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Implications of Operationalising a Comprehensive Approach

Topic 4: Collective Endeavors

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Implications of Operationalising a Comprehensive Approach

Abstract

The experiences of forces in the Balkans, Iraq and Afghanistan have demonstrated that these complex challenges cannot be resolved exclusively by military intervention, and are of such scale that no single agency, government or international organisation can manage them alone. A broad international consensus has emerged that recognises the importance of coherent and simultaneous application of military, political, economic and civil instruments – known as 'comprehensive approach' – to resolve crisis situations. However, efforts to implement comprehensive approaches have been fraught with political and administrative challenges and have suffered due to conceptual ambiguity in the understanding of collective endeavours.

By analysing the conclusions of recent experimentation, and utilising research on command and control, organisational science and public administration, we propose a model that can assist military, governmental and non-governmental leaders when working in collective endeavours. This model is based on 3 principles: 1) developing a standardised typology of cooperation in order to resolve conceptual ambiguity; 2) identifying key organisational features affected in collective endeavours; and 3) understanding the physical implications on these organisational features. We extend the NATO Network Enabled Capability interaction maturity model, in order to understand the physical implications of various modalities of cooperation on organisational structures and operational practices, in cross-organisational collective efforts.

Keywords: collaboration, coordination, cooperation, comprehensive approach

Implications of Operationalising a Comprehensive Approach

Introduction

The experiences of NATO forces in recent operations in the Balkans and Afghanistan 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 organisation can manage them alone (Friis & Jarmyr, 2008). As demonstrated by the outputs from the NATO Riga Summit (NATO, 2006c) and the NATO Bucharest Summit (NATO, 2008a), a consensus has emerged that recognises the importance of coherent and simultaneous application of civilian, diplomatic, economic and military instruments, in the efforts to resolve crisis situations. This overall effort is understood by the term, "Comprehensive Approach[1]".

Following the Bucharest Summit, on the 2nd April, 2008, three approaches were agreed upon to operationalise a comprehensive approach in NATO. Firstly, the Alliance should improve the coherency in application of crisis management instruments. Secondly, the Alliance should seek to enhance practical cooperation at all levels with international, national and independent organisations. Finally, NATO should focus on integrating stabilisation operations and reconstruction efforts in all phases of a conflict.

An important dimension of improving cooperation with other organisations is in planning and conduct of operations. A key part of the comprehensive approach is understood as the ability to improve interagency coherence; a key area of which is in the ability to plan and implement multilateral interventions. This dimension calls for NATO to proactively increase multilateral planning with partners, improve support given to partners in planning and improve regional and local engagement in planning and preparations. However, the strong caveat of independence remains: NATO should be sensitive to North Atlantic Council guidance regarding the sovereignty of partner organisations. A distinction between crisis activity and 'peace-time' activity should be noted. Outside of the context of immediate operations, NATO should develop permanent and formal standing relationships with a variety of key partners, whilst respecting the key role of the United Nations in brokering and facilitating coordinated relationships.

The Issues in Development of a Comprehensive Approach

The specification, development and implementation of the Comprehensive Approach in NATO will likely be fraught with difficulties. As a military alliance of 26 Nations, NATO faces many constraints in the implementation of any initiative, let alone one that requires deconstructing the boundaries and responsibilities between sovereign military force and international governmental and non-governmental civilian organisations.

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[1] In some literature, a specific distinction in meaning is made between 'a' comprehensive approach and 'the' comprehensive approach. In this article, there is no distinction made and the indefinite article and definite articles are used in whatever grammatical manner is appropriate. However, it is always understood that NATO will always be a supporting partner in a comprehensive approach; it will not *own* the initiative.

Political Challenges. There are significant political challenges in such an initiative: national perspectives may differ irreconcilably; national and organisational values and priorities will fall across a broad spectrum (Friis & Jarmry, 2008; Lipson, 2007); military leaders may be reluctant to concede power and budgets to non-military government functions (FFI, 2001); questions arise about the reduction of sovereignty in action and 'globalisation of security duties' (Baharvar, 2001; Blatter, 2001; Chatham House, 2005; Flanagan & Schear, 2008); and international non-governmental agencies face challenges of independence (Pugh, 2001; Stockton, 2002).

Administrative Challenges. Even as such fundamental syncretism is breached in the political domain, significant challenges in implementation will be encountered: forging comprehensive working relationships with a variety of non-NATO bodies represents a formidable administrative task of unparalleled complexity; traditional principles of bureaucratic systems are subtly altered as organisational boundaries are crossed and questions of legal-rational authority, responsibility and accountability arise (Morris et al., 2007); furthermore, whilst the rhetoric of a comprehensive approach is conceptually appealing and commensurate with current, global 'rights-based' sentiment on the reduction of military hegemony (Nelson & Dorsey, 2007), there is little empirical evidence on the overall practical, administrative cost-benefit.

Notwithstanding these significant political and administrative challenges, there are aspects of the comprehensive approach enigma that are independent of political considerations and invariant of administrative configurations. It seems logical, therefore, to consider these aspects before, or at least in parallel to the other, more contentious issues previously noted. Broadly, the current discussion in NATO and other organisations and think-tanks focuses on two particular aspects: the challenge of working out what to do in interventions – policy development, and the challenge of how to do it – policy implementation. The line between policy and implementation is not so clear cut; however, as a policy development question within the overall implementation efforts is the area of cross-organisational integration. However, both these aspects are reliant on some fundamental principles that have been little developed to date – the underlying causes behind the problem of conceptual ambiguity.

The Problem of Conceptual Ambiguity

Cross-organisational cooperation has been extensively studied in the defence, public administration and organizational science literature in recent years. Many theoretical studies have pushed the boundaries of understanding of collective endeavors between government and non-governmental entities with normative models detailing the required factors for success and the various dimensions of cooperation from initial conditions, processes, to outcomes (see, for example, Alberts, 2007; Alberts & Hayes, 2006, 2007; Bryson et al., 2006; Mattesich et al., 2001; Thomson, 2001; Thomson & Perry, 2006). Furthermore, many case-studies provide practical examples and evidence of collective endeavors in action (see, for example Agranoff & McGuire, 2003; Chisholm, 1992; Morris et al., 2007; Simo & Bies, 2007). However, there have been few studies that give succinct practical guidance to military and civilian leaders on the nature of

cooperative governance. Furthermore, in the literature reviewed we encountered significantly different interpretations and definitions in the concept of collective endeavours – the terms 'collaboration,' 'coordination,' 'cooperation,' 'inter-organizational relationships,''networks' and 'joint ventures' being used interchangeably in many cases. The objectives of this article are to provide military and civilian leaders with a practical guide to understand the direct physical implications of cooperative endeavours and to provide a standardized typology of cooperation. These are important for two reasons.

First, it is critically important for the development of a discipline of study to have a common typology. Although it well accepted that there is a scale of cooperation which varies in level of organizational integration and formality (Alberts & Hayes, 2006, 2007; Diehl, 2005; Huxham & Vangen, 2005; McNamara, 2008; Thomson & Perry, 2006), the lack of common standards results in disparities and ambiguities being concealed by inconsistent and interchangeable terminology, and prevents theory building (Imperial, 2005). In order to understand the detailed nature of cooperation and its application in various situations, to provide conceptual clarity, and to facilitate a deeper understanding of the wide variety of literature available, a consistent set of definitions is needed. A consistent typology allows creation of shared meanings, which, in the words of the political scientist, Deborah Stone, "motivate people to action and meld individual striving into collective action," (2002, p. 11) – highlighting the practical benefits in addition to the theoretical.

Second, of further importance is the need to guide leadership in structuring, planning, managing and evaluating collective endeavors. Although the literature has many exemplary studies, few are aimed at facilitating leader's understanding of practical implications of cooperative endeavors – the general focus is towards research knowledge as opposed to practitioner knowledge. As organization leaders and managers in both the government and non-government domains must be prepared to cooperate in order to achieve success (Bryson et al., 2006; Huxham & Vangen, 2005; Simo & Bies, 2007), a major part of this preparation must involve understanding the detailed, practical implications on resources, organizational structure, decision-making and accountability, to name a few.

This article has four sections of which the first three are 'operationalising principles' that key leadership should consider before entering into any collective endeavour. First, we propose an initial cooperation typology on which the study will be based. Second, we describe a framework of key themes that are relevant to practitioners involved in leading or participating in collective endeavours. Third, we develop the implications – the true meaning behind the typology – of cooperation, conduct a critical analysis of the model and review the literature. We conclude with suggestions for using the model and identify potential future research.

Operationalising Principle 1: Develop a Cooperation Typology

Several terms that describe various modalities of 'working together' appear frequently in the literature, the most common being: 'cooperation,' 'coordination' and 'collaboration.' Often, terms such as 'network,' 'joint arrangement,' 'multi-organizational,' 'inter-organizational relationships' and 'partnership' are used in specific contexts when referring to policy formulation, implementation of specific projects, or evaluations. We will focus primarily on the cooperation / coordination / collaboration terminology, as these are the most commonly used and the most ambiguous. Many subtle and varied meanings have been attached to each of these terms outside their standard dictionary definitions, however, one can discern that a scale of 'working together' is generally implied, which can form the basis of the cooperation typology (NATO, 2008b).

This scale was first articulated in the NATO Network Enabled Capability (NNEC) concept development (NATO, 2006a)[2]. The scale defines a level of maturity for NNEC command and control (C2) capabilities – that is, the higher up the scale, the more mature the capabilities. The lowest level of maturity is 'conflicted', which represents the historical state of affairs where individual services or organisations had very little C2 interaction. This is followed by 'de-conflicted', 'coordinated', 'collaborative', and finally 'agile', in which C2 resources are completely shared, organisational boundaries are essentially virtual, and lines of authority and command are completely transformed into a currently hypothetical, 'agile' state. This work was further elaborated in *Planning for Complex Endeavours* (Alberts & Hayes, 2007) and related in a general sense to planning between separate organisations.

This article seeks to further extend the maturity model defined in the NNEC work (NATO, 2006b) and Alberts & Hayes (2007) into an Interaction Magnitude[3] Model that will define the implications of moving from one level of interaction to the next on a wide variety of organisational features that may be encountered in operationalising a comprehensive approach. Before developing the typology, however, there are several assumptions that must be noted.

First, in a general sense, the notion of cooperation pertains to the idea of working together for a beneficial purpose. Although there will certainly be negative aspects involved, we assume that one of reasons participants are cooperating is that the net benefits outweigh the costs. Second, in this article we have placed the focus on leadership, which suggests that the focal point or integrator of the collective endeavour is governmental or military in nature (Goldsmith & Eggers, 2004). Although this is an implicit assumption in all that follows, the model is sufficiently general to allow it to apply to any participant in a cooperative endeavour and there is nothing to suggest that non-governmental organizations cannot lead a cooperative endeavor with government as a willing participant. Third, we are concerned only with cooperation between

[2] A fact not widely appreciated in the defence community is that work on network structures, organisational collaboration and scales of collaboration has been studied in academia since the early 70's, although the interaction maturity levels had not been previously described.

[3] See page 7.

organizations, not individuals, although this may occur as part of a larger framework of cooperation. Fourth, we are not concerned with *intra*-organizational cooperation such as interactions between different departments of the same agency, for example; although the typology described in this article will have some applicability to this case (Huxham & Vangen, 2005). Fifth, the typology applies only to 'salient stakeholders' – those that are directly involved in, or directly affected by the cooperative endeavor in question. Sixth, the typology applies to cooperative endeavors that have not yet begun. The aim is to guide participants in making informed decisions about the nature and implications of potential future activities in which they might become involved. However, there is some applicability to participants entering into ongoing cooperative projects. Finally, we assume 'interdependence', which is: "…a condition where two (or more) organizations require each other, are dependent each upon the other" (Chisholm, 1992, p. 42). The implication of interdependence is that: "the behavior of a particular organization…cannot be understood in isolation: its behavior is affected by and in turn affects that behaviors of those involved in the relationship" (p. 42). A further assumption that follows is that cooperative endeavors are borne out of a realization that an organization cannot achieve all its goals without cooperation with other organizations operating in the same domain.

Organizations working together can interact through a variety of different mechanisms. Formal structures can be designed with rules and procedures (Bryson et. al., 2006), or interaction may emerge through informal networks (Goldsmith & Eggers, 2004). Interaction may range from planned and mandated contact at the individual level, to full organizational integration and exchange of resources and authority. The level of interaction forms the first 'axis' on the cooperation typology, which we denote *interaction magnitude*[4]. This implies that the further an organization ascends up the scale of interaction, the more complex, institutionalized and internalized the cross-organizational interactions will be.

We may now create a *scale of cooperation* that reflects different levels of interaction magnitude (see Figure 1). This presents a first step in creating definitions for these frequently encountered terms. The lowest level of interaction magnitude is *conflicted*, which represents a baseline condition of no or very little cooperation. The second level is *de-conflicted*, followed by *coordinated*, then *collaborative.* Although the majority of public administration literature does not go further, to maintain consistency with the current interaction maturity models in the military domain, we allow for the existence of a final stage – currently still hypothetical – a *transformed* state of interaction.

The implications of each level on various organizational characteristics will be examined in the rest of the article. We reserve 'cooperation' as an all-encompassing term that describes a continuum of working together in the typology. Cooperation is a continuum of the four components, depending on the various implications of that level of interaction magnitude. We must resist the temptation at this stage to present definitions

[4] We believe that the term 'maturity' incorrectly implies that moving up the scale of interaction is preferable. There are many studies to suggest that operating at the highest level is not appropriate for all situations (see for example: Chisholm, 1992; Mattesich et al., 2001.). Alberts (2007) also acknowledges this concern.

for these terms which would be contrary to the message of this article; indeed, many excellent definitions have been developed by scholars in the cooperation literature. We intend to allow the definition to emerge from the full analysis of the cooperation typology presented in Table 1. The key point is that as collective endeavours are extremely complex phenomena; the true implications of what is meant by a simple term such as 'collaboration' cannot be sufficiently described in a single sentence.

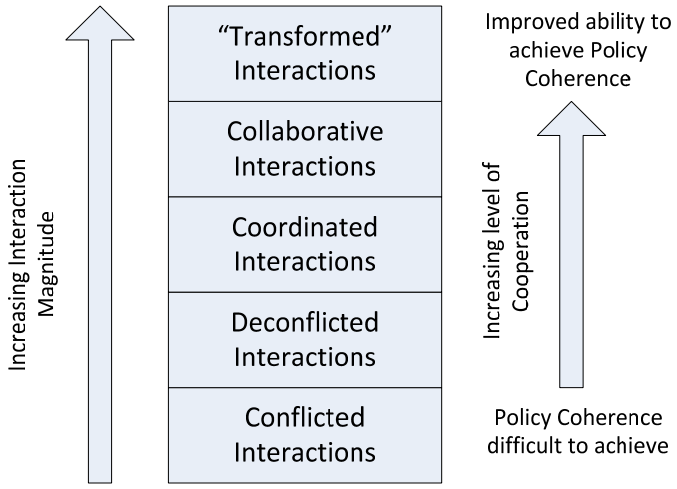

Figure 1: The Interaction Magnitude Model

The final component of the cooperation typology is the assertion that as organizations proceed up the scale of interaction magnitude they necessarily require increasing *policy coherence* in order to work together at that level. Policy coherence is a term widely used in the international development field, and institutions such as Organisation for Economic Cooperation and Development (OECD) have standardized its use in the development community (Picciotto, 2005). The OECD's Development Assistance Committee defines policy coherence as: "…mutually reinforcing policies across government departments and agencies creating synergies towards achieving the defined objective" (OECD, 2003, p. 2).

The concept of policy coherence allows further granularity in defining the terms in the cooperation typology, as for high levels of interaction magnitude – collaboration – organizations require mutually supporting policies and plans, and in many cases must adopt the same policies. This has implications on organizational structures, plans and resources, and practitioners must be aware of the consequences, especially in politically sensitive policy areas. Generally, it is expected that policy coherence must be proportional to interaction magnitude, however, it may be possible for organizations at the lowers level to have complimentary policies, but not actually be engaging in any coordination or collaboration. Conversely, it is not feasible for organizations operating at the level of collaboration to have inconsistent policies. Collective endeavours and comprehensive approach can be viewed as a form of policy implementation, providing an important bridge to the policy sciences scholarship. Significant evidence from this literature confirms the need for policy coherence in complex implementation projects

(see for example, Boston, 1992; Goggin et. al., 1990; Imperial, 2005; Lundin, 2007; May et. al., 2005, 2006; Mazmanian & Sabatier, 1983; Pressman & Wildavsky, 1984).

Other recent thinking on the comprehensive approach has defined two levels of potential cooperation: an 'integrated' approach and 'coordinated' approach (De Coning, 2007; Friis & Jarmry, 2008). In the integrated approach, "the aim is to develop systems, processes and structures that will ensure that all the different dimensions are integrated into one holistic effort" (Friis & Jarmry, 2008, p. 14). The coordinated approach does not seek formalised integration of systems and processes, but instead "favours utilising the diversity the actors as a way to manage the complexity, whilst pursuing coherence through bringing the various dimensions together at the country level" (Friis & Jarmry, 2008, p. 15).

Although these approaches can be explained under the framework developed in this paper, they lead to an important point. A comprehensive approach does not require that all actors are equally engaged at the same level of cooperation (Friis & Jarmry, 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. It may be that some organisations choose to integrate their systems and processes by collaboration, whilst others may seek only to de-conflict at limited levels.

Operationalising Principle 2: Understand Organisational[5] Features Affected

The literature reveals that collective endeavours can be characterized by a large number of dimensions; as a complex case of policy implementation, there are even more aspects to consider than single-organization implementation. However, as the purpose of this article is to understand *practical implications of increasing levels of cooperation*, we have identified several dimensions that occur repeatedly and that are particularly relevant to key organizational characteristics that military and civilian leaders would wish to understand prior to entering into any cooperative arrangement.

Little of the literature on the comprehensive approach has covered the issue of the required physical changes in organisational characteristics that are necessary to achieve various levels of cooperation with other organisations. These are the 'units of analysis' that will now be examined, generally from the perspective of current military structures in NATO:

Organisational Structure: The implications on various types of organisational structural features will be considered: the chain of command, hierarchical divisions and level of centralisation (devolution and delegation versus central control).

[5] There are many different theories that define what an organisation is and how it should function. In this discussion, no specific theories are assumed and complete generality is the goal; however, given the majority of organisations considered in a comprehensive approach are governmental in origin, some bias towards traditional, legal-rational, hierarchical models may be unavoidable

Communications: An organisation is simply a way to arrange people and resources to work towards a common goal in a coherent manner. The individual components need information in order to 'know' what to do and how. The type, structure, and protocol of organisations' communications methods will be considered.

Information Sharing: Information is the life-blood of an organisation. Regulations governing and constraining information usage and processes of organisations' information-sharing mechanisms will be analysed.

Decision Making and Operating Procedures: The decision making processes and operating procedures are critical to how an organisation functions and thus offer many constraints – or freedoms – on the level of cooperation possible.

Authority and Accountability: The implications on authority required will be discussed. Closely related to decision-making authority, accountability refers to the mechanisms that permit placing responsibility for actions on a particular individual or department. Governmental and individual organisations may have to contend with administrative and legal accountability.

Culture and values: Organisational culture can be defined as a set of shared understandings or meanings that are largely tacit among members of the organisation, are clearly relevant and distinctive to the particular group, and are also passed on to new members (Louis, 1980). Values are unobservable characteristics that underlie the operating basis of an organisation.

Planning: There is an important relationship between the ability of a military planner or civilian policy maker to agree a goal, and their authority to commit resources towards achievement of that goal. The level of cooperation strongly influences how cross-organisational planning occurs.

Evaluation[6]: The implications for key processes, resources and planning required for evaluation activities will be analysed.

Operationalising Principle 3: Understand the Implications

The physical implication of the various levels defined in the cooperation typology – the Interaction Magnitude Model (IMM) – will now be discussed. It should be noted once more that this article is not a case study and does not intended to define what a comprehensive approach should look like for any one particular organisation, instead, it is merely allows lays the foundation for decision-makers to begin understanding the practical implications of a working with other organisations in a more cooperative

[6] 'Evaluation' is the field of study and practice that considers measuring the performance and effectiveness of organisations and implemented programmes. This roughly corresponds to the military concept of campaign assessment, or effects-based assessment. See Williams & Morris (2009) for a detailed comparison.

manner. Each organisational characteristic will now be taken in turn, and the physical implications of operating at a particular interaction magnitude level on each characteristic will be analysed, with advantages and disadvantages given where appropriate. A Table summarising the discussions can be found at the end of the paper.

Organizational Structure

The dominant paradigm of organisation utilized by the vast majority of government is traditional bureaucratic hierarchy with legal-rational authority (Weber, 1947). It is recognized that bureaucracies are notoriously difficult organisations between which to make cooperation function – the difficulties in the response to Hurricane Katrina, for example, were in a large part, due to the complexities of coordination between federal, state and local government agencies (Bryson et al., 2006; Morris et al., 2007). Furthermore, governments and militaries are generally organized by function, whereas many problems are place-based or transcend the boundaries of a single function (Kettl, 2003; 2006).

A potential solution has been to reduce centralization by outsourcing government functions to private and non-profit organizations, or by creating new structures such as matrix or network-based organizations (Goldsmith & Eggers, 2004; Milward & Provan, 2000; Provan & Milward, 2001). These new organizational structures, however, have implications that conflict with many tenets of the dominant organizational bureaucratic paradigm to which we are all accustomed: a diffusion of responsibility, accountability, risk and control. The implications become more pronounced as the scale of interaction magnitude is ascended.

Kettl (2003) notes that contingent network structures are a potential solution to the Department of Homeland Security's event-based coordination problems; however, these organizational solutions must be coupled with leadership and culture changes. In this sense, networks are more related to mechanisms of information exchange in which the integrity of organizational boundaries are maintained. In our typology, Kettl (2003) is recommending operating at a level of de-confliction. His 'contingent coordination[7]' involves maintaining each organization's mission and function, but de-conflicting overlapping activities and working out joint solutions to meet gaps in service. Individual managers and staff may be responsible for forming networks and working outside the hierarchy, but there is no organizational structure changes required.

In their analysis of the Coast Guard's emergency response to Hurricane Katrina, Morris et. al. (2007) found evidence for both Kettl's (2003) 'contingent coordination' model and "the successful use of both traditional hierarchical and network-based coordination" (p. 94). The Coast Guard was able to successfully respond in a number of cases as a result of their culture of 'contingent coordination' as a standard operating procedure. The use of traditional military command structures was incorporated in addition to networks outside the hierarchy where required. The Coast Guard has some level of formalization in its network structures in the many federal statutes that require

[7] Note that this is Kettl's naming and does not refer to the coordination level in the IMM.

committees to be formed around key issues. As a result of these standard interorganizational working procedures, the Coast Guard has "embraced the many "languages" of other stakeholder organizations…and has a long history of drawing on local relations and partnering to get the job done" (p. 101). In our typology, the Coast Guard operates at an interaction magnitude level of coordination, which implies that interorganizational structures (committees) are formalized within the framework of the dominant hierarchy, and that the output from these structures feeds back into organizational policy.

The majority of case studies reviewed on cooperative endeavors recognize the use of some form of interorganizational relationship to achieve cooperation such as networks for information exchange (for de-confliction), or standing committees (for coordination). Several studies have reviewed hypothesized cooperative governance at the interaction magnitude of collaboration in our typology. Diehl (2005), McNamara (2008) and Thatcher (2007) use an "interorganizational arrangements model" that defines a cooperative endeavor called 'expanded partnership' in which "a new collective unit is formed to implement the initial collective objective (and) partner organizations establish formal linkages with the new collective unit" (Diehl, 2005, p. 51). Mattessich et. al. (2001) come to similar conclusions, defining collaboration as: "a more durable and pervasive relationship…bring(ing) previously separated organizations into a new structure with full commitment to a common mission" (p. 60). Ansel & Gash (2007) in their wide-ranging review of the cooperative governance literature conclude:

> "Collaboration implies two-way communication and influence between agencies and stakeholders and also opportunities for stakeholders to talk with each other. Agencies and stakeholders must meet together in a deliberative and multilateral process. In other words, as described above, the process must be collective." (p.546).

A common thread in these definitions is the recognition of a formal entity with a defined responsibility outside the traditional organization. It is telling that there is little evidence from case studies for the interaction magnitude of collaboration: in practice, there are significant challenges in achieving this level concerning organizational autonomy and defining responsibilities. However, as several theoretical studies have identified this as an 'ideal' form of cooperative action; we should not preclude its incorporation into the cooperation typology.

A fundamental tension exists between the level of cooperation and organizational independence (Eikenberry et. al., 2007). To reach the highest levels of interaction magnitude without losing independence, organizations would have to consider fundamentally reshaping their basic structures to become more decentralized, making network structure the main organizational arrangement (Keast et al., 2004). If decentralization is difficult (e.g. in the military), then in order to reach the interaction magnitude of collaboration (as defined in this article) some independence must be conceded and risk assumed, as collaboration necessarily means consensus on key policy objectives and achieving policy coherence.

Communications

Communications are critical to the functioning of any organization and equally critical to the functioning of cooperative endeavors (Comfort, 2002). Communications are defined in the context of organizational structures and procedures and are implemented through the creation of physical systems[8], the primary function of communications systems being to "create shared meanings among individuals, organizations and groups" (Comfort, 2007; p. 194). Outside of the emergency management and defences fields (see for example, Alberts & Hayes, 2007, 2007; Comfort, 2007; Kapucu, 2006; Morris et. al., 2007), the cooperation literature contains little mention of physical implications on organizational communication systems, using instead organizational structure (discussed in the preceding section) as a proxy variable and considering physical systems as a consequence of organizational design. This issue has been studied extensively in military literature, however, and has been generally approached in the opposite manner – physical communication requirements drive organization structures (Alberts, 2002; Alberts & Hayes, 2003).

The lowest case of interaction maturity is 'conflicted', meaning there is no cross-organisational communication. Even before the information revolution this was never completely the case, however, until very recently, it can be assumed that cross-organisational communication techniques and tools were very limited. Communications between organisations can be any combination of formal or informal networks. 'Formal' implies fixed infrastructure and institutionalised protocols; 'informal' communications means ad-hoc networks developed for a specific, limited circumstance.

Although scholars of Command and Control are now recognising that fixed and formal networks with well-defined rules are not necessarily the most effective in all circumstances (Alberts, 2007), we can make a general assertion that even if organisations decide to collaborate with a flexible, decentralised system, a conscious and institutionalised decision must still be made in order to link communications with other organisations' networks, regardless of their physical configuration. Thus, a requirement for increasing interaction magnitude is that the level of institutionalisation of cross-organisational communication must be increased. Physically, this means that leadership must issue policy that encourages the formation and maintenance of a network of contacts, that information 'push' as well as 'pull' is encouraged, and that formalisation of networks increases – both in physical infrastructure and in peer-to-peer contact.

At the maximum stage of interaction magnitude, the ownership of communications infrastructure may still be apparent, but the management and user community becomes transparent – that is, the formal and informal communication networks are decoupled from organisational boundaries. This requires a high-level leadership agreement between collaborating organisations. A simple physical example of

[8] Due to their now ubiquitous use, we consider 'virtual' communications such as e-mail, blogs, webpages and other online tools as essentially 'physical' in character.

this is the NATO Wide Area Network with its shared email, webpage and phone directory.

The advantages of increasing interaction magnitude in the area of communications are as follows:

a) Inter-organisational interaction is easier, faster, and more efficient,
b) The community membership is more easily known and better utilised,
c) Situational awareness and common intent can be increased amongst all members (e.g. through email news-letters), and therefore, policy coherence can be increased.
d) Increasing interaction magnitude in the Information Sharing area is encouraged.

The disadvantages are several:

a) Institutionalisation requires a fundamental policy shift from information security to information openness, which may be impossible to achieve in the military setting (although technologically it is possible).
b) The cost-benefit of high levels of cross-organisational communication is very difficult to determine.
c) The question of who pays for and maintains cross-organisational formal communications infrastructure is a practical difficulty that will pose significant administrative challenges.
d) Although the implications on cross-organisational communication are few for individual organisational independence and freedom of action, because of the threat of covert monitoring, or at worst case – espionage, significant inter-organisational trust must be developed.

Information Sharing

The concept that information sharing is a panacea for all situational awareness ills has been prominent in recent years, especially in the military community (Alberts, 2002; Alberts & Hayes, 2006). A major hindrance is that the military information community is extremely reluctant to share external to its immediate customers, for operation security reasons, and for reasons of national interest. However, there are still avenues for exploration in the sharing of operationally sensitive information for the purposes of policy coherence. The examples of Interpol, the US-UK-CA-AUS-NZ "five-eyes" intelligence sharing network and the NATO Intelligence community, are relevant cases.

The level of information sharing possible between organisations is, to some extent, dependent on the level of interaction magnitude in the communications field. However, it can be physically separated. An NGO working in Afghanistan may have a policy to either share information with military forces or to maintain complete isolation as a matter of principle. For the purpose of this article which is to develop 'meanings' for the various terms used in the comprehensive approach, the higher levels of interaction maturity may yield physical implications that are simply not acceptable for most organisations.

It can be postulated that the interaction magnitude in information sharing is proportional to the policy coherence between organisations. If organisations share radically different perspectives on a situation and fundamentally different objectives, then information sharing may not exceed de-confliction. However, if organisations have aligned policy goals, such as that between the US and UK, then it is highly likely that the UK Department for International Development (DFID) and the US Agency for International Development (USAID), for example, can operate with a high level of information sharing. Therefore, a physical implication of achieving higher interaction magnitude levels would be necessarily high-level leadership agreement on policy.

Decision Making and Operating Procedures

As with implementation in a hierarchy, cooperative endeavors require a set of explicit or implicit rules, procedures and decision-making mechanisms to guide implementation towards achieving objectives. In his detailed study of the public transit system in the San Francisco Bay Area, Chisholm (1992) explains how the problems of overlapping timetabling, duplication of services and coverage of key destinations (airports) from all local jurisdictions are poorly tackled by each jurisdiction's respective transportation agency and the various conglomerate authorities in the area. He describes how 'informal coordination' takes precedence over hierarchical organization when the latter fails due to its inflexibility and slow reactivity. 'Informal coordination' depends on "the development of informal norms and conventions through group interaction, socialization, and experimentation" (p. 85).

Furthermore, "informal conventions limit the scope of conflict and the range of issues to be considered, establish expectations of the behavior on the part of participants, and set out the kinds of factors to be considered in decisions" (p. 85). The effects of 'informal coordination' are similar to the enforcement of a single organization's policy and staff guidelines, yet no such written rules existed. Although Chisholm labeled this as 'coordination', on our cooperation typology his descriptions correspond to an interaction magnitude of de-confliction. No collective rules are formally established, but conventions and norms arise through the continued interactions of individual staff members, and these virtual rules may come to be recognized by organizational leadership.

The structure and location of decision-making mechanisms are also critically important for cooperative endeavors (Thomson et. al., 2006). In the study by Chisholm (1992), key policy decisions were still confined within organizational boundaries, although in the case of the San Francisco Bay Area Chisholm argues that this was an optimal situation, with the perhaps unexpected conclusion that further integration and formalization was unnecessary and counterproductive. In our cooperation typology, we associate an interaction magnitude of de-confliction with such a situation: major policy decisions are internal to an organization, but detailed implementation decisions at lower levels may be interdependent with other organizations.

As we proceed up the scale of interaction magnitude, decision-making mechanisms become more formalized and rules, norms and conventions more explicit. Thomson et. al. (2006, p. 24) consider that joint decision making and shared power arrangements are key in reaching agreement on collaborative activities. In our cooperation typology we associate this with the interaction magnitude of coordination, where consensus decision making occurs at high levels jointly between organizations. This is also consistent with government being the key convener and focal point for coordination at this level. Moving up to the interaction magnitude of collaboration, we expect to see joint decision making at all levels in the cooperating organizations or the decisions of an external network organization adopted across all participating organizations.

Bryson et. al. (2006) identify a hierarchy of operating procedures for governance of cooperative endeavors that is consistent with our cooperation typology and other examples in the literature. At the level of de-confliction, operating procedures consist of "self governing structures in which decision making occurs through regular meetings of members or through informal, frequent interactions." At the level of coordination operating procedures are provided by "a lead organization that provides major decision making and coordinating activities." Finally, at the highest level of interaction magnitude, collaboration, decisions are made via a "network administrative organization, which is a separate organization formed to oversee network affairs" (p. 49). In their study of non-profit organizations' responses to Hurricane Katrina, Simo and Bies (2007) confirmed Bryson et al.'s results to the level of coordination.

In the above cases and further studies reviewed (e.g. Ansell & Gash, 2007) the increasing formalization of extra-organizational decision-making structures, rules, norms and conventions with increasing interaction magnitude is emphasized. As cooperation increases, the levels at which cross-organizational decisions are made also increases. We associate de-confliction with decision making on a semi-informal basis through self-governing structures at lower levels. Coordination implies that a new organizational structure – a permanent standing body or committee or working group meeting on a regular basis – must be created at either a relatively high level of organization or at lower levels, but with high level formal mandates. Collaboration implies that cross-organizational decision making occurs at more than one level in the organization.

Authority and Accountability

Authority, in the traditional bureaucratic sense, means the ability to exercise power over others, either through coercive or material incentives (the ability to punish and the ability to reward). Physically, authority is associated with the ability to direct resources and to make policy decisions at a certain level.

If an organisation wishes to de-conflict with another, issues of authority arise simply in making the decision of whether or not to de-conflict with certain organisations. Moving up one stage to coordination means that decisions must be made to establish communication channels and engage in some level of information sharing, and to perhaps

allow a certain level of leadership to agree on shared policy and planned goals. At the collaborative level – assuming senior leadership has made the decision to collaborate – then authority must exist at lower levels to allocate some level of control over one organisation's resources to another organisation.

In February and April of 2008, several nations convened in a major event called Multinational Experiment 5 (MNE 5) to study cooperative endeavours, focusing on cooperative planning between military, government and non-governmental actors in a complex crisis response in Africa. A fictional scenario provided the planners with a multi-faceted security and humanitarian mission, with an emerging epidemic of Avian Flu. Representatives from a military command, government agencies, the United Nations, and NGO were present in several layers of planning forums that ran over two weeks (see DTSL 2007a, 2007b; USJFCOM, 2008a, 2008b, 2008c, 2008d)

Although the venue was purely experimental and many assumptions were made and realisms ignored, an unusual situation arose in which the relatively high-level representatives in the high-level forum performed both detailed planning, but as a result of their seniority they had the effective authority to make decisions about resources and goals. Therefore, participants were achieving a very high level of interaction magnitude. When lower level forums were employed to develop detailed cooperative plans derived from the high level forum's plans, difficulties were encountered when the organisations' representatives realised that there was a conflict between the amount of resources for which they could plan to employ, and their requisite authority. At lower levels – tactical command in the military system – detailed cooperative project plans could only be developed if the staff developing the project plans could be in total agreement cross-organisationally about cooperating on outputs and allocation of resources. Therefore, this was only possible if high-level leaders in all collaborating organisations have necessarily directed that total resource sharing was possible.

In an experimental sense, this was an interesting case in planning. When the real context is considered, however, we realise that the practical implications for decentralizing authority – and consequently accountability – are severe for high level of interaction magnitude. The benefit of operating in a bureaucracy is that clear line of responsibility and accountability can be established (Weber, 1947; Wilson 1989). A major problem of decentralisation is that maintaining accountability incurs a cost – the cost of monitoring the decentralised activity (Kettl, 1993, 2000, 2002; Provan & Kenis, 2007). Assuming that collaboration means that organisations divide up the lower level goals to achieve higher level goals, or sharing control over common resources, then monitoring functions become an administrative burden, or high levels of trust are required. Monitoring functions may include the following: regular leadership board meetings to ensure that resources are correctly allocated and missions are on track, increasing contracting and monitoring staff to implement contracts with private companies or non-profits, extending the use of cross-organisational liaison personnel to ensure that work agreed upon is carried out as planned.

The issue of accountability in a comprehensive approach can be illustrated by an example: suppose that a NATO operational headquarters agrees to provide logistical support and funding to an NGO if they provide humanitarian and medical personnel inside an Internally Displaced Person (IDP) camp. If a poor operating standards of the NGO results in the death of significant numbers of IDPs, who is accountable? On one hand, NATO could be accountable for not adequately ensuring that the NGO operated to high standards, received adequate funding and specifying the requirements; on the other hand, the NGO is accountable for failing to provide correct service. Certainly, more complex situations could be envisaged.

As organisations move up the interaction magnitude levels, increasing collaborative activity whilst maintaining freedom of action will incur a necessary cost of loss of accountability, responsibility, or extra financial or administrative cost to maintain these values (Milward & Provan, 2001).

Culture and Values

The cultural difference between governmental and non-governmental organisations is becoming ever more apparent, and even within the NGO domain a large variation exists. At the lower levels of interaction, cultural difference is unlikely to be an issue, however, at higher levels, cultural differences may have to be reconciled as organisations work more closely together. The physical implications of this may be significant, requiring that organisational policy is defined in this area and training and experience reduces cultural barriers. During MNE 5 for example, significant cultural conflicts were witnessed between the primary government-military dominated actors, and UN agency and NGO representatives, who were keen to retain their independence and realise immediate humanitarian aims, as opposed to planning first in detail for an intervention. NGO representatives mentioned that in order for them to cooperative in any significant manner, they must have direction to do so from core policy or leadership.

Increasing levels of interaction magnitude necessarily require convergence of participants' culture and values. A collaborative or transformed interaction magnitude with a high level of policy coherence, information sharing and decentralised authority would be extremely challenging without a similar organisational culture and shared set of values.

Planning and Evaluation

All organisations will undergo some form of planning, from systematic, resource-intensive planning by the military, to quick white-board sketches by a small NGO. Traditionally, large organisations put more thought into what they are going to do – in addition to resource planning, a principle encouraged by the advent of results-based management practices; whereas smaller organisations might focus planning more on distribution of resources.

More generally, it can be assumed that organisations plan in some hierarchical structure: national political objectives lead to organisational policy objectives which lead to individual 'mission' goals, followed by detailed planning of activities. Increasing the interaction magnitude level means that organisations' planning hierarchies must be linked at an increasing level, from either the bottom-up or the top-down. De-confliction may mean that organisations share only the top-level goals; collaboration may mean that organisations share and collaboratively agree on planned goals and activities at all levels.

An important relationship between planning and decision-making authority should be highlighted. The method of operationalisation of comprehensive approach in MNE 5 was to begin collaboration at the top level, gaining uniform agreement on strategic-level goals prior to the start of the intervention. This had the implication that all activities of participant organisations would be directed towards achieving the uniformly agreed goals.

Increasing interaction maturity in evaluation shares many of the same features as planning. At the level of de-confliction, organisations may make each other aware of the evaluation activities they are conduction. At the coordination level, organisations may ensure that they do not duplicate and actively share results. At the collaborative level, organisations may share resources for evaluation – an activity that carries the associated costs of loss of accountability and diffusion of risk (Williams & Morris, 2009).

Limitations

There are several limitations to this work that warrant further theoretical consideration: The core limitation of this approach to understanding the physical implications of interaction magnitude is that each dimension (the organisational feature) is inherently linked to the other dimensions. It is difficult to analyse the physical implication of increasing interaction magnitude on communications without considering the implications on planning, organisational structure and information sharing, for example. The table describes 'first-order' directly observable implications, however, 'second-order' implications that may not observed or realized until some time after are not considered. There are many ways in which the different levels of interaction magnitude could be defined – this article offers only one suggestion – and it is unlikely that uniform agreement would be achieved. However, it is preferable to have begun the process of understanding the practical issues of operationalisation of a comprehensive approach in detail, rather than not at all. There is no doubt that the model presented in this paper is a simplification: the scale of cooperation is not built from discrete levels, but is more likely to be a continuum.

Conclusions and Recommendations

An initial conclusion from the literature reviewed is that in most cases currently, cooperative endeavors occur primarily at the level of de-confliction. Increasing interaction magnitude beyond de-confliction leads to an often challenging level of cost

and risk and may actually make the conflated entity of cooperating organisations look like a centrally controlled government department in many respects. The "paradox of cooperation" is that in order to realise the benefits of increasing cross-organisational cooperation in collective endeavours, several key organisational characteristics must be fundamentally affected and altered. Although the benefits are often extremely valuable, they must be balanced with the necessity to maintain certain key necessities in governmental organisations – accountability, authority and responsibility – which incur a cost, either physical or monetary. Although the dimension of communications and C2 has been considered in the literature, case studies should be conducted to fully determine the nature of these tradeoffs in the other dimensions identified in this paper.

Multinational Experiment 5 allowed one of the first tests of increasing interaction maturity in the other dimensions, notably planning and organisational structure. The concepts tested in the event, Multinational Interagency Strategic Planning (US CREST, 2008) and the Cooperative Implementation Planning (UK DCDC, 2008) called for a high level of interaction magnitude. Coupled with academic research, these events provided an opportunity to learn about operationalising principles in a comprehensive approach that are relevant to NATO development. However, in the experiments, much artificiality was necessary and assumptions were made that removed the need to consider the detailed and physical implications on organisational structure, authority and C2, that would be very important, and challenging in the implementation of a comprehensive approach.

This paper has provided 'food for thought' to allow development of a rational framework for development of military support to a comprehensive approach in NATO. Two key conclusions are reached regarding the need for a typology of cooperation, and the need to better understand the physical implications of the comprehensive approach, allowing NATO to move past hypothetical discussion.

Typology of Cooperation: In order to improve the development of detailed proposals for operationalisation of a Comprehensive Approach, the concept of cooperation has been broken down into a hierarchical taxonomy that defines an increasing level of interaction from conflicted, de-conflicted, coordinated, collaborative and transformed. The physical implications for organisations on a variety of organisational characteristics are considered. This model is not a statement of fact; it is a suggested way in which the operationalisation of the Comprehensive Approach should be tackled and a tool for enabling discussion using commonly understood terminology.

Understanding of Physical Implications: The primary conclusion for NATO is that by understanding the physical, administrative implications presented in this paper, a comprehensive approach as envisioned in the current discussions may be far too ambitious to achieve without significant and radical policy realignment that is unlikely to occur in the current political landscape. The practical result of this work would be detailed policy guidance to NATO agencies and command structures on what should be accomplished with respect to achieving a certain level of interaction magnitude with certain organisations.

Recommendations

The recommendations arising from this work are as follows: Firstly, further development of the interaction magnitude model should be initiated, as a starting point for operationalising the comprehensive approach. Secondly, using a case-study approach, detailed physical, administrative implications on NATO organisational structures of achieving various interaction magnitude levels should be considered, using the terminology defined in the paper.

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Interaction Magnitude	Organisational Structure	Communications	Information Sharing	Decision Making and Operating Procedures	Authority and Accountability	Culture and Values	Planning and Evaluation
Transformed	▪ Organisational boundaries become significantly blurred, with widespread staff exchange, creation of hybrid commands and pooling of resources.	▪ Communication resources are shared between organisations ▪ Communication channels are de-coupled from communication resources ▪ Collaborative decentralisation is possible ▪ C2 infrastructure not dependent on cross-organisational boundaries	▪ Security and ownership issues transcended: information is not 'owned', it is simply 'there' ▪ Information is corroborated from multiple sources, meta-information contains value, cultural and belief perspectives ▪ Information decay is overcome	▪ Decision-making by consensus rather than authority ▪ Dissolution of organisational boundaries means decision-making chain integrated cross-organisationally	▪ Authority delegated from permanent or temporary high-level strategic bodies (e.g. such as an expanded NAC, similar to the UN Security Council)?	▪ "Extra-subjective" sensemaking to the extent that separate organisational cultures (with regard to the interaction or issue of interaction) are irrelevant	▪ Planning processes are synchronised at all levels and stages ▪ Resources are commonly pooled ▪ Reliance on other organisations' evaluations
Collaborative	▪ Separate, decentralised planning and execution organisations formed, that share power and authority between organisations and may control shared resources ▪ Permanent staff exchanges	▪ Communication planned by senior leadership and enacted during operations ▪ Collaborative mechanisms (email, phone, online tools) are widespread ▪ Physical C2 cross-organisational infrastructure begins to emerge	▪ Multi-source, corroborated and rich with meta-data ▪ Information is pushed and pulled as required	▪ Combined decision-making at all levels in organisations ▪ Decentralized forums make key policy decisions ▪ Decision making by consensus or deliberative methods ▪ Separate organizational rules, norms and conventions converge into joint, formal operational procedures	▪ Emerging cross-organisational authority - organizations having authority over staff and resources from other organizations) ▪ Mutual accountability compacts developed for decentralized network structures as risk is widely shared	▪ "Extra-subjective" organisational sensemaking (situational awareness and organisational cultural identities built through shared (but not equal) cultural perspectives)	▪ Planning processes are synchronised at output level (i.e. detailed project plans) ▪ Resources allocation is based on the assumption that sets of resources are commonly pooled ▪ Planning for division and sharing of evaluation tasks and resources
Coordinated	▪ Formal cross-organizations forums or committees ▪ Institutionalization of forum / committee output into organization's independent planning and execution processes ▪ Organizations still maintain relative independence ▪ Relationships have backing of organization leadership	▪ Cross-organizational communication institutionalized in organizational processes ▪ Voluntary information sharing become standard. ▪ Formal communications infrastructure emerges (e.g. joint webpages and e-mail addresses, dedicated phone numbers)	▪ Information is Multi-source and corroborated inter-organisationally ▪ Timeliness begins to depend on cross-organisational boundaries ▪ Each organisation begins to push as well as pull	▪ Mandated by senior leadership and Combined decision-making at high level of organizations ▪ Lead organization maybe responsible for key policy decisions	▪ Wide ranging delegation of authority to exchange / liaison staff to plan goals and allocate resources (e.g. operational cdr having freedom to allocate mission resources to support UN tactical operations without having to receive authorisation from higher levels)	▪ "Generic-subjective" organisational sensemaking (situational awareness and cultural identities built through structural mechanisms)	▪ Planning processes are synchronised at outcome level (i.e. the operational level). ▪ Goals are agreed cross-organisationally ▪ Resource allocation is de-conflicted at the operational level ▪ Sharing of evaluation results and practices ▪ Coordination to avoid duplicating evaluations
Deconflicted	▪ Regular, informal, cross-organisational meetings with individual staff members ▪ Communities of interest may emerge ▪ Organizations still operate relatively independently of each other	▪ Some limited person to person communication performed on individual's own initiative, usually ad-hoc ▪ Information exchanges between organisations are 'pulls'	▪ Each organisation pulls from external sources or external organisations when required.	▪ Individual leader's decision-making may be influenced by the activities or plans of another organisation as a result of informal interactions ▪ Organizational rules, norms and conventions completely independent	▪ Some limited delegation of specific functional authority to lower levels (e.g. specific guidance to an operational commander to interact as he sees fit) ▪ Traditional authority still dominant ▪ Accountability remains with individual organizations	▪ "Inter-subjective" organisational sensemaking (situational awareness built through social interactions)	▪ Planning processes are synchronised at impact level, i.e. top-level goals are shared cross-organisationally ▪ Completely separate evaluation processes and resources, some mutual awareness of other organisations programmes

Interaction Magnitude	Organisational Structure	Communications	Information Sharing	Decision Making and Operating Procedures	Authority and Accountability	Culture and Values	Planning and Evaluation
Conflicted	▪ Independent organizational structures ▪ Organizations function entirely separately.	▪ No cross-organizational communication ▪ Information owned and controlled by each respective organization ▪ Classification and ownership issues mean only very limited or no information sharing possible	▪ Information owned and controlled by each respective organisation ▪ Classification and ownership issues mean only very limited or no information sharing possible	▪ Decision making independent within each individual organisation ▪ No shared goals	▪ Traditional legal-rational authority in a hierarchical chain ▪ Authority limited to within organizational boundaries	▪ Independent sensemaking models for each organisation.	▪ Planning processes are independent and do not overlap. ▪ Potential for duplicative evaluations

Table 1: Indicators of Increasing Interaction Magnitude