Organizational Implications of Interagency Interaction

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ABSTRACT

Comprehensive approach is often thought of in terms of "coherence and coordination," which represent desirable qualities for any interorganizational interactions occurring in interventions. Much literature emphasises the antecedents to effective coherence and coordination, the postulated positive outcomes in their presence and observed negative outcomes in their absence, and the various individual, organizational, cultural and political challenges in implementation. A small but growing body of literature, mainly confined to defence research agencies, considers the detailed process of implementing comprehensive approach, yet there is little research considering interaction processes at an organizational level of analysis. By drawing on extensive research from the fields of organizational science, public administration and management, this paper argues for two points.

First, greater conceptual clarity is needed in the use of basic terminology, but also understanding of the real implications of various levels of interagency interaction. Attempts to systematize definitions in typologies are presented, and a suggestion about how to use the typologies in the context of comprehensive approach research is made. Understanding interagency interaction from an organizational perspective is important to guide policy makers and leadership about the organizational implications of interagency interaction, and to manage expectations about the limitations of high coherence and coordination.

Second, greater cross-disciplinary thinking is needed from the disciplines of organizational science, public administration and management. There are vast literatures on interorganizational relationships in organizational science, collaborative governance and multiorganizational policy implementation in public administration, and network dynamics in management. Comprehensive approach research would benefit from applying the multitude of theories and frameworks available, and applying organizational levels of analysis.

INTRODUCTION

Recent experiences of international interventions in conflict have demonstrated that these complex challenges cannot be resolved exclusively by military intervention and are often of such scale that no single agency, government or international organization can manage them alone (Friis & Jarmyr, 2008). A broad consensus has emerged that recognises the importance of coherent and simultaneous application of political, civil, economic and military instruments of power to resolve crisis situations. Often called a "whole of government approach," such efforts aim at increasing coordination, minimising duplication, and ensuring policy coherence between governmental departments and agencies at a national level, and various international and local actors (A. P. Williams, 2010). Many studies have attempted to define the term comprehensive approach, and some nations have official definitions (NATO, 2011). While definitions vary, three consistent themes emerge in the conceptualisation of comprehensive approach, which are emphasized to varying extents in each definition.

The first theme grounds comprehensive approach in the coherent application of national instruments of power. This recognizes the inherent limitation of dominance by any one instrument of power (i.e. military) and the various "tools" that constitute such power, such as military organizations and defence bureaucracies (Hull Wiklund, 2011). This theme also reflects a fundamental problem of division of labour between government departments. Organizational science research shows that complex crises and turbulent environments generate greater interdependence between organizations (Emery & Trist, 1965; Koppenjan & Klijn, 2004; Trist, 1977) due to the challenge in identifying stable boundaries of responsibility for organizational functions (Caruson & MacManus, 2006; Kettl, 2006).

The second theme considers comprehensive interaction with non-state actors, namely the full spectrum of international and nongovernmental organizations that may be present in conflict environments. This also encompasses the more granular perspective of interactions at the local level (NATO, 2012). The underlying assumption is that as top-down control of all actors is neither possible nor desirable, a different type of coordinated action is required. Increasing the network of contacts between organizations and actors aims to encourage emergent coordination, which provides opportunity for realising the same ends as top-down hierarchical control, but also opens up opportunities for constructive dialogue, problem formulation and action learning (Gray, 1989).

The third theme emphasises comprehensive action in all domains and elements of crises. This notion is underpinned by systems science and the parallels between conflict resolution and systems thinking (Li, Zhu, & Gerard, 2012). Systems thinking recognizes that a crisis situation is a "system of systems," a complex constellation of interdependent and ever changing parts (de Coning, 2008a). Thus any attempt to affect the course of the system should not only address one part of it, such as degrading an adversaries' military forces, but should simultaneously affect multiple parts of the system to maximise the effect (E. Smith, 2006). On the military side, comprehensive approach was paralleled by the development of "effects-based operations," which had similar underlying systems-based assumptions (E. Smith, 2003; A. P. Williams & Morris, 2009).

While these three themes have differing underlying assumptions, some common requirements emerge when the question of implementation in practice is raised. The literature on comprehensive approach repeatedly identifies coherence and coordination as distinct requirements for implementing interventions (de Coning, 2008a, 2008b, 2009, 2010; Friis & Jarmyr, 2008; OECD, 2003; Paris & Sisk, 2009; Picciotto, 2005). The real-world implication of comprehensive approach is that organizations and people have to interact across organizational boundaries and divisions of responsibility, in a way that—at a minimum—does not hinder individual organizations' goals.

While the coherence and coordination requirement is identified in comprehensive approach literature, there is a tendency to focus on the organizational and contextual antecedents necessary for coherence and coordination, and outcomes that they yield. Research on antecedents identifies the various requirements to establish coordination and to improve effectiveness, including: a history of prior interaction, legitimacy of leadership, interorganizational trust and respect, political climate, organizational culture, development of clear roles and responsibilities, agreed mechanism for conflict resolution, open and frequent communication, and leadership (Huxham & Vangen, 2005; Mattessich, Murray-Close, & Monsay, 2001). Likewise, the body of work on outcomes postulates the benefits of coherence and coordination, although empirical evidence is hard to attain (Herranz, 2010b; Paris & Sisk, 2009; Provan & Kenis, 2008). There are, however, some key gaps in understanding, which this present paper aims to highlight and suggest a future research agenda.

The first key gap concerns our understanding of *process*. With all the focus on antecedents, outcomes and the large body of political science and peacebuilding literature that examines the broader implications of

comprehensive approach (Friis, 2012; Gheciu & Paris, 2011; M. J. Williams, 2011), there is limited systematic research at an organizational level of analysis on the detail—the messy and complex process of actually implementing comprehensive approach[1]. This issue is critical given that the primary manner in which military or other interventions are implemented is via bureaucratic organizations and systems, a fact which is unlikely to change in the near future (A. P. Williams & Mengistu, 2014, Forthcoming). While many international organizations, development agencies and NGOs continually adapt their approaches in response to both academic work and policy-led practitioner involvement, policymakers may be unaware of the unintentional pathologies that arise from the intrinsic nature of bureaucratic structure (Barnett & Finnemore, 1999) or the general organizational challenges of increasing interagency interaction (Huxham & Vangen, 2005). Many case studies have analyzed interventions and made organizational recommendations (see for example Bensahel, Oliker, & Peterson, 2009; Crocker, Hampson, & Aall, 2005; Dijkstra, 2011; Hull Wiklund, 2010; Junk, 2012; Piiparinen, 2007; Rathmell, 2009; Simon, 2010; Weiss, 2005) but few have incorporated an organizational framework of analysis (some exceptions are Herrhausen, 2007; Lipson, 2007, 2012). This paper points toward some of the broader body of work in public administration, organizational science and management that could inform the conceptual and empirical study of comprehensive approach.

The second key gap concerns the conceptual clarity of comprehensive approach and notions such as coherence and coordination. The literature suffers from a menagerie of interchangeable and ill-defined terminology and conceptual operationalizations that describe organizations interacting: cooperation, collaboration, coordination, interorganizational relationships, networks, joint ventures, partnerships, alliances, consortia, integration etc.[2] (Cropper, Ebers, Huxham, & Smith Ring, 2008). Establishing basic definitions is useful to determine what is and what is not included as part of the definiendum (the "thing" being defined). Yet for complex, multidimensional phenomena such as interagency interaction in comprehensive approach, definitions often hide more than they convey. As interorganizational interaction involves a complex mix of variables interacting at different levels of analysis, single paragraph definitions cannot fully capture the true meaning nor allow sufficient distinction between other similar cases (Bailey, 1994). An analytical approach to understanding the phenomena is required. This paper presents a framework for understanding the distinctions between different forms of interorganizational interaction.

This analysis is important for three reasons. First, reducing the gap in conceptual clarity is a prerequisite for resolving the gap in understanding the process of interorganizational interaction. While it is generally recognized that there are different interorganizational forms of interaction (Friis & Jarmyr, 2008), there is little attempt in the comprehensive approach literature to conceptualize interorganizational interaction for the purpose of systematic and cumulative empirical research. This has encouraged, if not directly caused, the multitude of conceptual frameworks, typologies, definitions and interchangeable terminology. In order to understand the detailed nature of interorganizational interaction and its application in various situations, to provide conceptual clarity, and to facilitate a deeper understanding of the literature, a consistent set of definitions is needed (Imperial, 2005). Second, previous attempts at conceptualization viewed interorganizational interaction as a simple linear scale (e.g. increasing from coexistence to integration), yet many case study and theory work suggests that it needs to be recast as a complex interrelated spectrum (McNamara, 2012; Thomson & Perry,

[1] There are some notable exceptions in the defense literature. For example, a large-scale "live" experiment testing comprehensive approach analysis and planning processes was conducted in the *Multinational Experiment 5* (MNE 5) campaign, in 2008, Enkoping, Sweden (Hull Wiklund, 2010; NATO, 2008). While there is large body of literature from NATO STO studies and panels, the International Command and Control Research Symposium, and various national defence analysis agencies (e.g. Sweden's FOI), this work tends to either take a "case" approach across levels, or in empirical, statistical and modeling examples, focuses on the individual, micro or meso levels of analysis (Lyon, DeChurch, & Thompson, 2010).

[2] For the remained of this article, I use the terms "interorganizational interaction" or "interagency interaction" as a general descriptor for the wide variety of interorganizational forms such as collaboration, cooperation, coordination, networking etc.

2006; Thomson, Perry, & Miller, 2009; A. P. Williams, 2010). Finally, it is critical for organizational leadership to understand the real world implications. A comprehensive approach does not require that all actors are equally engaged at the same level of interaction (Friis & Jarmyr, 2008). What is important, however, is that participants understand the implications on their own organisational structure, resources and independence from operating at different levels of cooperation. Depending on the context of the interdependence between organizations, some organisations may choose to integrate their systems and processes in collaboration, while others may seek only to de-conflict at limited levels (Kamphius & Essens, 2011; A. P. Williams, 2010).

PROCESS OF ORGANIZATIONAL INTERACTION

A large body of research in organizational and administrative science, public policy and administration, and management, has considered the general subject of interorganizational interaction from a wide variety of theoretical perspectives. As alluded to so far, research on this subject is commonly organized in terms of three main groupings: antecedents to interorganizational interaction, interactive processes, and outcomes. This mirrors to some extent the input—process—output grouping described in theories of interdependency (Alter & Hage, 1993; Kamphius & Essens, 2011). In commonality with the comprehensive approach literature, while the antecedents and outcomes have received much attention, the process aspects is lesser understood (Thomson et al., 2009; Wood & Gray, 1991). Thus when considering interaction between organizational structures in the implementation process of comprehensive approach, important questions remain: how should interagency interactions be governed? What administrative structures and mechanisms are needed? How do governance and administrative structures vary with mission context? What are the implications for organizational independence? What are the implications for hierarchical authority in any one organization? While many case studies have answered these questions to varying extents, there is little generalized knowledge about such aspects. The purpose of this discussion is to illustrate some theoretical headway made in the administrative and organizational sciences on interorganizational interaction processes, and discuss how this could be adapted for comprehensive approach research.

The process of interorganizational interaction is highly complex and dynamic. It varies considerably depending on the situational context, and different factors are more or less important depending on the level of analysis adopted by a researcher. A number of scholars have attempted to construct multilevel theoretical frameworks to describe and explain the process (Ansel & Gash, 2007; Bryson, Crosby, & Stone, 2006; Emerson, Nabatchi, & Balogh, 2012; Simo & Bies, 2007; Thomson et al., 2009). These frameworks emphasise the interorganizational forms that are created between interacting organizations. In some cases, these new forms may be very informal and temporary; in other cases, they may resemble quasi-hierarchies (Thacher, 2004). One expert on interagency interaction went as far to say that it is “analytically convenient to speak of interagency collaborative capacity as though it were an agency itself, with conventional agency systems inside it—an operating system, an overhead and control system, a decision making system (Bardach, 1998, p. 21)

A useful example is a framework created by Ansel and Gash (2007), derived from a wide ranging review of contemporary collaboration literature. At the individual/team level of analysis, they describe a cyclical process. Face to face dialogue leads to trust building, which in turn enhances participants’ commitment to the process. Commitment is characterised by mutual recognition of interdependence, shared ownership of processes, and understanding of mutual gains. Trust and commitment allows shared understanding to develop. Depending on the context and the activity undertaken by the interorganizational form, partners may work on problem definition, mission planning, and identification of mindsets and values. These intermediate outcomes reinforce further face-to-face dialogue and further trust building, and a positive feedback loop is created.

Ansel and Gash recognised that the interorganizational process was highly dynamic and cyclical, but was affected by broader institutional factors such as the formal or informal governance and administrative structures created by interacting organizations. Part of the interactive process involves creating such organizational level structures, which then in turn interact with the individual level variables.

In another similar framework, Simo and Bies (2007) adapting from Bryson et al. (2006) linked antecedents—which they called “starting conditions”—to outcomes, via three related dimensions: process, informal sector involvement, and structure and governance. Their process dimension identified both formal and informal mechanisms for developing interorganizational agreements, leadership, legitimacy, and trust. They identified that managing interorganizational conflict (e.g. disagreement over goals, strategy, or use of resources) and planning are key elements of any interorganizational interaction. Their structure/governance dimension considered how partnering organizations were structurally arranged in their collective work, such as the linkages between levels of organization, or whether their interdependence was sequential or pooled (O'Toole, 1986).

Thomson developed a five-dimensional conceptualisation of interorganizational interaction that was tested in rigorous empirical survey research (Chen, 2006, 2008, 2010; Thomson, 2001; Thomson & Perry, 2006; Thomson, Perry, & Miller, 2008; Thomson et al., 2009). She identified two structural dimensions at the organizational level of analysis (governance, administration), two social capital dimensions at an individual level (mutuality, norms of trust and reciprocity) and one agency dimension at the organizational level (organizational autonomy). While many of the previous frameworks mentioned make important headway in grouping together important variables and specifying theoretical causal pathways, they are fairly crude as they do not give details about the inter-variable relationships. Thomson considered that these dimensions would vary, depending on the interorganizational form, and thus created an operationalized survey instrument of “collaboration,” which captured the various “levels” of the dimensions (e.g. governance, administration etc.).

Conclusion – Knowledge of Process

There is actually good knowledge about what drives interorganizational interaction processes in the public administration and organizational science literature. Further work is needed to adapt it to military, international development and peacebuilding organizations, which are most relevant to comprehensive approach.

There are several ways in which this framework could support research on comprehensive approach. First, a basic antecedents—process—outcomes framework could be applied across multiple case studies to determine the link between antecedent and outcomes, without necessary getting into the detail of process. Examples of this in the public administration literature include Chen (2010), Thomson et al. (2008) and Herranz (2010a). Furthermore there is a large body of work on policy implementation, the development of which paralleled interorganizational studies, which would be of value to comprehensive approach research.

Second, the various frameworks perform a simple but critical task of organizing key variables. A main finding of multiorganizational policy implementation studies, which sought to examine implementation of government programs by numerous organizations, recognised that a major challenge is the abundance of important variables (Goggin, Bowman, Lester, & O'Toole, 1990). The process frameworks prioritize those factors most important to interorganizational interaction.

CONCEPTUAL CLARITY

The understanding of process, however, doesn’t resolve the definitional problem: what do we really mean by “collaboration,” “coordination,” “cooperation,” or any of the multitude of terms commonly encountered? Part of the problem is that, as these process frameworks illustrate, these terms are characterised by a highly complex,

iterative and dynamic systems involving multiple organizational dimensions and variables. It is important to understand that any reference to "coordination" for example, is really referring to a unique interorganizational interaction process framework in action. Another issue is that while the process literature emphasises the characteristics of the new interorganizational forms, effects on the original organizations are underspecified. This section shows how some scholars have overcome this aspect by developing scale typologies that present "snapshots" of the process frameworks and give meaning to the various collaboration, cooperation and coordination terms.

A Review of Typologies in Organizational Theory

Organizations are intricate systems composed of multiple social structures, participants, goals, and technologies, interacting with the external environment and exhibiting complex individual and group behaviors. From this initial description, scholars have identified many distinct "dimensions" of organizations that merit study and often form the basis of entire disciplines. Rainey (2003), for example, identifies key dimensions as: goals, values, leadership, strategy, culture, organization type, hierarchical structure, processes, tasks, technologies, performance, incentives, individuals, and groups. Each of these dimensions can be further broken down; the dimension "structure" is composed of: specialization, division of responsibility, departmentalization, centralization, hierarchy, and formalization.

While this list of dimensions describes a single organization, scholars recognized that when organizations interact and form interorganizational relationships and structures, these dimensions are generally involved and affected by the interaction. A key effort of the interorganizational literature has been to examine how these variables are affected by various interorganizational interactions (Whetten, 1981). Efforts to define collaboration and related terms can be considered part of this broader body of interorganizational literature, which attempts to create *typologies of interorganizational forms* using the organizational dimensions—with some additions particular to interorganizational structures—as discriminating characteristics.

From the literature reviewed, typologies for interorganizational interactions generally have two axis. The first axis defines names for a particular interorganizational interaction, form or relationship, for example: collaboration, cooperation, or partnership. The second axis contains the discriminating characteristics or "dimension," for example: information, structure, resource, or decision-making. Each cell of the typology then describes what that particular dimension looks like for each interorganizational form (Table 1-1).

Table 1-1: Generic Construct for Typologies of Interorganizational Forms.

Dimensions (distinguishing characteristics)	Interorganizational Form		
	Form Type A	Form Type B	Form Type C…
Dimension 1	Indicator of Dimension 1 for Form Type A	Indicator of Dimension 1 for Form Type B.	Etc.
Dimension 2	Indicator of Dimension 2 for Form Type A	Etc.	
Dimension 3			

Early scholars realized that different interorganizational forms would have different mechanisms and processes, depending on their purpose and how they operated. Astley and Fombrun (1983) created a typology of interorganizational forms based on four dimensions: forms of internal interdependence; resource flow through the network; form of control; and emergent structures of coordination. They defined four general types of interorganizational forms or "collectives:" agglomerate, confederate, conjugate, and organic. The "organic" collective, for example, is characterized by an "indirect symbiosis" form of internal interdependence (the first dimension), meaning that even very different types of organizations depend on the same resource pool for existence, such as the vast spectrum of medical providers depending on the supply of sick people. An organic collective's form of institutional control (third dimension) is "political," where the dominant regulative force between organizational interactions is the political system in a state.

While this typology presented "ideal types" of interorganizational forms, a problem with this approach was that the four forms were not mutually exclusive, meaning the same dimension indicator could be repeated for multiple interorganizational forms (Gueguen, Pellegrin-Boucher, & Torres, 2006). For example, it is likely that "information flows" and "influence flows" would both be seen in the "organic" form. As the purpose of categorizing interorganizational forms was to support theoretical development and empirical study by analyzing which forms led to certain outcomes or behaviors, non-mutually exclusive independent variables (the interorganizational forms) negatively impact typology's empirical utility (K. B. Smith & Larimer, 2009). While Astely and Fombrun described the cells as representing "dominant" aspects of each interorganizational form, the dimensions were not practicable.

Gray (1989), in her influential book on interorganizational relationships, which she termed as "collaborations," again emphasized that the characteristics of interorganizational forms varied depending on context, and that the form eventually affected the outcomes. She defined four interorganizational forms first by the function that they perform, and secondly by the possible outcomes that may result from the collaboration. An "exploratory collaboration" may occur as one of the first activities between organizations in order to acknowledge interdependence between actors, establish trust and conduct initial problem scoping to "formulate the mess" (Ackoff, 1974). "Advisory collaborations" extend these functions and identify solutions. "Confederative collaborations" consider implementation of solutions, and may start to exchange resources to do so and develop increasingly formalized agreements. Finally, "contractual collaborations" see a high level of formalized solution implementation with legally binding contracts. A research and development consortia of industry and academic organizations is an example of a contractual collaborative, in which participants develop legal contracts about profits and copyright, but also complex formal and informal rules about how participating organizations interact.

Using function or purpose to discriminate interorganizational forms, such as in the Gray typology, is useful to allow a researcher to relate interorganizational interaction directly to the context of the situation or environment. For example, from a review of 36 environmental management case studies, Margerum (2008) constructed a typology of three interorganizational forms: action, organizational, and policy "collaboratives," according to whether the main reason for interaction between organizations was to act directly, change organizations' policies about a collective problem, or attempt to change government policy concerning the problem. In a similar vein, Alter and Hage (1993) identified different "coordination methods" depending on whether the interaction was for policy making, administration, or operations. In a more detailed analysis, Aiken et al. (1985), noted that whether an interorganizational form was for the purpose of coordinating programs, resources, suppliers, consumers or information, affected the comprehensiveness, accessibility, and compatibility of the interaction. More recently, Donahue and Zeckhauser (2011) organized their analysis on whether "collaboration" was for the purpose of improving productivity, gaining information, increasing legitimacy, or sharing resources.

Gray, Aiken and Margerum did not elaborate on the discriminating dimensions of interorganizational forms, making it challenging to use these typologies other than for initial theory development; however, Gray described the notion that interorganizational interactions become "progressively more institutionalized" (Gray, 1989, p. 240) proceeding from exploratory to contractual forms. That different interorganizational forms exhibit different "intensities" of interaction became the foundation for another influential early work on interorganizational theory: *Organizations Working Together* by Alter and Hage (1993).

Building from the Astley and Fombrun (1983) typology, Alter and Hage (1993) first started with the "form of interdependence" dimension with two values of competitive and symbiotic—the justification being that organizations in symbiotic relationships have much different logics and more opportunity for interaction compared to competitive relationships. Second, they further discriminated with two categories based on the number of partnering organizations (dyadic / triadic interactions, or multisectoral / networks), given strong findings from the interorganizational relations literature noting that collectivities with few members exhibit much greater tendency for self-interested behaviors. They used these four basic combinations to define the nature of three categories of interorganization forms: limited, moderate, and broad "cooperation."

Scales of Interorganizational Interaction

This work by Alter and Hage first established idea of "scale," "intensity" or "extent" of interorganizational interaction, leading to various efforts to categorise terms. Table 1-2 summarises the various attempts and shows that there is little consensus in terminology, other than "collaboration" being seen as a higher intensity form of interorganizational interaction. The most recent attempt at typologies by McNamara (2008, 2012) are probably the most comprehensive and deserve further consideration (see Table 1-3).

Table 1-2: Summary of Common Attempts to Categorize Interorganizational Interaction Terminology.

Author	Terminology Used for Interorganizational Forms (presented in order of lower to higher intensity)	Discriminating Dimensions
Alter and Hage (1993)	Limited cooperation Moderate cooperation Broad cooperation	Form of interdependence (competitive or symbiotic); number of partnering organizations (2 – 3 or >3 "multisectoral"); objectives; power; resources
Mattessich et al. (2001)	Cooperation Coordination Collaboration	Vision and relationships; structure, responsibilities and communication; authority and accountability; resources and rewards
Himmelman (2002)	Networking Coordinating Cooperating Collaborating	Formality of relationship; qualitative description of characteristics; resources

Author	Terminology Used for Interorganizational Forms (presented in order of lower to higher intensity)	Discriminating Dimensions
Mandell and Steelman (2003)	Intermittent coordination Temporary task force Permanent / regular coordination Coalition Network structure	Extent to which problem orientation is individual or shared; commitment to goal (common or separate); intensity of linkages (loose or tight); breadth of effort (narrow or comprehensive); complexity of purpose; scope of effort
Keast, Brown, and Mandell (2007)	Cooperation Coordination Collaboration	Goals of interaction; perspectives of participants about these goals; stability of structural linkages; formality of connections; risks and rewards of participation
A. P. Williams (2010)	Conflicted interactions Deconflicted interactions Coordinated interactions Collaborative interactions	Organizational structure; communications; information sharing; decision making; operating procedures; authority and accountability; culture and values; planning and evaluation
McNamara (2012)	Cooperation Coordination Collaboration	Design of administrative structures; formality of agreements; organizational autonomy; key personnel; information sharing; decision making; resolution of turf issues; resource allocation; systems thinking; trust

Conclusions – Typologies of Interorganizational Interactions

Several conclusions can be drawn from this review of scales and typologies. First, the terms chosen for various forms of interorganizational interaction are arbitrary. This explains, for example, how Himmelman (2002) considers networking as the most informal and limited interorganizational interaction, whereas Mandell and Steelman (2003) define it almost oppositely as the most intense and comprehensive interaction. Apart from the recent exceptions of McNamara (2008), Thatcher (2007) and Thomson et al. (2009), definitions created by dictionary writers and many scholars are generally conceptual rather than taxonomical—categorization based on empirical observations (Bailey, 1994; K. B. Smith, 2002). What is more important is understanding how the various dimensions pair together in certain combinations and what effects these have on outcomes. It is useful, however, to create standardization in the usage of terms, so this should be encouraged in further research.

Second, the layout of a typology suggests, in some cases, that interorganizational interactions exist on a "scale" characterized by both increasing magnitude of implications for partnering organizations and increasing formalization and interdependence of the emergent interorganizational form. In most cases, however, this scale is "quantized," meaning that, with the exception of time and financial resource, dimensions have a discrete number of values. While some typology approaches have used the term maturity to describe the increasing interorganizational interactions that occur from cooperation to collaboration (Alberts & Hayes, 2007; NATO, 2006), maturity suggests both elements of quality and superiority and implies that moving up the scale of interaction is preferable. Many studies suggest, however, that operating at the highest level is not appropriate for all situations (Chisholm, 1992; Mattessich et al., 2001). Although the term magnitude can be misconstrued to

imply quantity, this is not the intent. Interaction magnitude is meant to convey that the magnitude of the *impact* on partnering organizations will be greater at higher levels of interaction.

Third, it is critically important to realise that these typologies represent a "morphological field," that is, a way of displaying all the possible combination of dimensions that could occur (Ritchey, 2006). These typologies lead to the conclusion that cooperation is defined by the occurrence of *all* the dimensional indicators at that level. Yet this may not be the case. Many situations could occur where the dimensions A and B indicated a *high* level of interaction (i.e. collaboration), but dimensions C and D indicated a *low* level of interaction (i.e. coordination). The typologies do not tell us how to define this state.

Table 1-3: Adapted Version of McNamara's 2012 Typology of Interorganizational Forms.

Dimensions (distinguishing characteristics)	Interorganizational Form		
	Cooperation	Coordination	Collaboration
Design	Work within existing organizational structures	Centralized control through hierarchical structures	Shared power arrangements
Formality of the Agreement	Informal	Formal	Inform and Formal
Organizational Autonomy	Fully autonomous; policies to govern interorganizational interaction are not created	Semi-autonomous; policies to govern interorganizational interaction may be developed by higher authorities	Not autonomous; policies to govern interorganizational forms are developed jointly by participants
Key Personnel	Implementation of the partnership occurs at the lowest levels; leaders not involved	Implementation is based on a higher authority; a boundary spanner may foster linkages	Implementation is based on the participants directly involved
Information Sharing	Basic information shared through informal channels	Information is exchanged through more formal channels	Open and frequent communication through formal and informal channels
Decision Making	Independent decision making	Centralized decision making	Participative decision making
Resolution of Turf Issues	Conflicts avoided by virtue of organization's independence	A neutral facilitator may help resolve conflicts	Participants work together to resolve conflicts
Resource Allocation	Information is exchanged	Physical and nonphysical resources are exchanged to achieve individual goals	Physical and nonphysical resources are pooled in support of collective goals

Dimensions (distinguishing characteristics)	Interorganizational Form		
	Cooperation	Coordination	Collaboration
Systems Thinking	System integration does not occur	System integration may occur to better achieve individual goals	System integration does occur to better achieve collective goals
Trust	Trust relationships are not required but may develop	Leaders work closely to create relationships based on trust	Trust between participants is needed to sustain relationships

Application

The review of process frameworks showed that interorganizational interaction is a complex, multidimensional and dynamic process, and involves multiple levels of analysis. A major challenge of researching comprehensive approach, and more generally interorganizational interaction, is the multiplicity of variables and relationships of interest at multiple levels. Empirical research is highly challenging because interorganizational forms evolve considerably with time, and many organizational behaviors are affected by social constructions (Lincoln, 1985). Many of the typologies reviewed attempted to classify interorganizational forms into categories based on simple characteristics with qualitative values (e.g. network strength as "high" or "low"), yet the process frameworks reveal that the dynamic evolution of interorganizational interaction makes this very challenging. For example, "network strength" may vary considerably over time, or may be measured in different ways by different observers. Such inconsistencies diminish the empirical utility of the early typological approaches.

The later efforts by McNamara (2012), A. P. Williams (2010), and Keast et al. (2007) for example, include essential objective organizational characteristics in addition to the more general qualitative dimensions. They provide "snapshots" that give reasonable indicators about level of interaction, without getting too much into structural details. In reality, whether or not a particular interorganizational form is called "cooperation" or "collaboration" is immaterial, what is important is how the dimensions change for that particular form, and what this signifies for an organization. The McNamara framework, which is the most developed to date, allows organizational managers and leaders to review the important characteristics of interorganizational interactions, and consider the implications of step changes in level. While the typologies do not spell out these implications in detail, they provide a starting point.

CONCLUSIONS

This paper makes two key points. First, greater conceptual clarity is needed about the various terminologies used to describe "organizations working together." This is not merely a definitional issue. When we use the term "cooperation" or "collaboration," we are, in fact, referring to a complex set of interrelated and interactive organizational dimensions. When organizations "collaborate" multiple organizational dimensions are affected and leaders, managers, and staff need to be aware of the implications.

Interorganizational interaction often involves creating new administrative structures such as regular meetings, committees, or new organizational units with representative members from each organization. The design of these structures has significant impact on how the interaction is governed and how each organization participates, and may require varying amounts of resource commitment. Such administrative structures are underpinned by cross-organizational agreements, which have a range of formality. Agreements determine the

roles and responsibilities of each organization in the interaction and may consist of a handshake between working level staff, to formalised, legally binding contracts signed off by organizational leadership. The extent of administrative structures and the level of formality of agreement will impact, to varying extents, the amount of organizational autonomy. Higher levels of interorganizational interaction (i.e. "collaboration") may bring higher policy coherence overall between organizations, but this comes with a significant resource cost. One of the foremost experts in collaboration in public management put it this way: "There is one hard and fast conclusion from the research. This is that making collaboration work effectively is highly resource consuming and often painful. My strongest piece of advice to practitioners, therefore, is 'don't do it unless you have to.'" (Huxham, 2003, p. 420).

Obviously, in certain crisis situations this advice may not be particularly helpful as organizations may have little choice not to interact, cooperate, coordinate or collaborate. Another expert in the field gave some more useful advice that speaks to the overall message of this article: "don't collaborate unless you are willing to thoughtfully consider and educate yourself about the nature of the process involved" (Thomson & Perry, 2006, p. 28). Organizational leadership should be made aware of the impact of higher levels of interaction on the dimensions specified in the typologies: the design of administrative structure and governance processes; the formality of interorganizational agreements; the impact on organizational autonomy of participation; the use of key personnel; the process, security aspects and purpose of information sharing; decision making at all levels of organization; resolution of turf issues and other conflicts between organizations; resource allocation; encouragement of systems thinking; and trust.

The second point of this paper is to call for increasing cross-disciplinary thinking from the disciplines of organizational science, public administration and management. There are vast literatures on interorganizational relationship in organizational science, collaborative governance and multiorganizational policy implementation in public administration, network dynamics and structures in management. Comprehensive approach research would benefit from applying the multitude of theories and frameworks available and conducting more systematic research focusing on the organization as a unit of analysis.

Declarations

A portion of this work was conducted as part of the author's on-going Ph.D. dissertation research at Old Dominion University, Norfolk, United States. Other portions were conducted as part of several completed studies for NATO's Headquarters Supreme Allied Commander Transformation. The views expressed in this article are the views of the author and do not necessarily represent the views of NATO or any other organization. There are no conflicts of interest to report.

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