human service organization, when asked how he assessed the level of coordination between his organization and those with which they interacted, responded, "When they're doing what I want them to do, then we're coordinated!" While this may be a somewhat simplified--not to mention cynical--notion of what coordination is, it nevertheless highlights a crucial element of the concept--coordination is often in the eye of the beholder! For the purposes of this discussion, certain assumptions about coordination are made which, taken together, form an operational definition of coordination.

1. Coordination is one form of interorganizational relations (IOR). Other forms will not be addressed, nor will this discussion address intraorganizational coordination.

2. Organizations need to obtain resources--money, personnel, support and recognition, clients,* information--and entering into an IOR is often seen as a means of obtaining resources needed to achieve the organization's goals.

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*The term "client" will be used throughout this discussion to specify the recipient, or consumer, of services.

3. Organizations need to control--to the greatest extent possible--the environment, and coordination is a means of gaining control over uncertain environmental conditions (Whetten, 1981).

4. Efforts at coordination among two or more organizations occurs when (a) the organizations perceive mutual benefits or gains from interacting (a symmetrical exchange relationship), or (b) when one party is motivated to establish a relationship and the other(s) are not. In this latter instance, the relationship forms when the motivated party is powerful enough to force the other(s) to interact (Schmidt, 1977). This is termed a power-dependency relationship, and may occur through employing the power of the motivated organization, or by gaining access to power of an organization outside the immediate linkage (generally known as using "clout").

5. Few, if any, interorganizational relationships are either purely symmetrical or power-dependent. Between two organizations, they tend to vary from issue to issue, and among a number of organizations, a range of relationships may be found.

6. Commonly held propositions in the human services field are: coordination is good; lack of coordination is bad. The more coordination the better. These propositions are not necessarily so. Coordination has a price, and should be assessed in a cost/benefit context.

7. Finally, as described by Hall, et al. (1977), "Consumers or clients of organizations are usually served, processed, changed, or harassed not by a single organization, but by a number of related organizations." This is most abundantly true in those areas of service to population groups that range across problem areas and human needs, and this is particularly so if the choice is made to attempt an integrated or "continuity of care" approach to service delivery. In these circumstances, coordination is strongly advocated, if not mandated.

The bulk of the literature on coordination as a form of IOR stems from the writing of Levine and White (1961) who formulated the concept of coordination as "organizational exhange," and focused on voluntary coordination (see also Litwak and Hilton, 1962; Hasenfeld, 1972). Another major theoretical perspective focuses on power relationships and mandated (either by law or by administrative regulation) coordination (March and Simon, 1958; Aldrich, 1976). As can be seen in the assumptions stated above, the writer utilizes portions of both major constructs in attempting to present a model for analyzing IOR. The dimensions described later reflect this approach.

Components of Coordination

The following components each describe an element that is intrinsic to the process of coordination, or that shapes the relationship, and which together form the basis for the dimensions described later in this article. The components are the Types of Coordination, the Structural Forms of Coordination, the Medium for Coordination, and the Auspices for Coordination.

Types* of Coordination

1. Dyadic Linkages
   This describes a situation where two organizations find it mutually beneficial to collaborate to achieve a common goal. This might involve, for example, two organizations jointly purchasing a vehicle and sharing overhead costs, thus decreasing the cost for each. Another example might be a mental health center providing space for a counselor from vocational rehabilitation to meet with clients who are referred to the center for mental health services. In general, this form of coordination requires a minimum commitment of organizational resources, tends to be less formal and, therefore, more difficult to maintain (Aldrich and Whetten, 1981).

2. Organization Set
   This refers to the total system of linkages established by an organization, and is composed around a focal organization. The primary issues related to the notion of an organization set are (a) what factors affect the size and composition of the set, and (b) how does the focal organization cope with the conflicting demands of the other organizations in the set. A significant portion of the decision to view a system of interorganizational relationships as an organization set comes from the perspective of the analyst, i.e., whether the analyst chooses to view the system from the perspective of a focal organization, or as a system of interacting organizations attempting to achieve a specific purpose. An illustration might be a community mental health board serving a geographic area and its IOR. If perceived from the perspective of the board, it is an organization set; if perceived as a coalition of organizations working together to provide specified services, it could be an action set, a type described next.

3. Action Set
   This form of IOR is a network with a specific purpose. The factors which determine whether an action set will be able to achieve coordinated behavior are (a) the number of organizations in the set; (b) the extent to which a single powerful organization assumes a leadership role, e.g., the largest university in a state system of higher education; (c) similarity in values (operational) and attitudes among the members; and (d) the influence of the behavior of related action sets. An illustration of an effective action set is the efforts of the drug industry in state and national lobbying efforts.

4. Networks
   A network is all the interactions among organizations in a population, regardless of how the population is divided into dyads, organization sets, and action sets. Networks are seen as "loosely coupled" (Whetten, 1981) subsystems; the subsystems themselves, however, are densely coupled. An illustration of a network would be all the organizations that are related to the elderly in a state; one subsystem is composed of state agencies.

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*This typology is taken from Whetten (1981).

A central element in the concept of networks is the role of "linking pin" organizations. These organizations have ties to more than one action set and, by virtue of this fact, play a key role in integrating the network. The linking pin organization serves as a channel of communication between organizations, and provides services that link third parties to one another through the transfer of resources.

Structural Forms of Coordination

This section will look at the component of coordination that describes the structures in which the process of coordination occurs. The typology used is that developed by a number of authors (see, among others, Warren, 1967; Lindblom, 1965; Clark, 1965), and describes three forms of coordinating structures: Mutual Adjustment, Alliance, and Corporate. These three forms vary in terms of intensity, nature of power utilized, formalization, and the scope of activities involved. They range from mutual adjustment, as the weakest, to corporate, as the strongest. Weakness and strength, in this case, referring to degree of control, resources committed, and breadth and formalization of activity.

1. Mutual Adjustment
   This form develops between organizations that have few shared goals, and coordination tends to focus on specific cases. Staff involved are usually at the supervisory level, rather than at the highest levels, and rules tend to be developed ad hoc in the process of interaction. This form often involves individuals whose concern is the day-to-day activity of the organization, who interact with counterparts in other organizations as the need arises. Mutual adjustment achieves the narrowest range of benefits and requires the fewest costs.

2. Alliance
   This form of coordination is at an intermediate level between mutual adjustment and corporate. The attempt is to coordinate autonomous organizations through the use of negotiation, and without the authority of any formal hierarchy. It includes a number of arrangements, including federations, councils, and coalitions. One of the primary considerations in this form is whether or not a central administrative unit with staff is formed for the purpose of developing programs and administering day-to-day operations, as delegated by the member organizations. These staff can act as third party mediators and, in their absence, coordination is much more difficult to achieve.

3. Corporate
   The most distinctive characteristic of this form is that coordination occurs under the umbrella of a formal authority structure. Activities are divided among organizations on the basis of specialized work, but all organizations work toward the goals of the interorganizational system. An example of this type of structure is the departments within a state government. The objective of this structure is to closely approximate a single multi-unit organization. Needless to say, this approach is generally resisted by participating organizations, and results in an ongoing tension between, on the one hand, loyalty to the overall interorganizational system, and, on the other, commitment to the autonomy of the individual organization.

The Medium for Coordination

In bacteriology, the term "medium" refers to the nutrient that serves to cultivate micro-organisms; in art, the term applies to the material in which pigments are mixed to produce the working tool for the artist. In considering coordination, this notion of "medium" has relevance, as well. It refers to the factors that play a part in the decision by an organization as to whether or not it will enter into a coordinated relationship with other organizations.

In every interorganizational agreement there are costs and benefits (and these may be perceived differently by different individuals or groups). In general, the benefit is the increased access to some resource controlled by other organizations. The cost is resources committed, including the cost in terms of decreased autonomy, since each agreement with another organization limits the choices that can be made by an administrator in any given situation. Thus, an administrator must perceive that, in any situation involving an agreement for coordination, the benefits exceed the costs, or the administrator must perceive that, in the totality of the organization's agreements, the total benefits exceed the total costs.

Auspices for Coordination

A number of researchers have addressed the issue of the auspices for coordination (for example, see Schmidt and Kochan, 1977; Schermerhorn, 1975; Akinbode and Clark, 1976; Rogers and Glick, 1973; Whetten and Aldrich, 1979) and a general finding is that there exists certain critical preconditions for coordination to develop and thrive. A basic precondition that requires further elaboration is whether the coordination is voluntary or mandated.

The conditions for voluntary coordination (Whetten, 1981) are as follows:

1. There is a strong, positive attitude toward coordination, supported by professional staff and organizational reinforcement for engaging in coordinating activities;

2. There is a clearly recognized need for coordination, with the organization having broad goals, and a wide range of services and clients;

3. There is an awareness of potential organizations with which to establish IOR. This often occurs through informal contacts, as well as formal communications;

4. Potential associations are seen as being with compatible and desirable organizations and, in general, the organizations are seen as complementary;

5. Finally, the organizations possess the resources and internal structure necessary to maintain the coordination process.

We will now turn to a discussion of the conditions for mandated coordination, noting that while some of the conditions discussed above continue to operate, the relative strengths are different, and there is a shift in the nature of the conditions.

1. There must be an awareness of the mandate by staff, with a full understanding of the need for the relationship. While a positive attitude is no longer as crucial (at least, this is what is demonstrated by the research to date), it would appear, from the past experience of the writer when practicing as an administrator, to be in the best interests of the organization to at least have staff in a neutral, if not a positive position as regards the IOR.

2. Assessment of organizations as being compatible and desirable continue to operate as a strong factor; it is important that organizations in an IOR have roughly equal status.

3. The organization should have a common perception of the problem to be solved and have a professional ideology.

4. The organization should not pose threats to others involved in the IOR with respect to domain claims, and should have organizational structures and procedures which are compatible.

    Perhaps an illustration will serve to place these last two conditions more sharply in focus. As is often the case, there exist a number of examples that demonstrate coordination not working, and one of these is the effort, in some locations, to coordinate activities of mental health programs with those of law enforcement programs. Using some of the points discussed above, the discrepancies become evident, e.g., both the mental health center and the police want to reduce drug abuse (compatible stated goals), but the primary technology employed by the police is incarceration, while the mental health center primarily employs "treatment" (non-compatible technologies), thus, each demonstrates a different perception of the problem to be solved.

5. The final condition for mandated coordination is the existence of a capacity by the organizations to maintain the linkage. Breakdowns in the IOR can occur because, for example, one or more of the organizations suffer a cutback in resources; staff are overloaded with internal administrative responsibilities (the IOR may, in fact, not be as valued as certain internal activities); staff are not technically capable of maintaining the IOR; or there are inadequate internal or interorganizational communication channels.

If these conditions are not adequately met, and an organization is mandated to establish large numbers of interorganizational linkages (as are most human service agencies), staff tend to subvert the coordination process, and research shows (Whetten, 1977) that mandated coordination under these circumstances creates a negative attitude among staff that impedes the overall effectiveness of the organization, as well as sabotaging the effort at coordination.

The Coordination Dimensions Scale (CDS)

The following dimensions of coordination (see Figure 1) are based on the preceding discussion, and reflect the key variables that the writer suggests are determinants of (1) the likelihood that coordination can develop, and be maintained, and (2) the quality or effectiveness of that coordination. Further, the dimensions can assist in determining the form of coordination that appears the most feasible under the circumstances. The CDS should be used to suggest directions and possible alternatives, by eliminating other less desirable alternatives. It will not replace sound administrative problem-solving and decision-making activities,* but will provide an organizing framework for those activities.

It is imperative that completion of the CDS be by individuals thoroughly knowledgeable of the formal and informal policies, procedures, and politics of the organizations under review, or by someone who will be given access to this knowledge. If a questionnaire is utilized, it should be completed by individuals able and willing to provide the required information. The information is then used to complete the CDS (an example of a questionnaire is available from the writer).

The dimensions each are presented on a continuum of one (low) to seven (high), with the low end of the continuum (one) suggesting that coordination is unlikely, and the high end (seven) suggesting coordination is likely. When the CDS is used to assess an existing IOR, the low end (one) suggests a low level of effectiveness, and the high end (seven) suggests a high level of effectiveness. Low assessments on specific dimensions can be used to pinpoint problem areas. The numbers assigned to each end of a continuum are to informally provide a framework to each Dimension, and should be considered as such rather than as a true scale with discrete points. It is intended as a means of introducing some degree of structure to what is, for the most part, an unstructured process.

Procedurally, the steps are:

1. Assess the exising or proposed IOR on each of the 14 Dimensions. This provides an overall assessment, in terms of the "score," as well as an identification of particularly weak or strong individual Dimensions;

2. Clarify whether the Auspices, i.e., the initiative for the IOR, is Voluntary or Mandated;

3. Based on the preceding determinations, identify the preferred Structural Form.

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*The writer is reminded of the sage advice of a friend and former colleague, who was an experienced and successful handicapper of thoroughbred racehorses: "While you may not be able to pick the winner of a race, good handicapping can eliminate a lot of the losers!" This would appear a sound approach for any decision-making process.

Figure 1
Coordination Dimensions Scale

Dimension	Title	Continuum
1	Operational Goals	Incongruent Congruent 1 2 3 4 5 6 7
2	Technology/Values of Decision-Makers	Incongruent Congruent 1 2 3 4 5 6 7
3	Domain (Clients)	Low High Agreement Agreement 1 2 3 4 5 6 7
4	Relationship	Competitive Symbiotic 1 2 3 4 5 6 7
5	Availability of Resources in Environment	Inadequate Exceed Goals 1 2 3 4 5 6 7
6	Awareness of and Linkage to Alternate Sources of Resources	Many No Alternate Alternate Resources Resources 1 2 3 4 5 6 7
7	Amount of Resources Invested	Large Small Amount Amount 1 2 3 4 5 6 7

8	Benefits Accrued	Small Amount							Large Amount

Small Amount   1   2   3   4   5   6   7   Large Amount

8   Benefits Accrued

Small Amount   Large Amount

1   2   3   4   5   6   7

9   Frequency of Interaction Required

Large Number   Small Number

1   2   3   4   5   6   7

10   Formal Structure

Relationship Informal and No Specified Procedures   Relationship Formal & Procedures Specified

1   2   3   4   5   6   7

11   Resource Needs

Conflictual   Complementary

1   2   3   4   5   6   7

12   Awareness & Understanding of Agreements by Staff

Complete Rejection   Complete Acceptance

1   2   3   4   5   6   7

13   Perceived Status

Unequal   Equal

1   2   3   4   5   6   7

14   Ability to Maintain Coordination

Inadequate Resources   Adequate Resources

1   2   3   4   5   6   7

15   Initiative (auspices) for Coordination:* (see use in Figure 2)

      V-   Voluntary, initiated by Participating Organizations

      M-   Mandated by Higher Level in Vertical System

     ML- Mandated by Law/Regulation, and Perceived as Affecting
           Both (All) Participating Organizations by the Organizations
           Themselves.

*This item is not placed on a continuum, as are the preceding dimensions, since the initiative, or auspices, for coordination influences the structure and the medium, but is not an indicator, in itself, of the likelihood of coordination existing or not.

Figure 2 is used to illustrate how the analysis of an existing IOR, or a proposed IOR, obtained from the use of the CDS, and depicted as a CDS Score,* can be used in conjunction with the initiative for the relationship, to identify a preferred structural form. For example, two organizations, with assessments at the high end on the 14 dimensions, suggests a high probability of developing and maintaining an IOR. If the initiative is voluntary, the most appropriate structural form would be an alliance, probably a coalition. In the event of a larger number or organizations, the structural form would likely be a federation with staff. At the lower end of the dimensions are organizations that score less than 42 (1-3) and which are highly unlikely to attempt a voluntary IOR. If mandated, it is likely not to succeed for a variety of reasons reflected in the Dimensions Score. This relationship, between the position on the continua of each Dimension, presented as a total in the CDS, and the Auspices and, ultimately, a Preferred Structural form, is depicted in Figure 3.

A final point that should be noted is that the corporate structural form is preferred in all instances where the initiative for coordination is mandated by a higher level in the vertical system. This is true as well when coordination is both mandated by law and perceived as having an equal impact on the participating organizations. The exception to this latter point is when the Dimensions Score is low, indicating some serious question about the ability to maintain an IOR. In this instance, mutual adjustment is suggested as the structural form, since it is the least intense form of coordination and the least demanding.

Discussion

This article describes a decision-making model to begin to provide some structure to what has been essentially an unstructured process. It encourages coordination under specified conditions; but, some additional observations are required. If one perceives coordination as involving costs as well as benefits, rather than viewing it as a fundamental good toward which to strive, then it is incumbent to be aware of some of those costs.

1. Coordination, as does any IOR, has a cost in terms of decreased organizational autonomy as well as those costs in committed resources. As the total costs increase, organizations are more hesitant to enter into IOR's. It should be recognized that this reduction in organizational autonomy has an impact on the structure of the organization (Paulson, 1977). This in turn impacts the functioning of the organization, and its ability to deal with problems. Organizations will not enter into agreements unless it is felt the benefits will outweigh the total costs.

2. It is not as useful as it might be to view IOR's only in a one-dimensional context, e.g., horizontally, but not vertically. Horizontal coordination relationships affect vertical intraorganizational relationships (Mathiesen, 1971) as well as vertical IOR's. The addition of these further dimensions is a needed next step.

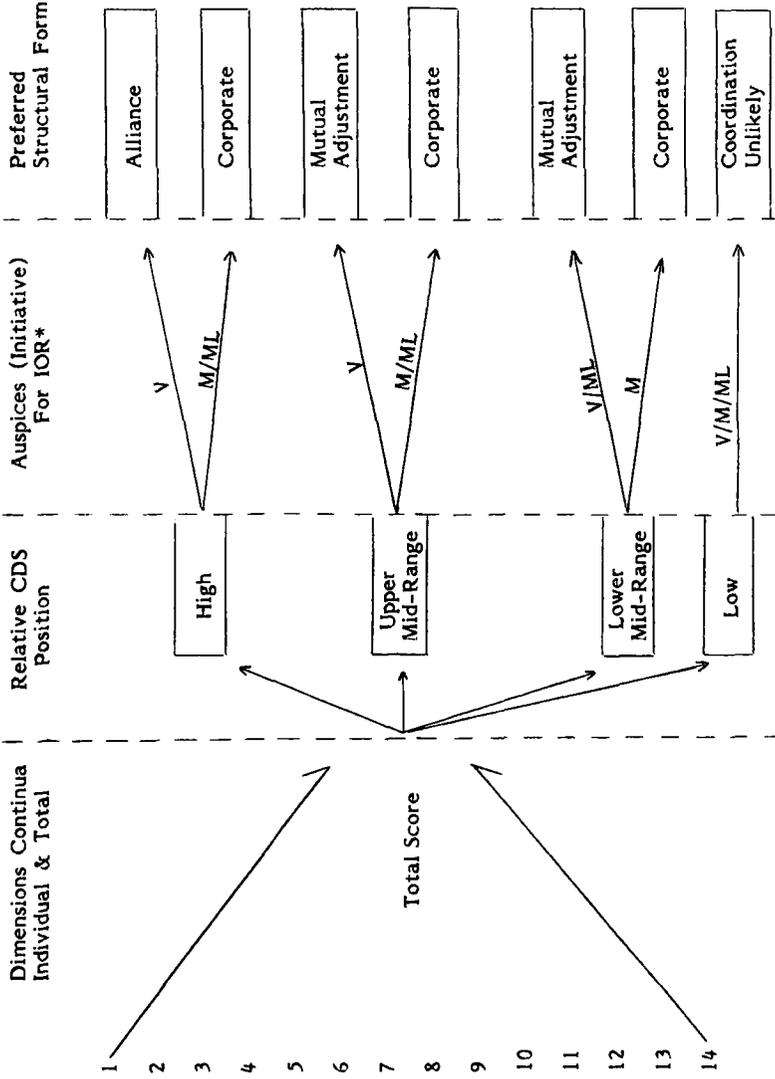*These scores, at this point, are suggestive, and are open to modifications, particularly in the mid-ranges (42-83). The end-points, however, are reasonably firm as they are derived from the extensive research cited throughout this article. In general, the CDS should be seen as more a topographic map depicting broad characteristics of the terrain, rather than a road map showing details of the route to follow.

Figure 2

Preferred Structural Form Based on CDS Score
And Initiative for Coordination

CDS Score	Initiative (Auspices)	Preferred Structural Form
84+	V	Alliance
	M-ML	Corporate
76-83	V	Mutual Adjustment
	M-ML	Corporate
42-75	V-ML	Mutual Adjustment
	M	Corporate
< 42		Coordination unlikely to develop voluntarily or be maintained if mandated

Dimensions Continua Individual & Total	Relative CDS Position	Auspices (Initiative) For IOR*	Preferred Structural Form
1			Alliance
2		v	Corporate
3	High	M/ML	
4			Mutual Adjustment
5		v	Corporate
6	Upper Mid-Range	M/ML	
7			Mutual Adjustment
8	Total Score		Corporate
9	Lower Mid-Range	V/ML	
10		M	Coordination Unlikely
11	Low		
12		V/M/ML	
13			
14			

*V-Voluntary
M-Mandated
ML-Mandated by law

3. The more closely integrated a system of organizations, the less able it is to adapt, since a change experienced by one organization is felt by all organizations, and requires a complex response.

4. Extensive coordination may reduce the quality of services provided by the network as a whole (Warren et al., 1974). Coordination tends to reinforce the status quo and reduces useful duplication among services. (With the current situation of diminishing resources, the issue of duplication as a useful device to encourage innovation becomes less likely, but is still a valid consideration.)

5. Any severe lack of domain consensus, i.e., those dimensions addressed by 2 and 3 on the CDS (clients served, types of services, manner of providing services), is particularly likely to make coordination difficult, if not impossible. This suggests the need to begin to determine relative weights of the dimensions.

6. In the current environment of scarcity in the human services, it is highly unlikely that organizations will be willing to risk their scarce resources; the environment is seen in zero-sum terms. When they are willing, they will probably require a larger pay-off in relation to risk. In addition, these harsh circumstances cause organizations to be much more protective of their domain.

While it is clear that the tool suggested, the Coordination Dimensions Scale, is in a preliminary stage, it is derived, nevertheless, from a firm foundation of research. The degree of its utility can only be determined by using it to assist in the decision-making process associated with considering and entering into coordinated relationships, or assessing existing relationships. This use also will serve to refine the Scale, particularly in those Dimensions that now can only be assessed in the broadest of terms. As a tool, it can never replace that factor that determines how and when to use it--the judgment of involved and knowledgable individuals. At best it can serve, however, as a guide for that judgment.

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