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**NAVAL
POSTGRADUATE
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MONTEREY, CALIFORNIA

THESIS

**FOSTERING PARTNERSHIP IN HUMANITARIAN AID
AND DISASTER RELIEF**

by

John P. Wishart

June 2008

Thesis Advisor:
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Erik Jansen
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**FOSTERING PARTNERSHIP IN HUMANITARIAN AID AND DISASTER
RELIEF**

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Submitted in partial fulfillment of the
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from the

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ABSTRACT

Humanitarian aid operations are a social and interactive enterprise among a variety of international partners. There are currently many initiatives that attempt to enhance collaboration between United States Government Agencies, foreign governments, international government organizations, non-governmental organizations (NGOs), and private volunteer organizations. The diverse nature of organizations and numbers of groups involved in a complex humanitarian emergency is extraordinary. Participants must understand there are multiple factors that impact the collaborative capacity of groups in humanitarian aid and disaster relief operations. They need to understand that some NGOs will work with the military and some will not. Military forces must respect NGO needs for independence, neutrality, transparency, and impartiality. However, when actors can come to an agreement regarding contact within these environments the sum of their efforts will be greater than their individual contributions. Face-to-face contact is crucial in enhancing collaborative capacity. Individuals build trust through face-to-face contacts which can translate to more frequent contact using other less personal or social modes of communication. Collaboration is an iterative process. Participants must build collaborative capacity over time by focusing on developing swift trust and be aware of cultural understanding. Participants must also use face-to-face contact at the initial meeting. After swift trust is established, participants can use media of decreasing richness over time, but should schedule face-to-face meetings to ensure collaboration is maintained.

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I. INTRODUCTION

Humanitarian aid operations are intensely social and interactive among a variety of international partners. There are currently many initiatives that attempt to enhance collaboration between the United States military and non-governmental organizations (NGOs). The diverse nature of organizations and numbers of groups involved in a complex humanitarian emergency is extraordinary. Generally, the central government is the authority within the country, but military units and NGOs all work together in the same geographical space. However, the boundaries that separate the groups are not geographic but structural and relational. The author uses Hocevar, Thomas, and Jansen's definition of collaborative capacity as "the ability of organizations to enter into, develop, and sustain interorganizational systems in pursuit of collective outcomes."¹ Collaboration allows groups to accomplish what individuals alone cannot and it prevents duplication of individual or organizational efforts. Collaboration is most beneficial when organizations are interdependent and rely on each other to achieve a common goal or task.² Finally, interorganizational reliance provides an opportunity for organizations to coordinate their work and find ways to work well with one another.³ Virtual collaborative networks are networks where individuals rely on information technology to mediate traditional geographical and temporal boundaries of an organization. The result is a "company without walls" that operates as a virtual "collaborative network of people," independent

¹ Susan Page Hocevar, Gail Fann Thomas and Erik Jansen, "Building Collaborative Capacities: An Innovative Strategy for Homeland Security Preparedness," *Innovations through Collaboration, Advances in Interdisciplinary Studies of Work Teams* 12 (2006): 256.

² Tammy A. Rinehart, Anna T. Laszlo and Gwen O. Briscoe, *COPS Collaboration Toolkit: How to Build, Fix and Sustain Productive Partnerships* (Washington, D.C.: Office Of Community Oriented Police Services, U.S. Department of Justice, 2001): 6. www.hsdh.org/homsec/docs.justice/nps18-053105-07.pdf.

³ Gail Fann Thomas, Susan Page Hocevar, Erik Jansen. A Diagnostic Approach To Building Collaborative Capacity In An Interagency Context. (Monterey, CA: Naval Postgraduate School, September 25, 2006): 2.

of location or affiliation.⁴ A virtual collaborative network is a network that operates across space, time, and organizational borders by webs of communication technologies.⁵

A method to encourage collaboration is to use the flexibility of the internet to communicate and share information virtually. The concept of virtual implies interfaces and boundaries; project teams that rapidly form, reorganize, and dissolve when the needs of a dynamic marketplace change; and individuals with differing competencies who are located across time, space, and cultures.⁶ For the first time, the internet provides a framework to enable full collaboration between geographically dispersed participants.⁷ This is highly attractive because of the distributed nature of operations in humanitarian aid and disaster response operations. Virtual networks are groups of geographically dispersed organizational members who communicate and carry out their activities through information technology.⁸ Virtual collaborative networks can leverage the communicative and interconnective capability of the internet enhancing the efficiency and harmonizing HADR groups. Virtual collaborative networks are an attractive method to harmonize the efforts of all of the groups in a natural disaster. These virtual connections tie people together for effective information exchange and communications among the US military, U.S. Departments and Agencies, foreign governments and security forces, International Organizations, NGOs, and members of the private sector involved in stability operations.⁹ Virtual collaborative networks add a unique capability to large scale, geographically dispersed operations by coordinating different elements

⁴ Yulin Fang. Should I stay or should I go? Worker commitment to virtual organizations. System Sciences, HICSS 2006. Proceedings of the 39th annual Hawaii international conference. ed. D. J. Neufeld (2006): 1 <http://ieeexplore.ieee.org.libproxy.nps.edu/search/selected.jsp>.

⁵ Joyce Yi-Hui Lee and Niki Panteli, "A Framework for Understanding Conflicts in Global Virtual Alliances." University of Bath School of Management (Aug 2008), <http://www.bath.ac.uk/management/research/pdf/2007-08.pdf>.

⁶ Sirkka L Jarvenpaa and Dorothy E. Leidner. "Communication and trust in global virtual teams," *Organization Science* 10, (6, Special Issue: Communication Processes for Virtual Organizations) (Nov – Dec 1999), 791-815, <http://links.jstor.org/>

⁷ Extranet. Website. <http://www.tartsystems.com/extranet.htm>.

⁸ Anthony F. Chelte, "Challenges of Virtual Teams in the Classroom," *The Journal of Behavioral and Applied Management* 4 no. 1 (Winter, 2003), http://www.ibam.com/pubs/jbam/articles/vol4/article4_7.htm.

⁹ Department of Defense Directive 3000.05, "Military Support for Stability, Security, Transition, and Reconstruction (SSTR) Operations," (Nov 28, 2005).

from different points in space tied together by the internet. By understanding the capabilities of all parties, each group may agree to work with one another from geographically dispersed locations and establish planning meetings virtually, either asynchronously or simultaneously. However, there are certain barriers to collaboration that contributing partners must understand in order to share information and collaborate effectively which are discussed in the thesis.

A. RESEARCH QUESTION

The central question for this thesis is: how can non-governmental organizations and military personnel build collaborative capacity in humanitarian aid and disaster relief operations during the initial phase of an operation?

B. PRIOR RESEARCH

There has been extensive research in virtual collaborative networks and virtual work groups in industry. There has been extensive research in understanding how the military and non-governmental organizations (NGOs) can collaborate more effectively during a humanitarian aid operation. There has been significant research in enhancing United States government interagency collaboration after the attacks on September 11, 2001 and after Hurricane Katrina. There has been limited research regarding the use of the information and communications technology during international disaster relief and humanitarian aid operations.

In this thesis, the author discusses applicable literature of open systems theory and sociotechnical systems theory. The author examines how trust and cultural understanding affect the propensity for individuals to communicate during HADR operations. This is covered in more detail in Chapter II.

C. SIGNIFICANCE OF RESEARCH

In a humanitarian crisis or disaster relief situation, the capacity of a single nation's internal disaster response capability can be overwhelmed. Other nations and groups can add their collective capacity to help alleviate suffering. There are numerous

groups and organizations that participate in HADR operations. The United States Institute for Peace states that there are approximately 38,000 NGOs around the world.¹⁰ There are also 192 Member States of the United Nations.¹¹ Additionally, each member state of the United Nations may have air, land, and sea forces that may be used in humanitarian aid, disaster relief (HADR), or stabilization operations. Finally, there were 324 natural disasters from 1950 to 2001, which may combine many of the aforementioned groups.¹²

Social, cultural and organizational differences between U.S. military forces, multinational forces, other U.S. and foreign government agencies and nongovernmental organizations (NGOs) make interactions between members of these organizations engaged in stability, security, transition and reconstruction operations (SSTR) less effective.¹³ If humanitarian agencies are to perform their valuable functions of aiding those victimized by internal conflicts and regional warfare, they will need to cooperate more closely with military forces. In turn, military organizations will need to provide better support for the vital mission performed by UN humanitarian organizations and NGOs.¹⁴

During the 2004 Asian Tsunami, collaboration between Indonesian and foreign troops was problematic. Initially, there were no civil-military coordination experts to persuade the military to share information or take aid workers on flights to assess needs. Nevertheless, most agreed that without the military, this would have been a major crisis.¹⁵ Military operations must be strategically integrated and operational as well as

¹⁰ Robert Perito. *Guide for Participants in Peace, Stability, and Relief Operations* (Washington, D.C.: The United States Institute of Peace Press, 2007): 101.

¹¹ List of UN Member States. Website. <http://www.un.org/members/list.shtml>.

¹² Anonymous. *Population and Development Review*, 28, no. 1 p. 171-174. (Mar 2002): 172. <http://www.jstor.org/stable/3092777>.

¹³ Roxanne Zolin, "Swift Trust in Hastily Formed Networks," (Naval Postgraduate School), <http://www.nps.edu/cebrowski/Docs/swiftrust100302.pdf>.

¹⁴ Andrew Harris, Peter Dombrowski "Military collaboration with humanitarian organizations in complex emergencies," *Global Governance* 8, no. 2 (Apr 1 2002): 155-178. <http://www.proquest.com.libproxy.nps.edu/> (accessed April 26, 2008).

¹⁵ Iolanda Jaquemet, "World Disasters Report - Chapter 4," The International Federation of Red Cross and Red Crescent Societies (2005) <http://www.uat.ifrc.org/publicat/wdr2005/chapter4.asp>.

tactically coordinated with the activities of other agencies of the USG, IGOs, NGOs, regional organizations, the operations of foreign forces, and activities of various host nation (HN) agencies.¹⁶

D. METHODOLOGY

The primary method to gather data for this thesis was retrospective interviews of military, NGO, and IGO personnel who have been directly involved with humanitarian aid, disaster relief, or stabilization operations. Telephonic interviews, face-to-face interviews, and questionnaires were used to determine barriers and enablers to collaboration. Online questionnaires were posted on a Department of Defense community of interest website and a link to the questionnaire was distributed to personal contacts of the author. Additionally, some respondents passed on the questionnaire to other qualified personnel within the humanitarian aid and disaster relief community.

Hocevar, Thomas, and Jansen have provided several foundational projects for the author's research. Their development of enablers and barriers to collaboration "Building Collaborative Capacity: An Innovative Strategy for Homeland Security Preparedness"¹⁷ were used as the framework from which the author developed the thesis. *A Diagnostic Approach to Building Collaborative Capacity in an Interagency Context*¹⁸ provided ideas regarding collaboration with United States government agencies. Bertram's Naval Postgraduate School thesis, *Factors That Effect Interagency Collaborations: Lessons During and Following the 2002 Winter Olympics*¹⁹ provided the format and structure for this work. The majority of the questions for the thesis were derived from a questionnaire

¹⁶ Joint Publication 3-08, *Interagency, Intergovernmental Organization, and Nongovernmental Organization Coordination During Joint Operations Volume I*. (Mar 17 2006): I-1.

¹⁷ Susan Page Hocevar, Gail Fann Thomas, and Erik Jansen, "Building Collaborative Capacity: An Innovative Strategy for Homeland Security Preparedness," in *Innovation Through Collaboration: Advances in Interdisciplinary Studies of Work Teams* 12, Amsterdam, The Netherlands: Elsevier Ltd. (2006): 262.

¹⁸ Gail Fann Thomas Susan Page Hocevar and Erik Jansen, "A Diagnostic Approach to Building Collaborative Capacity in an Interagency Context," (Monterey, CA: The Naval Postgraduate School, Sep 25 2006).

¹⁹ Christopher D. Bertram, "Factors that Effect Interagency Collaborations: Lessons During and Following the 2002 Winter Olympics," (Thesis, Naval Postgraduate School Mar 2008).

developed by Dr. Roxanne Zolin.²⁰ The discussions cover the social and technical aspects of including trust, culture, and communication mechanisms including face-to-face contact and technology. The author analyzed the results from the interviews and identified what actions actors need to take to enhance collaboration and build collaborative capacity.

E. SUMMARY

The author examines the propensity of individuals and groups to collaborate by interviewing 34 members of the international humanitarian aid community. Complex humanitarian aid operations involve members of the affected nation, NGOs, the United Nations, and possibly members of the United States government. Virtual collaboration can provide a mechanism to improve efficiency, reduce duplication, and harmonize the efforts of the international aid community.

In Chapter II, the author reviews the literature regarding systems theory and sociotechnical systems theory, which is used to frame the overall research. The author then examines enablers to collaboration including trust, culture, and communication mechanisms. The author used the themes identified in the literature regarding social and technical factors to collaboration. The author generated questions from the literature for the questionnaire used in Chapter III.

In Chapter III, the author discusses the methodology, the contributors, interviews, the interview process, analysis, and limitations to the study. In Chapter IV, the author discusses the interview findings including what processes and actions participants need to execute to collaborate more effectively. Types of communication media are also covered. In Chapter V, the author concludes the thesis and discusses the findings, implications, recommendations, and further research.

²⁰ Dr. Roxanne Zolin provided an unpublished paper to the author which evaluated a Department of Defense community of interest website. Roxanne Zolin, "HA/DR Websites," (Naval Postgraduate School, Aug 29 2007).

II. BACKGROUND / LITERATURE REVIEW

A. BACKGROUND

Social, organizational, and contextual factors can limit and shape the willingness of civilian and military personnel and organizations to openly cooperate and share information and capabilities. “Constructing collaborative information environments is not primarily a technology issue. Effective, low-cost network equipment and data management systems exist today, and more are being developed. Rather, the challenges are largely social, institutional, cultural, and organizational.”²¹ U.S. DoD Joint Publication JP 3-08 states, “Handled improperly, the relief community can be alienated by a perception that, contrary to its philosophical ideals, it is considered no more than an intelligence source by the military.”²² The military emphasizes national security, public order, and force protection—all of which are enhanced by assertively addressing and reducing the sources of threat whereas civilian assistance providers, on the other hand, equate security with ensuring that belligerents do not perceive them as a threat.²³ Interestingly, NGOs frequently possess valuable information but are reluctant to share intelligence with security forces for fear of reducing their relationship with the affected population and increasing their own risk by appearing partial. For their part, security organizations loathe sharing information with NGOs because sharing information

²¹ Larry Wentz, “An ICT Primer Information and Communication Technologies for Civil-Military Coordination in Disaster Relief and Stabilization and Reconstruction,” (Center for Technology and National Security Policy, National Defense University Washington, D.C., Jul 2006).

²² Joint Publication 3-08, *Interagency, Intergovernmental Organization, and Nongovernmental Organization Coordination During Joint Operations, Volume I*. (Washington, D.C.: Department of Defense, Mar 17 2006): III-26.

²³ Michael J. Dziedzic and Michael K. Seidl, “Provincial Reconstruction Teams and Military Relations with International and Nongovernmental Organizations in Afghanistan,” *United States Institute for Peace. Special Report 147*, (Sep 2005), <http://www.usip.org/pubs/specialreports/sr147.pdf>, 2.

risks compromising operations and sources.²⁴ Government officers need to be more sensitive and respectful of boundaries when seeking information from NGOs.²⁵

B. THEORETICAL FOUNDATION

This section reviews the systems theory and sociotechnical systems theory literature to describe the interaction of the participants in a humanitarian aid/disaster relief (HADR) operation. Systems theory is the basic frame of reference used to describe humanitarian aid groups. From this theoretical frame, the author describes how different factors impact the way individuals collaborate.

Sociotechnical systems theory (STS) is the study of the interactions between people and machines and computers. The author's goal is for the reader to understand that social and technical factors are important to virtual collaborative networks. It is an idea of joint optimization, where one element compliments the other.

1. Systems Theory

A system of systems that interact with each other could be seen as a system.²⁶ These interactions are not simple, linear cause and effect relations, but complex networks of interdependencies that only can be understood by their common purpose: maintaining the system in good health.²⁷ A "systemic approach unifies and concentrates on the interaction between elements and studies the effects of interactions."²⁸

During a crisis, there is no hierarchical command and control network between the groups that conduct HADR operations; instead there is an ad hoc and unstructured

²⁴ Scott Feil, "Building Better Foundations: Security in Postconflict Reconstruction," *The Washington Quarterly*, 25, no. 4 97–109. (Autumn 2002): 107.

²⁵ Ellen B. Laipson, "Can the USG and NGOs Do More? Information-Sharing in Conflict Zones," *Studies in Intelligence*, 49, no. 4. (2005), https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol49no4/USG_NGOs_5.htm.

²⁶ C. Heylighen, "Basic Concepts of the Systems Approach," In: F. Heylighen, C. Joslyn and V. Turchin (Editors): *Principia Cybernetica Web* (Principia Cybernetica, Brussels, 1998), <http://pespmc1.vub.ac.be/sysappr.html>.

²⁷ *Ibid.*, 3.

²⁸ J. De Rosnay, "Analytic vs. Systemic Approaches", ed. F. Heylighen, C. Joslyn and V. Turchin, *Principia Cybernetica Web* (Brussels: Principia Cybernetica, 1997), <http://cleamc11.vub.ac.be/ANALSYST.html>.

relationship that requires a horizontal or networked relationship. Response organizations must build adaptive organizational networks that “rely on internal and external feedback, organizational learning from the reactions of the external environments to its decisions, distributed decision making by small ad hoc teams, and a high degree of flexibility and innovation.”²⁹

“A purposive system is a multi-goal-seeking system the different goals of which have a common property. Production of that common property is the system's purpose. These types of system can pursue different goals but they do not select the goal to be pursued. The goal is determined by the initiating event. But such a system does choose the means by which to pursue its goals. “³⁰ A system is an aggregate of elements considered together with the relationships holding among them.”³¹ “A system is closed if no material enters or leaves it; it is open if there is import and export and, therefore, change of the components. Living systems are open systems, maintaining themselves in exchange of materials with environment, and in continuous building up and breaking down of their components.”³² In another work, Von Bertalanffy (1950) writes that, “A system can be defined as a complex of interacting elements.”³³

2. Sociotechnical Systems Theory

Emery and Trist (1969) developed sociotechnical systems theory (STS), which is an open systems theory. It emphasizes that an optimizing organizational system requires detailed attention to both the technological and the social components.³⁴ Kelly states that

²⁹ John R. Harrald, “Agility and Discipline: Critical Success Factors for Disaster Response,” *The Annals of the American Academy of Political and Social Science* 604 (2006): 265, <http://ann.sagepub.com/cgi/content/abstract/604/1/256>.

³⁰ Russell L. Ackoff, “Towards a system of systems Concepts,” *Management Science* 17, (11, Theory Series) (Jul 1971): 666. <http://links.jstor.org/>.

³¹ Andras Angyal, “The Structure of Wholes,” *Philosophy of Science* 6, no. 1, (Jan 1939): 28. <http://links.jstor.org.libproxy.nps.edu>.

³² Ludwig Von Bertalanffy, “The Theory of Open Systems in Physics and Biology,” *Science* 111, (Jan 13 1950): 23. <http://links.jstor.org.libproxy.nps.edu/>.

³³ Ludwig Von Bertalanffy, “An Outline of General System Theory,” *The British Journal for the Philosophy of Science* 1, no. 2, (Aug 1950): 143. <http://links.jstor.org.libproxy.nps.edu/>.

³⁴ F.E. Emery and E.L. Trist, “Sociotechnical Systems,” *Systems Thinking*, ed. F.E. Emery, (Baltimore, MD: Penguin Books, 1969): 284.

sociotechnical systems theory originated shortly after the Second World War in a paper on the effects of mechanization in British coal mines that argued that neither technology nor social systems could be seen as individual components, but is interrelated and interact with one another.³⁵ The notion of the STS was expanded to that of the “open system”; in other words, an enterprise could not be treated in isolation from its “environment,” such as product or labor markets.³⁶ Occupational roles express the relationship between a production process and the social organization of the group.³⁷ In their seminal coal mining study, work groups were shattered by the introduction of new machinery, leading to performance levels much lower than expected by the technical considerations of engineers. The engineers did not take into account the social considerations and reorganization required with the introduction of the machinery. The hierarchy that was developed after decades of hand labor was reorganized and the mining output was not appreciably increased.

Beyond matching the social and technical dimensions of work, a socio-technical system must also relate effectively to the task environment - those external elements that are relevant to the setting and achievement of system goals.³⁸ Sociotechnical systems theory seeks to improve productivity and human enrichment through a design process that focuses on the interdependencies among people, technology, and environment.³⁹ This perspective views production systems as comprised of both technological and social parts. The former consists of the equipment and methods of operations used to transform raw materials into products or services; the latter includes the work structure that relates

³⁵ John E. Kelly, “A Reappraisal of Sociotechnical Systems Theory,” *Human Relations* 31 no. 12, (1978): 1071. <http://hum.sagepub.com/cgi/content/abstract/31/12/1069>.

³⁶ Ibid.

³⁷ E. L. Trist and K. W. Bamforth “Some Social and Psychological Consequences of the Longwall Method of Coal-Getting: An Examination of the Psychological Situation and Defenses of a Work Group in Relation to the Social Structure and Technological Content of the Work System,” *Human Relation* 2 vol. 4 (1951): 14.

³⁸ Thomas G. Cummings, “Self-Regulating Work Groups: A Socio-Technical Synthesis,” *The Academy of Management Review* 3, no. 3, (Jul 1978): 626. <http://links.jstor.org>.

³⁹ Ibid.

people to the technology and to each other.⁴⁰ A sociotechnical system can perform optimally only if the social and technical dimensions are designed to fit the demands of each other and of the environment. Attempts to optimize the technical or social dimension alone result in the suboptimization of the socio-technical whole.⁴¹

C. TRUST

Austrian biologist Ludwig von Bertalanffy argued that, in designing organizations, too much attention is focused on individual pieces and not enough on the relationship of all of the pieces as they interact with one another.⁴² The key tenet of STS theory is the principle of joint optimization - an organization can perform optimally only if the social and technical dimensions are designed to fit the demands of each other and of the environment and attempts to optimize the technical or social dimension alone result in the suboptimization of the socio-technical whole.⁴³ This interdependence creates a point in space where different teams must work together in order to solve a problem. Trust, cultural understanding, and communication impact this collaboration, as discussed next.

Mishra states, “Trust is one party's willingness to be vulnerable to another party based on the belief that the latter party is 1) competent, 2) open, 3) concerned, and 4) reliable.”⁴⁴ Additionally, Rousseau, *et al.* offers a compelling definition of trust, “Trust is a psychological state comprising the intention to accept vulnerability based on positive

⁴⁰ Thomas G. Cummings, “Self-Regulating Work Groups: A Socio-Technical Synthesis,” *The Academy of Management Review* 3, no. 3 (Jul 1978): 626. <http://links.jstor.org>.

⁴¹ Victoria L. Mitchell and Barrie R. Nault, “The Emergence of Functional Knowledge in Sociotechnical Systems,” Haskayne School of Business, University of Calgary, Calgary, Alberta, Canada, Nov 2003): 5.

⁴² David Hanna, *Understanding How Organizations Function, Designing Organizations for High Performance*. (New Jersey: Prentice Hall, 1988): 9.

⁴³ Victoria L. Mitchell and Barrie R. Nault, “The Emergence of Functional Knowledge in Sociotechnical Systems,” Haskayne School of Business, University of Calgary, Calgary, Alberta, Canada, Nov 2003): 5.

⁴⁴ Aneil K. Mishra, “Organizational Responses to Crisis: The Centrality of Trust” in *Trust In Organizations*, ed. Kramer, Roderick M. and Thomas Tyler (Newbury Park, CA: Sage, 1996): 5. <http://totaltrust.files.wordpress.com/2006/02/Trust%20Book%20Chapter1.pdf>

expectations of the expectations or behavior of another.”⁴⁵ Furthermore, trust is critical in developing a collaborative relationship over time. However, Dodgson contends that effective learning between partners depends on the construction of a "climate" of trust engrained in organizational modes of behavior, and supported by the belief in the mutual benefits of collaboration throughout the organization. Dodgson also states that many studies of the process of collaboration refer to the necessity of high levels of trust between partner firms in order to facilitate communication and learning; trust is a crucial component.⁴⁶ Zolin's concept of swift trust is couched within temporary teams, particularly when there is pressure due to time or importance ascribed to achieving the project goals. This is typical of the context of SSTR. Swift trust is, “The willingness to rely upon team members to perform their formal and informal roles in a hastily formed temporary team involved in some aspect of SSTR (Security, Stabilization, Transition, and Reconstruction Operations).”⁴⁷

Trust is a critical element in order to communicate effectively. Holohan states (p. 35), trust is intrinsic to greater identification with the mission, greater exchange of resources and information, and greater cooperation in problem solving.⁴⁸ If one group or person does not trust another, they may not provide information that can impact the overall effort of the operation. According to Sztompka's missive on *Trust, instrumental trust* is based on expectations of relating to capability, reliability, dependability, competency, and efficiency.⁴⁹ In addition, Sztompka also elaborates on the concept of *axiological trust* which is based on moral expectations of integrity and for moral

⁴⁵ Denise M Rousseau, Sim B Sitkin, Ronald S Burt, Colin Camerer. “Not So Different After All: A Cross-Discipline View of Trust,” *Academy of Management. The Academy of Management Review* 23, no. 3 (July 11 998): 395. <http://www.proquest.com>.

⁴⁶ Mark Dodgson, “Learning, Trust, and Technological Collaboration,” *Human Relations*, 46, no. 1 (January 11 993): 77. <http://www.proquest.com/>.

⁴⁷ Roxanne Zolin, “Swift Trust in Hastily Formed Networks,” (Naval Postgraduate School), <http://www.nps.edu/cebrowski/Docs/swifttrust100302.pdf>.

⁴⁸ Anne Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*, (Stanford, CA: Stanford University Press, 2005).

⁴⁹ Piotr Sztompka. *Trust: A Sociological Theory*, (U.K.: Cambridge University Press, 2000): 53.

responsibility.⁵⁰ Performance can be measured and trust can be granted conditionally, based on the results of the evaluation period.⁵¹

These interactions are not simple, linear cause and effect relations, but complex networks of interdependencies.⁵² The relationship between participants as they interact with one another⁵³ is critical to enable trust between groups. Trust is critically important in new and temporary organizations, because it acts as a substitute for the traditional mechanisms of control and coordination.⁵⁴

D. CULTURAL UNDERSTANDING

Arai states that culture is an ever-evolving system of shared patterns of meaning-making that consciously and sub-consciously shape and reshape human behaviors and perceptions; it is a dynamic process through which people come to assign symbolic meaning to natural and social phenomena and to perceive what they believe is legitimate or illegitimate.⁵⁵ Culture is another component to enhancing or enabling collaboration. Lipnack and Stamps (1997) make a case that a successful virtual community is 90 percent culture and 10 percent technology.⁵⁶ Differences in organizational missions, structures and processes, and cultures create problems that make communication, coordination, cooperation and ultimately collaboration less effective.⁵⁷

⁵⁰ Piotr Sztompka. *Trust: A Sociological Theory*, (U.K.: Cambridge University Press, 2000): 54.

⁵¹ *Ibid.*, 77-78.

⁵² *Ibid.*, 3.

⁵³ David Hanna, *Understanding How Organizations Function, Designing Organizations for High Performance*. (New Jersey: Prentice Hall, 1988): 9.

⁵⁴ Eva C. Kasper-Fuehrera and Neal M. Ashkanasy, "Communicating Trustworthiness And Building Trust In Interorganizational Virtual Organizations," *Journal of Management* 27 (2001): 238, <http://jom.sagepub.com/cgi/reprint/27/3/235>.

⁵⁵ Tatushi Atai, "Making Sense of it All: Cross Cultural Understanding," (The Naval Postgraduate School's Center for Stabilization and Reconstruction Studies presented a workshop on cultural understanding in Monterey, CA, Sep 12 2007).

⁵⁶ D. Calvin Andrus, "The Wiki and the Blog: Toward a Complex Adaptive Intelligence Community," *Studies in Intelligence* 49, no. 3, (Sept. 2005): 25.

⁵⁷ Roxanne Zolin, "Swift Trust in Hastily Formed Networks," (Naval Postgraduate School), <http://www.nps.edu/cebrowski/Docs/swiftrust100302.pdf>.

Anne Holohan provides a unique insight into culture and HADR and stabilization operations. She states, “For a network organization to be effective, it must produce an institutional culture, or a shared identity and understanding of how things are done, that serve throughout its existence.”⁵⁸ This new culture is created when collaborating organizations come together in response to a problem. The new culture must foster trust and identification with the new organization as well as the mission; only then sufficient information exchange and cooperative problem solving occur to fulfill the mission’s goals.⁵⁹

Organizations may have contrasting objectives, strategies for reaching their goals, and measures of success, all of which contribute to misunderstanding and distrust. Even when actors overcome ideological, language, and professional barriers, other obstacles, such as competition over limited resources, remain.⁶⁰ For information to flow across community divides, members must identify with a mission larger than their organization’s own goals. In places where trust is a rare commodity, personal relationships are essential for making things happen.⁶¹ Experiences and lessons from real-world relief efforts and post-conflict recovery operations suggest the need to create a common culture of trust in information networks and communications between civilian governments, military organizations, IGOs, and NGOs.⁶²

To summarize, HADR operations are systems. Each HADR group interacts with other systems during an operation. Individual participants interact with one another as elements of larger systems. Today, participants have access to technology that can enhance collaboration, but trust and cultural understanding are essential to effective collaboration.

⁵⁸ Anne Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*. (Stanford, CA: Stanford University Press, 2005): 6.

⁵⁹ *Ibid.*, 90.

⁶⁰ Rebecca Linder, “Wikis, Webs, and Networks: Creating Connections for Conflict- Prone-Settings,” (Oct 15 2006): 9, http://www.csis.org/media/csis/pubs/061018_pcr_creatingconnections.pdf.

⁶¹ *Ibid.*, 24.

⁶² Larry Wentz, *An ICT Primer Information and Communication Technologies for Civil-Military Coordination in Disaster Relief and Stabilization and Reconstruction*. (Washington, D.C.: Center for Technology and National Security Policy, National Defense University, July 2006): 5.

1. Cultural Misunderstanding and the Need for Trust

Different cultural approaches to information affect the priority given to seeking information-sharing relationships.⁶³ Government officers need to be more sensitive and respectful of boundaries when seeking information from NGOs.⁶⁴ Creating a common communications culture—increasing trust and setting a foundation for collaboration and information sharing—must be done without undermining either the neutrality of civilians, IGOs, and NGOs or the need for the military to safeguard operational security information.⁶⁵ There must be a common new culture that fosters trust and identification with the mission; only then sufficient information exchange and cooperative problem solving occur to fulfill the mission’s goals. ⁶⁶ Pre-existing common culture and the demand for trust within the collaboration strongly affect how much formal and informal trust is produced in collaboration. ⁶⁷ The military’s distinct organizational culture, which makes the military very effective in combat, may frustrate civilian relief organization personnel, who may find the military inflexible and inscrutable. By contrast, civilian relief organizations often have radically different organizational cultures and structures. They tend to be less formal, less authoritarian, and less focused on internal traditions or security concerns. ⁶⁸ Military organizations have a very proactive and obtrusive force protection posture designed to ward off threats through a variety of mechanisms including patrols, intelligence gathering activities, interrogations, and maintaining constant vigilance of future actions and planning through operational security (OPSEC). NGOs, correspondingly, maintain their safety by establishing an aura of transparency and

⁶³ Ellen B. Laipson, “Can the USG and NGOs Do More? Information-Sharing in Conflict Zones,” *Studies in Intelligence*, 49, no. 4. (2005), https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol49no4/USG_NGOs_5.htm.

⁶⁴ Ibid.

⁶⁵ Larry Wentz, *An ICT Primer Information and Communication Technologies for Civil-Military Coordination in Disaster Relief and Stabilization and Reconstruction*. (Washington, D.C.: Center for Technology and National Security Policy, National Defense University, July 2006): 51.

⁶⁶ Anne, Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*. (Stanford, CA: Stanford University Press, 2005): 90.

⁶⁷ Ibid., 72-73.

⁶⁸ Larry Wentz, *An ICT Primer Information and Communication Technologies for Civil-Military Coordination in Disaster Relief and Stabilization and Reconstruction*. (Washington, D.C.: Center for Technology and National Security Policy, National Defense University, July 2006): 25.

neutrality designed to establish a façade of benevolence towards other parties. These approaches to security and force protection are diametrically opposed: closed versus open. The military emphasizes national security, public order, and force protection, which are enhanced by assertively addressing and reducing the sources of threat; on the other hand, civilian assistance providers equate security with ensuring that belligerents do not perceive them as a threat.⁶⁹

Another interesting cultural difference is that humanitarian organizations seek to alleviate suffering without regard for the aid recipient's affiliation with any of the parties to a conflict. There is a reluctance to share information with the military, due to the civilian groups' desire to remain independent and neutral as private aid groups do not want to be perceived by the population and affected nation's leadership as an intelligence-gathering arm of the military.⁷⁰ When military units in combat provide "humanitarian-type" relief, it is typically associated with political objectives.⁷¹

E. MECHANISMS OF COMMUNICATION

Participants from developed countries have a multitude of capabilities available to them prior to deployment. In the field, actors may or may not have access to the internet or cellular service, but communications technology plays a role during an operation. However, participants still contact one another via a variety of different communication mechanisms including face-to-face contact, telephones, and radios.

1. Face-to-Face Contact and Virtual Collaboration

Face-to-face meetings are invaluable when establishing trust in distributed environments where the majority of communication is via telephone, email, or radios.

⁶⁹ Michael J. Dziedzic and Michael K. Seidl, "Provincial Reconstruction Teams and Military Relations with International and Nongovernmental Organizations in Afghanistan," *United States Institute for Peace. Special Report 147*, (Sep 2005): 1-2, <http://www.usip.org/pubs/specialreports/sr147.pdf>.

⁷⁰ Larry Wentz, *An ICT Primer Information and Communication Technologies for Civil-Military Coordination in Disaster Relief and Stabilization and Reconstruction*. (Washington, D.C.: Center for Technology and National Security Policy, National Defense University, July 2006): 4.

⁷¹ Michael J. Dziedzic and Michael K. Seidl, "Provincial Reconstruction Teams and Military Relations with International and Nongovernmental Organizations in Afghanistan," *United States Institute for Peace. Special Report 147*, (Sep 2005): 2, <http://www.usip.org/pubs/specialreports/sr147.pdf>.

Face-to-face interaction is crucial for achieving an exchange of knowledge.⁷² Today, collaborative websites add an additional capability to humanitarian aid organizations, but groups must still meet with one another in order to harmonize capabilities. In a study of the use of virtual workspaces in industry, members report the value of the face-to-face meetings which helped them coordinate during their virtual meetings and many members reported that having met a person previously at a face-to-face meeting helps them understand the other person much more clearly.⁷³ Time spent face-to-face with key actors in the humanitarian community, on the ground, can potentially produce greater collaborative results.

For groups who have long-term agendas, building trust is an important component of the team-building process. In a study targeting trust in virtual teams, Jarvenpaa and Leidner found that trust in virtual teams may form fast, but may not be substantial.⁷⁴ Zolin and Hinds state,

...trust may be more difficult to develop because coworkers have fewer opportunities to interact face-to-face, have less unplanned interaction, rely more heavily on technology to mediate their interactions, and often are more heterogeneous because they inhabit different cultural contexts.⁷⁵

Hossain and Wigand state that initial face-to-face communication is an essential prerequisite in establishing higher levels of trust among agents working from a geographically dispersed location. ICT-enabled virtual collaboration would be effective with the existence of face-to-face communication support and would lead to higher levels of satisfaction in collaboration. They conclude with the observation that building trustworthy relationships among agents is dependent on the level of face-to-face communication support.⁷⁶

⁷² Anne Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*. (Stanford, CA: Stanford University Press, 2005): 45.

⁷³ *Ibid.*, 40.

⁷⁴ Gloria Mark, "Building Virtual Teams: Perspectives on Communication, Flexibility, and Trust," *ACM SIGGROUP Bulletin*, 19, no. 3, (Dec 1998): 41.

⁷⁵ Roxanne Zolin, and Pamela J. Hinds, "Trust In Context: The Development Of Interpersonal Trust In Geographically Distributed Work," In *Trust and Distrust in Organizations*, ed. Roderick M. Kramer, and Karen Cook (New York: Russell Sage Foundation, 2004).

⁷⁶ Hossain Liaquat and Rolf T. Wigand, "ICT Enabled Virtual Collaboration through Trust," *Journal of Computer-Mediated Communication* 10 no. 1, (2004), <http://www.blackwell-synergy.com/doi/full/10.1111/j.1083-6101.2004.tb00233.x>.

Holohan describes the communication methods in Kosovo between the United Nations Civil Administrator and other groups in descending priority: face-to-face contact, telephone, voice mail, and then email.⁷⁷ The participants repeatedly focused on the need for face-to-face contact, especially in conflict or post-conflict settings. Initial meetings between personnel were nearly always conducted face-to-face. Rutkowski conducted a study of 268 participants from different professional and national cultures working together for six weeks on a specific IT project and stated that it is difficult to build efficient and operational teams in the absence of synchronous face-to-face communication, and that low levels of social presence and interactivity are recognized as main factors of failure in virtual teams.⁷⁸ Kasper-Fuehrera and Ashkanasy state that computer mediated communication (CMC) is a powerful tool to overcome time and distance barriers, but it suffers from the limitation that nonverbal communication, an important component in trust building, is difficult to achieve. Thus, while nonverbal cues are included in CMC, they are clearly not as easily transmitted as they are in face-to-face communication and interpretation of these cues is subject to cultural differences. As such, and since nonverbal cues are central to communication of trust, this represents a critical potential limitation to the value of virtual organizations.⁷⁹

In a study focusing on trust in virtual teams, Jarvenpaa and Leidner found that trust and relationship building were crucial in virtual teams; it may form fast, but may not be substantial.⁸⁰ Computer mediated communication (CMC) is a powerful tool to overcome time and distance barriers, but it suffers from the limitation that nonverbal communication, an important component in trust building, is difficult to achieve. Thus, while nonverbal cues are included in CMC, they are clearly not as easily transmitted as

⁷⁷ Anne Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*, (Stanford, CA: Stanford University Press, 2005): 117.

⁷⁸ A. F. Rutkowski, "E-collaboration: The reality of Virtuality Professional Communication," *IEEE transactions*, ed. M. Van Genuchten. Trans. T. M. A. Bemelmans, D. R. Vogel, 45, (2002): 220, <http://ieeexplore.ieee.org.libproxy.nps.edu>.

⁷⁹ Eva C. Kasper-Fuehrera and Neal M. Ashkanasy, "Communicating trustworthiness and building trust in interorganizational virtual organizations," *Journal of Management* 27, (2001): 237, <http://jom.sagepub.com/cgi/reprint/27/3/235>.

⁸⁰ Gloria Mark. December, "Building Virtual Teams: Perspectives on Communication, Flexibility, and Trust," *ACM SIGGROUP Bulletin*. 19, no. 3, (1998): 41.

they are in face-to-face communication.⁸¹ Mark (1998) states, “Some virtual team members report the value of the face-to-face interaction as providing information that helps the teams coordinate themselves during their virtual meetings and many members reported that having met a person previously in a face-to-face meeting helps them manage speaking turns with that person, interpret silences (is someone reflective?), and gives them a better understanding of questions.”⁸²

2. Technical Mechanisms of Communication

Information and communications technology (ICT) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing.⁸³ Virtual collaboration refers to the use of ICT for supporting the collective interaction among multiple parties involved.⁸⁴ Groups can leverage the power of the internet to harmonize their efforts. As companies expand globally, face increasing time compression in product development, and use more foreign-based subcontracting labor, virtual teams promise the flexibility, responsiveness, lower costs, and improved resource utilization necessary to meet ever-changing task requirements in highly turbulent and dynamic global business environments.⁸⁵ The interface that individuals make with the computers is extended beyond their line of sight to cover greater geographic areas. This ability to stretch resources and capabilities is a key element to collaboration, virtually. The concept of virtual implies permeable interfaces and

⁸¹ Eva C. Kasper-Fuehrera and Neal M. Ashkanasy, “Communicating Trustworthiness and Building Trust in Interorganizational Virtual Organizations,” *Journal of Management* 27, (2001): 237, <http://jom.sagepub.com/cgi/reprint/27/3/>.

⁸² Gloria Mark. December, “Building Virtual Teams: Perspectives on Communication, Flexibility, and Trust,” *ACM SIGGROUP Bulletin*. 19, no. 3, (1998): 40.

⁸³ Definition of ICT from SearchCIO-Midmarket.com. Website. http://searchcio-midmarket.techtarget.com/sDefinition/0,,sid183_gci928405,00.html.

⁸⁴ Liaquat Hossain, Rolf T. Wigand, “ICT Enabled Virtual Collaboration through Trust,” *Journal of Computer-Mediated Communication* 10, no. 1, (2004), <http://www.blackwell-synergy.com/doi/full/10.1111/j.1083-6101.2004.tb00233.x>.

⁸⁵ Sirkka L. Jarvenpaa, and Dorothy E. Leidner, “Communication and Trust in Global Virtual Teams,” *Organization Science* 10, (6, Special Issue: Communication Processes for Virtual Organizations) (Nov. – Dec 1999): 791.

boundaries; project teams that rapidly form, reorganize, and dissolve when the needs of a dynamic marketplace change; and individuals with differing competencies who are located across time, space, and cultures.⁸⁶

Holohan elaborates on the ways virtual forms of communication play a central role and may substitute for direct, face-to-face communication to a large extent. The history of people's interaction become part of the common interpretive space, and socioemotional content – trust, friendship, traditions, bonds, and so on – becomes part of that common interpretive space.⁸⁷

The Chief Information Officer of the Department of Defense defines a community of interest (COI) as, “Collaborative groups of users who must have a shared vocabulary to exchange information in pursuit of their shared goals, interests, missions, or business processes. This group includes end users, program managers, application developers, subject matter experts, Combatant Command, Service and Agency representatives, and IT Portfolio representatives.”⁸⁸ Much online contact is between people, who see each other in person. They mix email communication with face-to-face communication, phones, and radios; conversations that start in one medium continue in another.⁸⁹

3. Communication Challenges

Deployed personnel often lack reliable and interoperable communications links with local and international partners.⁹⁰ Problems include insufficient bandwidth, destroyed cell phone towers, no power, and incompatible equipment among partners. Moreover, even reliable communications technology is not as effective as face-to-face contact.

⁸⁶ Sirkka L. Jarvenpaa, and Dorothy E. Leidner, “Communication and Trust in Global Virtual Teams,” *Organization Science* 10, (6, Special Issue: Communication Processes for Virtual Organizations) (Nov. – Dec 1999): 791.

⁸⁷ Anne Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*, (Stanford, CA: Stanford University Press 2005).

⁸⁸ Definition of Community of Interest. DefenseLink. Website. <http://www.defenselink.mil/cio-nii/coi/>

⁸⁹ Anne Holohan, *Networks of Democracy: Lessons from Kosovo for Afghanistan, Iraq, and Beyond*, (Stanford, CA: Stanford University Press 2005): 104.

⁹⁰ Gay Matthews, “Stability, Security, Transition, and Reconstruction Observations and Recommendations from the Field, (Compilation of observations from the Strong Angel III Exercise, San Diego, CA, August 21 – 26, 2006, Nov 7 2006), http://www.strongangel3.net/files/sstr_20061107_web.pdf.

F. SUMMARY

The United Nations Interagency Standing Committee states, “It is the essential dialogue and interaction between civilian and military actors in humanitarian emergencies that is necessary to protect and promote humanitarian principles, avoid competition, minimize inconsistency, and when appropriate pursue common goals.”⁹¹ U.S. DoD Joint Publication JP-3-08 emphasizes, “Military operations must be strategically integrated and operational as well as tactically coordinated with the activities of other agencies of the USG, IGOs, NGOs, regional organizations, the operations of foreign forces, and activities of various host nation agencies.”⁹² The complex nature of HADR systems interacting with other systems creates points in space where collaboration can occur. The author highlighted the importance of trust, culture, face-to-face contact, and technical elements to enhance collaboration. Technical elements of collaboration include access to the internet, reliable power, and cellular phones. Virtual collaborative networks are attractive to participants as a result of their ability to enhance efficiency and communication.

⁹¹ United Nations Office for the Coordination of Humanitarian Affairs, *Civil-Military Relationship In Complex Emergencies: An IASC Reference Paper*, (Jun 28 2004), <http://ochaonline.un.org/>.

⁹² Joint Publication 3-08, *Interagency, Intergovernmental Organization, and Nongovernmental Organization Coordination During Joint Operations Volume I*, (Washington, D.C.: Department of Defense, Mar 17 2006): I-1.

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III. METHODOLOGY

A. RESEARCH OVERVIEW

The research question for this thesis is: how can non-governmental organizations and military personnel build collaborative capacity in humanitarian aid and disaster relief operations during the initial phase of an operation? The author divided the latter portion of the literature review into two sections: social and technical enablers to collaboration. These two components must be jointly optimized to use each of the two elements maximally. For example, a high-quality website or virtual collaborative tool without any members is completely worthless. In addition, participants and groups may maintain great relationships, trust one another, and have vast cultural understanding. They must be aware that face-to-face contact is needed to establish trust. By coupling all of the different processes together, participants can use joint optimization to enhance their collective collaboration and utilize their resources and capabilities more efficiently. This chapter describes the research methodology, the interview questions, the interview process, and how the interviews were analyzed. The author concludes with limitations to the study.⁹³

1. Contributors

Thirty-four personnel were interviewed from various civil and military groups. Twenty-three military personnel, three members of NGOs, two members of the United Nations, and six members of the U.S. government were interviewed. The participants described their level of experience, their organizational position during the operation, and to which group they belonged: NGO, military, US Interagency, or international organization. The participants have had at least one year of experience. The majority of the interviewees had more than five years of experience. The author ensured participants worked with other groups, i.e. NGO with military, international organization with military, etc. Organizations include the Mission Aviation Fellowship, Project Hope, the

⁹³ The research methodology is indebted to Chris Bertram's thesis, supervised by Dr. Erik Jansen and Dr. Susan Hocevar. Christopher D. Bertram, "Factors that Affect Interagency Collaborations: Lessons During and Following the 2002 Winter Olympics, (MA thesis, Naval Postgraduate School, Mar 2008).

Research Triangle Institute, InterAction, the United Nations, U.S. State Department, U.S. Department of Defense, the U.S. and German Army, the U.S. Navy, U.S. Air Force, and the U.S. Marine Corps, and the emergency services division of the Dallas-Fort Worth International Airport. Interview participants have experience in Iraq, Afghanistan, the Philippines, the Pakistani Earthquake, the South Asia Tsunami, the Bangladesh Cyclone, or aboard the US Navy's Hospital ships during medical diplomacy missions. There were four women and thirty men interviewed.

The author also attended several conferences and deployed aboard the USNS COMFORT from June through July 2007. The first conference was a cultural understanding conference in October, 2007. Naval Postgraduate School's Center for Stabilization and Reconstruction Studies (CSRS) hosted the "Making Sense of it All: Cross-Cultural Understanding" from September 9-2, 2007. The second conference was the U.S. Navy's 2008 Stability and Security Conference from January 30-31, 2008, Crystal City, VA. The author also deployed to Guatemala, Belize, and Panama aboard the USNS COMFORT. At all of the events the author was able to interact and interview various members of NGOs, the United Nations, foreign militaries, and the services of the U.S. Military. The author also attended a briefing regarding the post-earthquake recovery in May 2008. The planner for the operation provided a briefing regarding hastily formed networks and civil-military collaboration. The author asked questions regarding culture, the development of trust, the ICT infrastructure, and interaction with international aid groups.

2. Interviews

The discussions covered trust, culture, ICT, and face-to-face contact. Participants also discussed barriers to collaboration including ICT problems and cultural misunderstanding. Finally, the author analyzed the results from the interviews and identified themes to enable or erode collaboration. Those themes can help provide leaders and operators within the HADR community improve future collaboration.⁹⁴

⁹⁴ Christopher D. Bertram, "Factors that Affect Interagency Collaborations: Lessons During and Following the 2002 Winter Olympics, (MA thesis, Naval Postgraduate School, Mar 2008).

The interviews were divided into three sections. The first section of the interview determined participant experience. The second section determined how trust and culture impact information sharing and collaboration. The final section discussed specific communication mechanisms. The author has provided several questions below; the complete list of questions is provided in Appendix A.

- What are the primary modes of information sharing that you use?
- How do you develop trust in HADR operations?
- How did you contact the individual or group?
- Are there barriers to collaboration in virtual information and work groups?
- What are the cultural barriers to collaboration?

In face-to-face and telephonic interviews, the author was able to ask additional questions regarding enabling components to collaboration, primary sources for information, and how history and personal networks enhance collaboration. The author also asked specific questions to individuals with unique skill-sets or experiences.

3. Interview Process

The primary method for gathering data was retrospective interviews of military, NGO, and IGO personnel who have been directly involved with humanitarian aid, disaster relief, or stabilization operations. The author used multiple methods to obtain information regarding enhancing collaborative capacity between aid groups.

Telephone interviews and questionnaires were used to determine how trust, culture, and different communication methods impact individual collaboration. Some participants were sent the questionnaire via email. The participant had the choice to fill out the interview and email back the completed questionnaire or to conduct a telephone interview. If the participant agreed to a telephonic interview, the author called the participant and conducted the interview. The interviews lasted approximately thirty to forty-five minutes. The author focused attention of how individual participants communicated with one another in the field. The author also conducted face-to-face interviews various field experts at the two conferences, at meetings on the Naval Postgraduate School campus, and aboard the USNS COMFORT while deployed.

Online questionnaires were posted on a Department of Defense community of interest website and a link to the questionnaire was distributed to personal contacts of the author. Additionally, some respondents passed on the questionnaire to other qualified personnel within the humanitarian aid and disaster relief community. The questions for the thesis were derived from a questionnaire developed by Dr. Roxanne Zolin.⁹⁵

4. Analysis

The results were analyzed and compared to literature regarding trust, culture, and various communication mechanisms. Interview results were reviewed to discover common themes. These themes were compared to the literature. Some of the common themes were the importance of trust, cultural understanding, and face-to-face contact.

B. LIMITATIONS OF THE STUDY

A limitation of the study was the small size of the participant group. A greater representation of the aid community would be beneficial. The author did not tape or transcribe the interviews. In several instances respondents did not want to conduct a telephonic interview, but filled out the questionnaire and sent back the completed questionnaire via email. In other instances, some individuals had not been involved in a HADR or stabilization operation for several years and ICT equipment was not used. The amount of time between the interview and their deployment could reflect inaccuracies of the actual events. Some individuals were also only willing to fill out the questionnaire, but did not want to be interviewed over the phone. This precluded the author from asking follow-up or probing questions if there was a certain event or statement which warranted further explanation or clarification.

C. SUMMARY

The author gathered information from 34 individuals from the humanitarian aid community. Thirty-four individuals responded to open-ended questions via telephone,

⁹⁵ Dr. Zolin provided an unpublished paper to the author which evaluated a Department of Defense community of interest website. Roxanne Zolin, "HA/DR Websites," (Monterey, CA: Naval Postgraduate School Aug 29 2007).

filled out a questionnaire, or emailed the results back to the author. The author used unstructured, open-ended interviews in multiple circumstances to investigate how individuals communicated with individuals from other groups in the field. The purpose of the research was to determine what social factors enabled collaboration and to determine what communication mechanisms participants used during HADR operations.

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IV. RESULTS

A. INTERVIEW FINDINGS

The thesis was developed to answer the question, how can non-governmental organizations and military personnel build collaborative capacity in humanitarian aid and disaster relief operations during the initial phase of an operation? This chapter details participant responses to questionnaires and interviews. Trust, culture, and different communication media affect and impact an individual's propensity to collaborate and share information. The interview results generally support the literature review in Chapter II. Furthermore, the author's results were inductive. The questionnaire and the literature review were tied to one another and the author's preconceived ideas were biased by the literature.

1. Trust, Cultural Understanding, and Communication

The interviews confirmed that social and technical factors impact collaboration. Social factors including trust, face-to-face contact, ICT, and culture were confirmed to be enablers to collaboration.

a. Trust and Cultural Factors

Ninety-one percent stated there was organizational distrust between groups. Fifty percent of the respondents stated a lack of trust was a barrier to collaboration. Fifty-three percent of the respondents stated culture was a barrier to collaboration. One respondent stated, "Many times DoD personnel need to tone down the military profile when working with DOS [Department of State] or civilian agencies." Another participant stated, "Most NGOs see all militaries the same; as the initiators of violence. Most in the military see NGOs as ineffective and 'tree huggers.' Another participant said, "Getting over the 'what's in it for me' attitude---quickly." An NGO participant who worked with the Provincial Reconstruction Team in Iraq stated, the cultural understanding between NGOs and the military was "very bad" and it seemed like, "we were speaking different languages." Cultural misunderstanding and technical

problems were barriers to collaboration. The author spoke to an expert from the Dallas Office of Emergency Management and asked, “How do you develop trust in HADR operations?” She replied:

Pre-event. When people are most relaxed and tend to want to listen to each other’s ideas, issues and concerns more. As has been stated multiple times, it’s too late to be exchanging business cards when you’re on the scene of a disaster. There also needs to be trusted agents from the affected community involved in the operation. Without the buy-in from the community via these agents, the operation won’t be as efficient and effective as it could be. Training and exercising pre-event are key to building those relationships and finding out who the “go-to” people are as well as those who can’t and shouldn’t be trusted.

A U.S. Army officer who deployed to Afghanistan as the commander of a Provincial Reconstruction Team stated, “Yes, but methods for overcoming [cultural understanding] are often personality-based; one must start somewhere.” An Army Civil Affairs Colonel who worked with the International Security Assistance Force in Afghanistan used traditional mechanisms of coordination and collaboration. Meetings were scheduled several times a week with his counterparts within the Afghan government and meetings with Turkish Civil-military units occurred face-to-face. He stated, “Trust was established quickly as a result of their common background in civil affairs and being members of the military” and “trust and rapport” enhanced their communication and coordination. Furthermore, the lack of telecommunications infrastructure prohibited the use of the internet. A participant confirmed “That appreciation for another’s’ perspectives is based on consensus building and trust.” Another stated, “It is a mixture of capabilities and experience as well as an understanding of the culture.” The author asked an Army Civil Affairs officer and former commander of a Provincial Reconstruction Team, “How do you develop trust in HADR operations?” She replied, “By finding opportunities to build trust and share unclassified information, as much possible and by not taking over meetings, staying in the background and listening.”

A U.N. expert in civil-military relations provided an interesting statement regarding the terms on humanitarian aid and disaster relief. He stated, “Humanitarian Assistance is based on needs and the term should be reserved for organizations being able

to establish neutrality, impartiality and humanity, or NGOs. The military should use disaster relief in developing trust in HADR operations.”

The author asked a participant about organizational distrust and appreciation for another’s perspectives. They replied, “As long as everyone is able to leave their ego at the door, there’s an appreciation for each other’s perspectives. When agencies refuse to see that there are other factors at work and that we all have ‘bosses’ to answer to, there tends to be more animosity. The sooner everyone realizes that we’re all in it together and we all have the same goal of saving lives and relieving suffering, the more fluid the response seems to be. Yes, the military folks seem to come with a level of arrogance that they’re going to show us ‘local folks’ how to do it.”

b. Mechanisms of Communication

Sixty-two percent of the respondents stated they used face-to-face contact as their most frequent method of communicating with other participants. A U.S. Army Civil Affairs officer who is a former commander of an Afghanistan Provincial Reconstruction Team stated “That they used a Civil Military Operations Center (CMOC), to contact members of another group.” Regarding communication in the field, she stated, “It has to be face to face or phone, virtual if time and space is too hard to overcome.” A U.N. expert in civil-military relations was asked, “Did you use the website’s tools?” He replied, “Files, chat, video, and sometimes Skype; generally speaking, our connections in the field are too slow.” Although high-tech equipment can overcome some of the obstacles, they cannot be sustained by local authorities and therefore inappropriate with regard to medium and long term coordination. A member of the Dallas Office of Emergency Management stated her interactions were done, “Via face-to-face, telephone, e-mail, other agencies, and in any other manner that was appropriate at the time, however face-to-face and telephonic communication are always preferred.” A Marine Lieutenant Colonel who was the officer in charge of the Civil-Military Operations Center during the Bangladesh typhoon affirmed, “Interpersonal relationships and organizational contacts” were the keys to collaboration. In addition, their primary communication techniques were cell phones and face-to-face contact. The U.N. expert in civil-military relations

recommended “Face-to-face contact to hash out differences and goal setting.” The author asked a U.N. expert in civil-military relations, “With whom did he choose to share information?” He replied, “Tested sources and partners, based on trust, confidence and experience.”

The author asked, “In your opinion, what made the collaboration successful?” A participant replied, “[by] talking to each other before acting. It [the operation] would have been successful if orders and policies were geared towards achieving same goal.” Another stated, “Personal interaction between ‘guys on the ground’ and open line of communication and trust.”

The author spoke to another U.S. Army Civil Affairs Major who served as a Civil Affairs Team – Alpha (CAT-A) team leader in Afghanistan. He stated that, “All of his coordination with Provincial Reconstruction Team civilians was through face-to-face communication.” He also stated, “With locals in both the Philippines and Iraq, it was cell phone and face-to-face. With USG personnel it was email and face to face.”

The author also spoke to an NGO whose specialization was aviation and telecommunications support during disaster relief operations. The NGO participant established remote telecommunications sites after the Indonesian Tsunami and established numerous telecommunications sites during the USNS COMFORT’s mission to the Southern Hemisphere in 2007. Regarding his interaction with the military, he stated that, “Exercises and operations such as the USNS COMFORT’s mission established trust and rapport between his NGO and members of the military.” He reiterated, “Face-to-face introductions go a long way toward communication,” and, “by just meeting people,” collaboration can be enhanced. Another participant stated, “Trust is built, technologies and tools are tested.” The author asked another member of the military, “How do you develop trust in HADR operations?” He replied, “Establishing relationships, *a priori*.”

The U.N. expert in civil-military relations stated that large geographic distances and discussions over email, teleconference, and virtual networking proved worthless in several exercises and deployments. Only when key players had met

repeatedly and developed trust over time was true collaboration achieved.⁹⁶ One participant replied, “In the field it has to be face to face or phone, virtual if time and space is too hard to overcome.”

The author attended the Navy’s Stabilization and Security Conference from 30-31 January 2008 in Washington D.C. Rui Lopes, who is the Director of Network Operations from Save the Children, provided some interesting insights regarding information sharing and communication. He stated collaboration was based on “human interaction and relationships” and the relationships on the ground between people and “knowing the key players” were important to communication. A participant stated, “...it helps in developing social networks and understanding the culture of other groups and how to relate and communicate with them.” The author asked, “Is there an appreciation for the others’ perspectives?” A participant replied, “Sometimes, again it is based on consensus building and trust.” Another stated, “Yes, but only once the other group realizes that there is some sort of professionalism and added value behind discussions and coordination work.” Another stated, “As long as everyone is able to leave their ego at the door, there’s an appreciation for each other’s perspectives.

c. Technical Factors

Thirty-five percent of the respondents stated they used email as their most frequent method to contact other participants. Thirty-two percent of the respondents stated bandwidth was a barrier to collaboration because it slowed down internet speed. Sixty-seven percent of the respondents stated websites, email, and phones were barriers to collaboration. Cellular phones and text messages are also used heavily.

The author spoke to an U.S. Army Civil Affairs Lieutenant Colonel who served as a commander of a PRT in Afghanistan who has extensive experience in civil affairs operations, but also in information sharing via the internet and virtual work groups. The author asked, “Do you feel that communities of interest (COI) websites are a valuable tool to share information in order to build collaborative capacity and increase efficiency?” She replied, “Yes and no, often there are too many sites to check. If I

⁹⁶ Anonymous United Nations Official A, online questionnaire received by author 15 NOV 07.

checked each one everyday, that is all I would get done. Most helpful sites are ones that notify me via email or RSS that something in my area of interest has changed.”

One NGO respondent stated that phones, Skype, Groove, and SMS (short message service) or texting were critical. Another military officer, with experience in leading the effort during the aftermath of the Pakistani Earthquake used SMS and texting extensively. He also stated that the local telecommunications infrastructure was not developed to support the needs of the US assistance force. Furthermore, the Pakistani military internet system was not compatible with US “.mil” web addresses.

The author also interviewed a member of the U.S. military who deployed from two months to Utapao, Thailand to aid in the Tsunami relief effort. He worked with NGOs, local aid groups, international militaries, and IGOs. He used a variety of methods to communicate. His primary method was via cell phone, secondary was commercial email, tertiary was video teleconference, and finally land lines. The author asked how useful the websites he used were and he interestingly stated, “As useful as the lead agency used it. None were fully useful and the primary collab[oration] [tool] was [the] cell phone and email w/ att [attachments].” The author also asked, “Are there other lateral mechanisms via face to face coordination i.e. liaison personnel established in order to ensure collaboration and harmonize operations?” He replied, “Yes.” The author then asked: “are these preferred to virtual collaboration?” He replied, “Always.”

An NGO who was a member of a consortium attempting to establish a community of interest website for NGO information sharing and collaboration mentioned that it was difficult for NGOs to decide on a virtual collaborative website or application because of resource constraints. He also stated that groups wanted to communicate, but could not decide on a common website because of resources and organizational culture. He also mentioned, “Bandwidth was a major problem in communication in Bangladesh after their typhoon in 2007.”⁹⁷ Another stated, “Yes, bandwidth can often be an issue.”

⁹⁷ Comments from a speaker at the Navy’s Security and Stabilization Conference, (Crystal City, VA. January 30 - 31, 2008).

The author interviewed a U.N. representative with extensive experience in civil-military relations who is a published author and recognized professional in the field. She was based at the Utapao Airbase in Thailand in the Asian Tsunami relief operations. In that event, the U.N. element was the coordinating mechanism between twelve nations. Unfortunately, the element was based inside a military base which excluded many of the NGOs that were involved in the relief effort. Regarding the type of communication they used, limited bandwidth was a serious impediment to access complex websites which limited their access and use. Additionally, she was so busy that she did not have the opportunity to sit down at a computer terminal to input data into a website as they only had between seven and fifteen U.N. staffers at any one time. They did use meetings and face-to-face contact to coordinate operations. They also used the U.N.'s Virtual OSOCC, On-Site Operations Coordination Center, and email, but the people that used it were people that had known one another in the past. The "main purpose of the Virtual OSOCC is to facilitate decision-making for international response to major disasters through real-time information exchange by all actors of the international disaster response community."⁹⁸ However, the U.N.'s Virtual OSOCC couldn't open because of limited bandwidth. There was also so much information to process to try to put everything on a website slowed down operations.

She also conducted a multinational experiment between the United Nations, Joint Forces Command (JFCOM), and the North Atlantic Treaty Organization (NATO). They used audio and chat via the internet, but could only speak to one another one at a time, causing slowdowns and confusion between participants. They also conducted some experiments with Turkey, the U.S., Belgium, and the UK with over fifty users on a teleconference. There was actually "too much information" being passed between participants. There were also some NGOs involved, including the International Committee of the Red Cross and InterAction. She felt that the virtual information sharing venues (teleconferencing, chat, etc.) limited communication because without face-to-face contact, contributors could only speak to the official policy of the

⁹⁸ The United Nations' Virtual On-Site Operations Coordination Centre. Website. <http://ocha.unog.ch/virtualosocc>.

organization and everything had to be, “on the record.” Face-to-face contact gave the participants the opportunity to speak candidly and to give their honest, personal assessments of a particular event or situation. The virtual option participants were “less inclined to be honest.” The two NGOs, ICRC and InterAction, were very frustrated with JFCOM video teleconference meetings and decided to meet off-site with the Department of State, USAID, and the Coordinator for the Office of Reconstruction and Stabilization at the ICRC compound in order speak more candidly where they could not share online.

During the Lebanon evacuation crisis, the U.N. representative used no computers and just speaker phones to coordinate. She said, “That worked much better.” The reasons why were because information exchange was in real-time and the participants had already developed relationships with one another and were “comfortable with one another.” A participant stated, “Generally speaking, our connections in the field are too slow. Although high-tech equipment can overcome some of the obstacles, they cannot be sustained by local authorities and [are] therefore inappropriate with regard to medium and long term coordination.”

The author asked two participants a specific follow-up question regarding power and reliable communications. A participant who aided in the response effort after Hurricane Katrina stated, “Yes, the convention center where we located our operations was three floors [and] underground the multiple layers of cement impeded our ability to communicate in the first few days. Repeaters were put in place after that and communication became much easier.” Another participant replied to the same question, “It always is, and maybe the most important one: to have simple and reliable communications.”

B. SUMMARY

The interviews of the thirty-four humanitarian aid experts stated trust, culture, and face-to-face contact were important to enhancing collaboration between groups. The experts also specified barriers to collaboration: cultural misunderstanding and technical challenges.

V. DISCUSSION

A. DISCUSSION OF FINDINGS

This thesis was designed to answer the question: “how can non-governmental organization and military personnel build collaborative capacity in humanitarian aid and disaster relief operations during the initial phase of an operation?” This chapter discusses the findings and their implications as they relate to the literature. The interview results generally support the review in Chapter II.

The participants were asked a variety of questions regarding experience, collaborating with aid actors, the type of communication medium they used, and social factors that were enablers or barriers to collaboration during HADR or stabilization operations.

Daft and Engel define information richness as the ability of information to change understanding within a time interval. Communications that require a long time to enable understanding or that cannot overcome different perspectives are lower in richness. In a sense, richness pertains to the learning capacity of a communication. They state, in order of decreasing richness, the media classifications are (1) face-to-face, (2) telephone, (3) personal documents such as letters or memos, (4) impersonal written documents, and (5) numeric documents. The reason for richness differences includes the medium's capacity for immediate feedback, the number of cues and channels utilized personalization, and language variety. The data revealed that individuals preferred to use a high richness media source.⁹⁹ Dr. Richard Snyder and this author derived a model of the interaction between military and non-governmental organization (NGO) personnel. The model indicates that each individual must have cultural understanding of other groups, they should meet in a neutral setting, the military person must be aware of the impact of a full battle dress uniform with weapons, helmet, and body armor, and it must occur face-to-face. From that initial face-to-face meeting, swift trust can be developed. In addition,

⁹⁹ Richard L. Daft, and Robert H. Lengel. “Organizational information requirements, media richness and structural design,” *Management Science* 32, (5, Organization Design) (May 1986), <http://links.jstor.org.libproxy.nps.edu/>.

Hocevar, Thomas, and Jansen state “felt need” is likely to be a prerequisite for building collaborative relationships.¹⁰⁰ We also recommend a reason or need to work together and collaborate. This also was supported in Bertram’s thesis, which described felt need as a compelling reason for several different organizations to work together in an interdependent effort.¹⁰¹

Collaboration is an iterative process. Participants must build collaborative capacity over time by focusing on developing swift trust and being aware of culture understanding. Participants must also use face-to-face contact at the initial meeting. After swift trust is established, participants can use media of decreasing richness over time, but should schedule face-to-face meetings to ensure collaboration is maintained. For example, individuals may meet face-to-face and may exchange cell phone numbers or an email address. Then, the individuals may use these lesser rich media to collaborate. Over time, the individuals may introduce one another to a collaborative website or application where it is easier to communicate with one another asynchronously or synchronously. File sharing, including video, maps, audio, or video-teleconferencing could occur if the parties felt a need to execute those activities. Furthermore, the telecommunication infrastructure must be able to provide the necessary bandwidth to support the participant’s needs. Figure 1 depicts this iterative process.

¹⁰⁰ Susan Page Hocevar, Gail Fann Thomas and Erik Jansen, “Building Collaborative Capacities: An Innovative Strategy for Homeland Security Preparedness,” *Innovations through Collaboration, Advances in Interdisciplinary Studies of Work Teams* 12 (2006): 272.

¹⁰¹ Christopher D. Bertram, “Factors that Affect Interagency Collaborations: Lessons During and Following the 2002 Winter Olympics,” (MA thesis, Naval Postgraduate School, Mar 2008): 12.

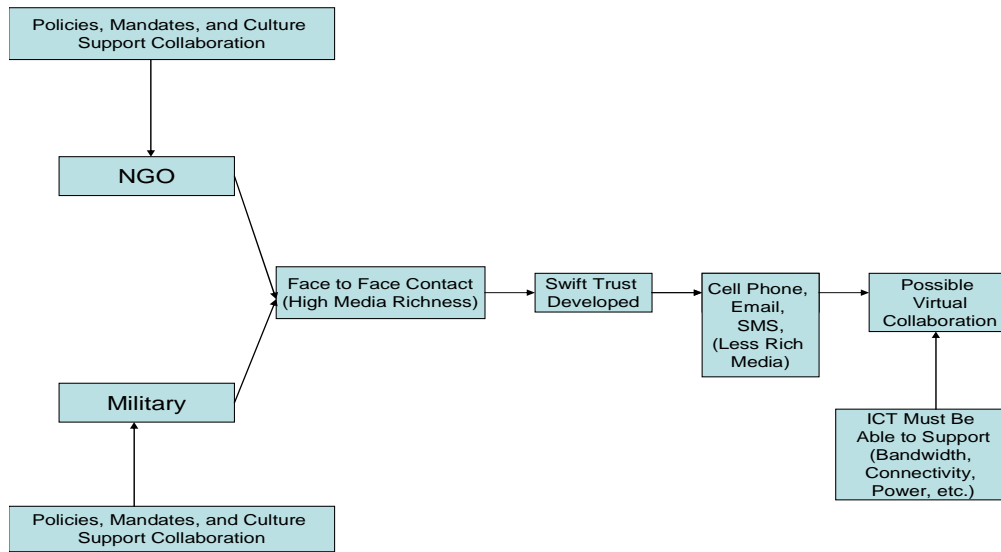


Figure 1. Framework for Collaboration

There are several assumptions the author has made regarding the framework for collaboration. First, the policies or orders of both the military and the NGOs allow for collaboration, contact, and information sharing. Second, each group has had some training in civil-military operations. Third, both groups also have a “felt need” to collaborate. Fourth, the security situation is not severely degraded due to armed militias, terrorist cells, or insurgent groups such as in Iraq or Afghanistan. Finally, the environment and context of the situation is a humanitarian aid or disaster relief situation. Participants may use the framework to collaborate. The author now discusses the iterative collaboration process.

1. Trust and Cultural Understanding

Trust is the foundation where collaboration is constructed. Trust is a critical component to collaborating with individuals and groups, especially those outside an individual’s home organization. The findings of this thesis reinforce the need for trust in individual and group collaboration. This is particularly true in horizontal relationships between peer-type organizations.

An impediment to civil-military cooperation stems from the mutual lack of familiarity and is compounded by the fact that NGOs are suspicious of the military and vice versa. Distrust, language, cultural misunderstanding, a lack of face-to-face contact and organizational bias all impact social collaboration. There is ignorance of the other's organization including their organizational structure and capabilities. Each group also may have inherent mistrust that stems from very different institutional cultures.¹⁰² Organizational misunderstanding and a lack of respect for the policies for the group also negatively impacts the collaboration between groups. If individuals and groups do not have relationships developed and honed over time, collaborative capacity is impacted. Rui Lopes of Save the Children stated that military personnel cannot come into Save the Children compounds with weapons, body armor, and uniforms. He would prefer to have the military personnel specially trained in civil-military relations to meet with security coordinators at a neutral site or with the military person in civilian clothes. Additional social barriers to collaboration include: soldiers respond to clear lines of command, sets of rules, and operational orders, aid workers are less generally independent minded and retain considerable decision making power at field level.¹⁰³

2. Mechanisms of Communication

Face-to-face contact is crucial to enhancing collaborative capacity. Individuals build trust through face-to-face contacts which can translate to more frequent contact using other less personal or social modes of communication. Once face-to-face contact is executed, participants may use media of decreasing richness in order to enhance efficiency and maximize their joint optimization. They can use cellular phones, the internet, chat, and other communications methods to expand the geographic span of control to help more people.

¹⁰² Francis Kofi Abiew, "NGO-Military Relations in Peace Operations," *International Peacekeeping* 10, no. 1, (Spring 2003): 30.

¹⁰³ Ibid.

Today's emergency responders can no more dispense with mobile phones or electronically transmitted spreadsheets than a global courier company can. Mobile phones increase the flow of information, and the speed at which it can be processed, in a world where information used to be confused or absent.¹⁰⁴ Toby Porter, emergencies director of Save the Children, adds that mobile phones can facilitate relations between aid agencies and local governments.¹⁰⁵ “In the humanitarian operation of the future,” says Porter, “beneficiaries of emergency aid will use technology to tell us what they need—cash, food, or education...”¹⁰⁶ Linder states “The ultimate goal of enhanced connectivity is to enable local populations to prevent and mitigate conflict, and help rebuild their country.”¹⁰⁷

Limited or no internet connectivity, sporadic or nonexistent cellular service, lack of power, and even bad transportation infrastructure make connecting on very basic levels impossible. Inefficient communication infrastructure can mean that something as simple as sending an email or setting up a meeting can prove extremely time consuming.¹⁰⁸ Bandwidth can be so limited as to be almost unusable; cellular service is uneven; and many headquarters staff relies heavily on internet-based information and by doing so, exclude colleagues working in more remote areas. Incompatible radio systems, for instance, make civilian-to-military and even military-to-military communications difficult.¹⁰⁹

¹⁰⁴ Anonymous, “Flood, Famine and Mobile Phones,” *The Economist*, (Jul 26 2007), www.economist.com.

¹⁰⁵ *Ibid.*

¹⁰⁶ *Ibid.*

¹⁰⁷ Rebecca Linder, “Wikis, Webs, and Networks: Creating Connections for Conflict- Prone- Settings,” (Oct 15 2006) http://www.csis.org/media/isis/pubs/061018_pcr_creatingconnections.pdf.

¹⁰⁸ *Ibid.*, 10.

¹⁰⁹ *Ibid.*, 11.

B. RECOMMENDATIONS

Participants must understand there are multiple factors that impact the collaborative capacity of groups in HADR operations. The author now provides several recommendations that participants may utilize to enhance collaboration and cooperation before a crisis.

1. Exercises, Training, and Conferences

Groups should become more familiar with one another face-to-face through exercises or conferences in non-crisis situations. Training should include cultural awareness, the importance of trust, and how one can adeptly choose the most appropriate communication method. The United Nations has developed a Civil Military Coordinator's course that introduces each respective group to one another. The author interviewed an extremely experienced Civil-Military Liaison Officer of the United Nations who has deployed to nearly every major catastrophe since the early 1990s. The author asked: "How did he contact the individual or group?" He replied, "Through established networks, which are a result of many years of hard work. Our team has some 1900 graduates of the United Nations Civil-Military Coordination Training Program (UN-CMCOORD). These people are reliable partners in every emergency response operation." Training exercises, conferences, and informal meetings give groups an understanding of each party's policies, culture, and capabilities. This interaction allows military, civil-military experts and NGO liaison officers an appreciation of one another's organizational culture and structure.

2. Policies, Orders, and Felt Need

By using the model identified in Figure 1, participants must understand the need for supportive policies and feel a need to collaborate. Department of Defense policies and orders can provide a framework to establish how personnel collaborate in HADR environments. However, aid groups who are willing to collaborate must also establish policies or mandates that provide parameters for their members. By formalizing the process of collaboration, individual actors may be more frank with one another and

develop trust sooner to speed the collaboration process. Finally, individuals and groups must see value in collaborating with one another. Groups work with one another if there is a felt need for collaboration.

3. Virtual Environment and Social Networking

Once individual participants meet face-to-face in a rich media environment, if they choose to do so, they may exchange contact information. This contact information may include less rich media such as a cellular or telephone number, a Skype username, or an email address. If the participants see the value of collaborating virtually, they may choose to meet in a community of interest website or in a virtual collaborative environment. These virtual meetings could include an occasional email or a link on an individual's MySpace or Facebook homepage. The proliferation of social networking websites provides an effective mechanism for individuals to maintain contact with one another who may be separated by distance or culture.

4. Brokers

Another approach to communications is through brokers. Brokers can be used from impartial organizations to serve as bridges between groups. Officers from the United Nations or USAID can serve as brokers and coordinate and deconflict operational requirements between military and civilian aid providers.

C. HYPOTHETICAL RESULTS OF SUCCESSFUL COLLABORATION

Humanitarian aid and disaster relief actors need to come to an understanding that some NGOs work with the military and some will not. Military forces must respect NGO needs for independence, neutrality, transparency, and impartiality. However, when actors can come to an agreement regarding contact within these environments the sum of their efforts will be greater than their individual contributions.

The United Nations Inter-Agency Standing Committee recognizes this crucial need. It has stated in its Civil-Military Guidelines and Reference for Complex Emergencies states, "Engaging military support for humanitarian operations is not a new endeavor. In today's security environment, however, the military are ever more involved

in the ‘*direct*’ provision of aid, while humanitarian actors are often faced with situations where there are no alternatives but to rely on the military, as a *last resort*, for safety and to access populations in need - at the serious risk of compromising their neutrality, impartiality, and/or independence, and thus their ability and/or credibility to operate.” John Holmes, the UN’s Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator stated, “In today’s reality, aid workers and soldiers at times have little choice but to re-explore their relationship and improvise best ways possible for some degree of potential interaction, while simultaneously responding to the emergency at hand.” There will be groups who will not work with the military, other NGOs, or IGOs. There may also be groups that collocate themselves with military forces in order to get the aid to the people as quickly and as efficiently as possible. Given their overarching shared purpose, all actors must respect the goals of each group. Figure 2 provides a graphical depiction of the results of collaboration. Included are collaborative groups and groups and individual components that do not share information as readily with other elements in the operation.

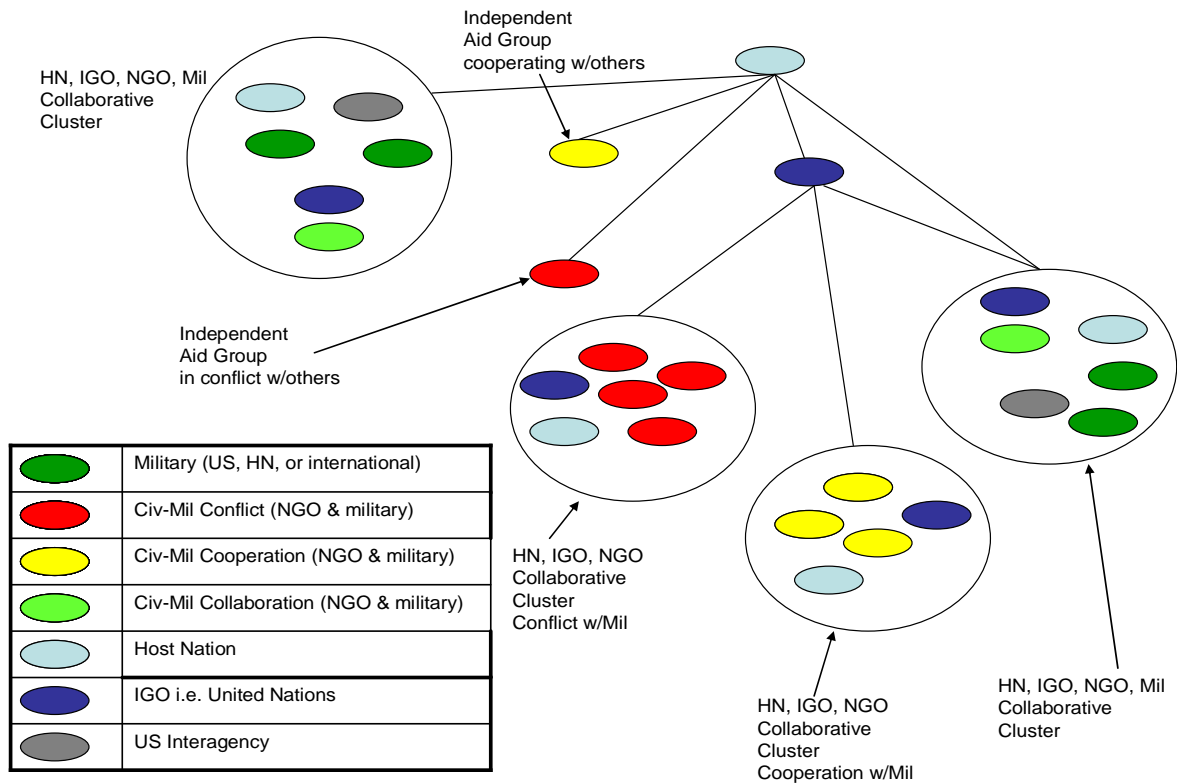


Figure 2. Results of Successful Collaboration

D. FURTHER RESEARCH

Natural and man-made disasters are always a constant threat. During a crisis situation, groups from around the world will come to the aid of the people in need. However, this thesis only focused on specific enablers and barriers to collaboration relating to trust, culture, ICT, and face-to-face contact. There are still many areas of research that can be explored. Website design and virtual social networking between participants could be analyzed. Power in austere environments is critical to supporting ICT infrastructure. Hastily Formed Networks, developed by the Naval Postgraduate School's Cebrowski Institute, are a key component to enhancing collaboration focusing on wireless networking. Another aspect of research would be analyzing the ICT connective points of a network organization coupled with virtual social networking.

Finally, another area of study could be the propensity to use face-to-face contact for horizontal communication, between organizations, and email and collaborative software for vertical communication within the same organization.

E. CONCLUSION

On 2 May 2008, as the author neared completion of the thesis study, Cyclone Nargis hit Myanmar. The international aid community is attempting to gain access to the devastated areas. A Red Cross press release stated, “The Myanmar Red Cross and the International Federation works closely with government officials, sharing information as it comes in, gradually forming a picture of the myriad needs in this devastation and highly-complex natural disaster. Many, many thousands of people are homeless and are living in pitiable conditions.”¹¹⁰ The Myanmar government has said 22,000 people were killed. The top U.S. envoy in the country has said the death toll may be as high as 100,000.¹¹¹ The international community is currently preparing to engage in a massive aid effort. ICT, trust, culture, and face-to-face contact will be necessary enablers of collaboration. However, Myanmar’s telecommunications infrastructure will have a massive impact on the aid effort. If the infrastructure has been damaged, aid distribution will be slowed, duplication of efforts can increase, and aid assessments may take longer to process and share between aid actors.

Virtual collaborative networks may be able to enhance efficiency and the capability of all aid groups, but participants must understand the value of collaborating with other groups. If there is not a propensity to collaborate, organizations will stovepipe. Aid groups can alleviate suffering of the population, but the sheer scale of the emergency will overwhelm the government’s capabilities to care for its own people.

¹¹⁰ Joe Lowry, “Aid Moving Out In Myanmar But More Needed,” ReliefWeb, (May 9 2008), www.reliefweb.int.

¹¹¹ Dan Rivers, “Behind the Scenes: Escaping Cyclone-Ravaged Myanmar,” Cable News Network, (May 9 2008), www.cnn.com.

This thesis was written to understand what components are necessary to enhance collaborative capacity between humanitarian aid organizations. Collaborative enablers, cultural understanding, face-to-face contact, and ICT, are all necessary elements to share information. Conversely, actors must be aware of the barriers to collaboration including cultural misunderstanding and technical challenges associated with ICT. Once the actors understand what necessary components to collaboration are, they can also mitigate the challenges to collaboration.

Unfortunately, as the devastation of Cyclone Nargis has demonstrated, natural and man-made disasters are a constant threat to the most vulnerable populations. The catalyst of a natural disaster creates a compelling need for people and organizations to come together to alleviate suffering.

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APPENDIX

QUESTIONNAIRE

Background: There are many reasons for civilian organizations to collaborate with military organizations and vice versa.

The objective of this interview is to explore attitudes toward community of interest (COI) websites that are designed to enhance collaboration between groups during humanitarian aid and disaster relief operations.

What you will say will be confidential.

Please think of a time when you had to interact with a member of the US Military or an NGO.

Part 1: Determining an interviewee's experience and familiarity with community of interest websites and collaboration.

1. Have you been involved in a humanitarian aid operation?
 - a. What disaster, where, when? How long were you there?
 - b. Did you interact with an military member/NGO during the event?
 - c. Why?
 - d. How did you contact the individual or group?
 - e. How did you interact with the other group?
2. Are you aware of any websites used to create a community of interest or assist communications between organizations during a HADR operation?
 - a. Which ones?
 - b. How useful was the website?
 - c. What capabilities did the website have?
 - d. Did you use the website's tools i.e. hanging files, chat, video, etc.?
 - e. What was your overall impression of the utility of the site?

- f. Do you belong to any websites?
 - g. Which ones?
 - h. Do you feel that community of interest (COI) websites are a valuable tool to share information in order to build collaborative capacity and increase efficiency?
3. The Department of Defense has developed www.shareinfoforpeople.org.
- a. Have you heard of it?
 - b. If yes, why and in what context did you use the website, i.e. historical reference, GIS, discussion threads, etc.
 - c. What do you think of the idea?
 - d. Did you know that DoD sponsored the website?
 - e. Would you contribute to the website?
 - f. Who are the potential users of the site?
 - g. How do you choose which entity to share information?
4. The United Nations has developed www.reliefweb.int and <http://ocha.unog.ch/virtualosocc>
- a. Have you heard of it?
 - b. If yes, why and in what context did you use the website, i.e. historical reference, GIS, discussion threads, etc.
 - c. What do you think of the idea?
 - d. Did you know that the UN sponsored the website?
 - e. Would you contribute to the website?
 - f. Who are the potential users of the site?
 - g. How do you choose which entity to share information?
5. What are the primary modes of information sharing that you use?
- a. Email?
 - b. Fax & telephonics?
 - c. Collaborative website?
 - d. Community of interest website?

- e. Skype?
- f. Do these websites ask...”what can they do for you?”

Part 2: Examining the culture and propensity to share information between NGOs and military personnel.

Are there rewards and incentives to collaborate military or NGO groups?

1. Are there other lateral mechanisms via face to face coordination i.e. liaison personnel established in order to ensure collaboration and harmonize operations?
 - a. Are these preferred to virtual collaboration?
 - b. Did geographic separation impact communication between groups?
 - c. Did reliable communications including power available impact communicative capabilities?
2. Is there organizational distrust between groups?¹¹²
 - a. Is there a perceived level of incompetency between groups?
 - b. Is there animosity or arrogance between groups?
 - c. Is there an appreciation for the others’ perspectives.
3. Are there barriers to collaboration in virtual information and work groups?
 - a. Is funding affected by media coverage?
 - b. Competition for resources in a flash funding appeal through the UN
4. Are there restrictions to collaborating with NGOs/military personnel?
 - a. For example the ICRC forbids contact with military personnel.
5. If you have collaborated with Mil/NGO, what were the results of the collaboration?
6. What are the cultural barriers to collaboration?
 - a. Security
 - b. “Aiding the enemy”
7. How do you develop trust in HADR operations?

¹¹² Susan Page-Hocevar, Gail Fann-Thomas, and Erik Jansen. 2006. Building Collaborative Capacity: An Innovative Strategy for Homeland Security Preparedness. *Innovation Through Collaboration: Advances in Interdisciplinary Studies of Work Teams*, Volume 12, Elsevier Ltd. 255–274. 260.

8. Is there an individual in your organization whose focus is communications?
 - a. In a NGO cluster or military logistics area or CMOC, there are individuals whose sole focus is on communications...did they use collaborative software?
9. What would you tell another peer within your group or an outside group about www.reliefweb.int or www.shareinfoforpeople.org

Part 3: Looking at the websites through a marketing lens in order to determine if there are any identifiable characteristics that would lead to greater collaboration.

1. Imagine the website could speak, what would it say about itself?
2. What does the product need to be successful?
3. Can you name five positive characteristics about the website that you have used in the past? Or are there positive characteristics about collaborating with NGOs or military personnel?
4. If you were responsible for marketing one of the two websites, what persuasive arguments would you use in talking to NGO or military personnel?
5. Is the leadership or management of your group supportive or committed to collaborating with the other i.e. military with NGO and NGO with military?

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
Fort Belvoir, Virginia
2. Dudley Knox Library
Naval Postgraduate School
Monterey, California
3. Erik Jansen
Naval Postgraduate School
Monterey, California
4. Dorothy Denning
Naval Postgraduate School
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