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Improving disaster response collaboration using trans-organization development

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IMPROVING DISASTER RESPONSE

COLLABORATION USING TRANS-ORGANIZATION

DEVELOPMENT

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Abstract

In order to address the complex problems that arise as a result of a disaster, response organizations must know how to effectively collaborate. This study provides an initial exploration of the possible application of trans-organization development (TD) process for improving the effectiveness of disaster response collaborations. Through interviews and on online survey of emergency and disaster services practitioners (both professional and volunteer), this study concluded that while there is clear value in the concepts that the TD process proposes, it was inconclusive as to whether or not the process would improve the effectiveness of collaborations during disaster response. Based on these findings, recommendations for practitioners in the field of emergency management and for further academic research have been proposed to reach further alignment on what collaboration means within the field of disaster response and also how the TD process may improve disaster response collaborations.

Table of Contents

List of Tables

List of Figures

Chapter 1

Introduction

The researcher had heard about the phenomenon of mismanaged donations during her undergraduate studies, but experiencing it firsthand had been a jarring revelation for her. She stood in a gym, navigating canyons of donations mostly comprised of mismatched clothing, 36 hours after Hurricane Katrina devastated the Gulf Coast. These well-intentioned donations, which could surely be used by someone who was affected by a disaster, were languishing in a heap. The management of such donations, getting these items organized and into the field, is a huge undertaking. This involves not only understanding the need for donated items, but also the logistical and communication backbone to make it happen.

The phenomenon described above from the researcher's firsthand experience is commonly known in the field of emergency management as "the disaster after the disaster" (Roos, n.d., para. 4) because of the large logistical challenge that is associated with sorting, storing, and utilizing unrequested donations while simultaneously trying to provide life-saving efforts such as providing shelter and food. This phenomenon repeats itself during disasters over and over again: an inundation of dog shoes and dog food for search dogs working at the World Trade Center after 9/11, Frisbees sent to Haiti after the 2010 earthquake, and snow-sports gear sent to Hurricane Andrew survivors. Experts in donation management are essential, as they ensure these hundreds and sometimes thousands of items get to the appropriate destination while still allowing other critical emergency management activities to continue.

Now, imagine that all these well-intentioned donations are instead organizations thrown together in a pile after a disaster strikes. The high-top sneaker is a disaster medical team, last season's dress shirt is a nonprofit feeding truck, a pair of hiking socks are an animal welfare team, ski boots represent local college students who want to help, and the winter parka is the federal government. These far-flung organizations come to be mixed together with the local organizations that experienced the disaster, and all of them have a responsibility to respond (i.e., local jurisdiction, local nonprofits, etc.). They all have expertise and resources, but they cannot successfully meet the needs of the disaster on their own. How does this "heap of help" reassemble into a well-oiled, streamlined, relief and recovery machine in a matter of days, sometimes hours?

For the local jurisdiction, some of these organizations are expected to show up after a disaster, and they fit the response plan like a glove. Other organizations are somewhat or completely unexpected and there is little or no framework for integrating them into the response operation, or to determine if they should be included.

Yet there they are. A pile of Frisbees in amongst the earthquake rubble, only the lefts of last year's tennis shoes amongst the tsunami debris, and a mountain of unlabeled boxes with "stuff" after the Joplin, Missouri, tornado. How do disaster response organizations collaborate effectively in an emergent disaster situation when they may have no prior relationship, no authority over each other, and may have not planned or even expected to work with each other?

Background and Significance

Charles Fritz developed the initial definition of a disaster as

an event, concentrated in time and space, in which a society, or a relatively self-sufficient subdivision of a society, undergoes severe danger and incurs such losses

to its member and physical appurtenances that the social structure is disrupted and the fulfillment of all or some of the essential functions of the society is prevented. (Mileti, 2001, p. 210)

Disasters are inherently complex events that tend to be dynamic and uncertain. Looking at the Haiti earthquake in 2010, the response started as an earthquake response, but then had to transition to a combined earthquake and public health emergency with the outbreak of cholera, which was compounded by the onset of the hurricane season. Additionally, because there is generally more demand than resources to address the needs following a disaster, response organizations must often collaborate with one another.

Organizations will become involved in disaster response for a variety of reasons ranging from statutory regulations requiring their involvement to members feeling morally compelled to respond. To the outside observer, the response of so many organizations surely must appear as a benefit to the disaster at hand. After all, as Nolte and Boegnigk (2011) pointed out, "Hundreds of organizations from different regions and countries might come together during an emergency response, because no single organization can provide all the necessary services" (p. 1). Nevertheless, just slightly out of public view (sometimes), complexities arise when organizations come together in the aftermath of an emergent disaster incident and must collaborate due to the interdependencies that exist between them. These complexities, if not addressed properly, can lead to inefficiencies and ineffective operations.

In response to the possible types of disasters, including the potential losses and disruptions, society (i.e., jurisdictions and organizations) has developed plans and procedures to manage disasters. Training and exercises take place routinely and are required by many organizations. However, because of the uncertainty of disasters, it is

impossible to plan, train, and exercise for everything. In large disasters the associated

uncertainty, or sometimes chaos, can grow. Majchrzak, Jarvenpaa, and Hollingshead

(2007) noted,

> In disasters of large scale and scope, formal plans break down in unexpected ways
> as the disaster unfolds. Authority structures and communications react in
> unforeseen ways. Planned communication links break down. Information about
> the disaster arrives at a pace, level of detail, level of credibility and
> connectedness, and across a variety of sources that rapidly make any planned
> response too slow, disconnected, and inadequate for the task. (p. 147)

In 2005, Hurricane Katrina demonstrated how severe the consequences can be

when formal response plans fail. One example of inadequate or disconnected formal

response planning from Hurricane Katrina was the use of the Superdome as a shelter of

last resort, which became damaged, isolated by flood waters, and became unmanageable

and unsafe for evacuees and responders.

It is also nearly impossible to predict which specific geographic area a disaster

will affect, either directly or indirectly. Hurricanes Katrina and Rita illustrated this

concept when every state was involved in response operations for the storms. As

McGuire and Silvia (2010) pointed out in their research, "Disasters often exceed a single

jurisdiction's or entity's ability or resources, and almost never neatly contain themselves

within a single city, county, or state boundary. Therefore intergovernmental and

intersectoral collaboration is essential" (p. 280).

Many reports that examine or evaluate the successes and failures of a response to

a disaster (i.e., after-action reports) often look at physical communication systems,

information sharing procedures, supply chain interruptions, and other physical or

procedural elements; however, a critical area that is frequently commented on is the

ability to successfully collaborate. The U.S. Government Accountability Office (2009)

found, "because of the numerous partners and stakeholders involved after a disaster,

effective collaboration is critical in order to accomplish many recovery-related tasks"

(p. 2). Despite the identified importance of collaboration, there is evidence that

collaboration during disaster response continues to be a challenge: "In the wake of the

2005 Gulf Coast hurricanes, numerous reports have identified coordination and

collaboration as a key challenge during the government's response" (U.S. Government

Accountability Office, 2009, p. 1). A real-time evaluation of the response following the

Haiti 2010 earthquake found,

> Despite the quick mobilization of aid, the quality of the achievements was
> drastically affected by serious constraints linked to the magnitude of the disaster,
> the uncontrollable flow of frequently inexperienced small NGOs
> [nongovernmental organizations], the inappropriateness of many practices in
> urban contexts, and weak global leadership. The RTE [real-time evaluation] found
> that the response to the earthquake between January and April 2010 was a missed
> opportunity to translate the quick setting up of cluster coordination and the
> availability of substantial resources in the form of money, military assets and staff
> into timely results. (Grünewald & Binder, 2010, p. 8)

These authors continued to state that a major challenge in Haiti was the "limited

collaboration between international actors and national institutions at both national and

decentralized levels" (Grünewald & Binder, 2010, p. 8).

Disaster occurrences are on the rise: "Approximately 100 natural and

technological disasters were registered in 1975, in 2008 more than 600 disasters were

reported worldwide" (Nolte & Boenigk, 2011, p. 1). This trend of increases in disaster

occurrences will likely continue as result of climate change (Bernstein et al., 2007) and as

people move into more concentrated and hazardous areas (De Smet, Lagadec, & Leysen,

2012). As disasters increase, there is greater potential for loss of life, damage or loss of

property, and increased amounts of money spent on response and recovery efforts. With

disasters occurrences on the rise, there is a great need for organizations to respond and to be as successful as possible; as such, it is important that disaster response agencies not only know their expertise but also know how to effectively collaborate with other organizations in emergent disaster situations.

Purpose of Study

The purpose of this study was to explore if the trans-organization development (TD) process can be utilized during disaster response to improve the effectiveness of collaborations. Developed by Cummings in 1984, the TD process is a planned change process (Worley & Parker, 2011). While there is broad support for collaboration during disaster response, there is no formal or documented process on how to achieve collaboration that is recognized in the field of disaster or emergency management. This gap may be filled by using the TD process, which is designed to facilitate collaboration across organizational boundaries that are underorganized (Cummings & Worley, 2009; Worley & Parker, 2011). As such, this process may prove to be extremely beneficial, given the identified interdependencies between those who respond to disasters and the need to address the complex problems that can arise during disasters that may or may not be addressed adequately by existing plans. This lack of planning, or inability to plan for everything, coupled with the potential to be interdependent on organizations with no familiarity or established relationships, is the underorganized system that the TD process was designed to address. Considering that the TD process is intended to facilitate collaboration and is not incident, problem, or organization specific, it may provide benefit in disaster response when the exact problem and those who are needed cannot be predicted ahead of time, as it can be applied to any network regardless of the member

organizations' day-to-day operations. The key potential that the TD process offers to

disaster response is the facilitation of developing new or modified networks to address

tasks that can only be addressed by the entirety of the network. This process helps

networks identify which organizations are needed, the feasibility and desirability of the

network, task perception agreement, the creation of structures and mechanisms for how

the work will be done, as well as being a process for comprehensive evaluation (Worley

& Parker, 2011).

In order to explore the primary research question of whether or not use of the TD

process would improve the effectiveness of disaster response collaborations, the

following subquestions were developed:

1. What does it mean to collaborate in the field or disaster/emergency services?

2. How do disaster response participants perceive the formation and execution of

    collaborative efforts during disaster response?

3. What is the perceived value or importance of the TD process as it relates to

    disaster response collaborations?

To answer these questions, the researcher conducted interviews and an online

survey of disaster and emergency services professionals and volunteers. Data collected

from study participants included their perspectives on collaboration in general, which

provided a baseline understanding on the field's perception of collaboration. Data were

also collected concerning participants' perceptions on how collaborative efforts are

formed and executed during disaster response. The research then moved on to data

collection concerning specific elements that occur when using the TD process to identify

the value or importance that practitioners place on these elements, and how often, if at all,

they experienced the practice of these elements during disaster response. Finally, data concerning the overall value or importance of each of the TD phases were collected. The intent of the data collection was to compare what practitioners identify as important or valuable for disaster response collaborations, how the TD process, or some of the elements of the TD process, currently align with disaster response collaboration, and participants' actual disaster response collaboration experiences. Through the use of the interviews and the online survey addressing each of these data collection areas, an in-depth and comprehensive understanding of disaster response collaboration and how the TD process may improve the effectiveness of these collaborations was gained.

Study Organization

This chapter provided the introduction to the research. Chapter 2 presents a comprehensive literature review of what is currently known about collaboration, TD and the TD process, and collaboration during disaster response. Chapter 2 also identifies any gaps in the literature regarding these topics. Chapter 3 provides an overview of the research methods used during this study to collect data from disaster and emergency services practitioners. This includes an explanation on why the research design was chosen, participant criteria and selection, and the development of data collection questions for both the survey and the interviews. Chapter 4 presents the research findings from those surveyed and individuals who were interviewed. Findings were organized by the type of data (quantitative vs. qualitative) and by each phase of the TD process. Chapter 5 then discusses the conclusions from this study and their implications, the limitations, as well as the recommendations for both practitioners and for additional academic research.

Chapter 2

Literature Review

This chapter reviews what is already known about the fields of collaboration, TD, and collaboration during disaster response. To lay the appropriate groundwork, this chapter first examines the definition of collaboration and how collaboration differs from two other forms of common inter-organizational relationships, cooperation and coordination, both of which also frequently occur during disaster responses. This chapter will then analyze what the literature says about the need for collaboration, followed by a review of what is already known about the TD process. Finally, a review of collaboration during disaster response will be discussed to provide the context for the research question concerning whether or not the TD process improves the effectiveness of collaboration during disaster response.

Collaboration Amongst Organizations

This section explores literature relating to collaboration amongst organizations. The literature discussed is divided into the following subsections: (a) cooperation, coordination, and collaboration defined; (b) collaboration; and (c) why collaboration is needed.

Cooperation, coordination, and collaboration defined. When groups of individuals or organizations decide to work together they can organize in various ways. Examples of this include cooperation, coordination, and, of course, collaboration. To fully grasp the concept of collaboration it is important to understand differences between each of these. There is a considerable amount of literature explaining each of these

concepts independently as well as how they differ from one another. McNamara (2012)

used a continuum to describe each of these:

> At one end of the continuum, cooperation is defined as an interaction between
> participants with capabilities to accomplish organizational goals but who work
> together, within existing structures and policies, to serve individual interests. . . .
> Coordination is placed in the middle of the continuum and is defined as an
> interaction between participants in which formal linkages are mobilized because
> some assistance from others is needed to achieve organizational goals. At the
> other end of the continuum, collaboration is defined as an interaction between
> participants who work together to pursue complex goals based on shared interests
> and a collective responsibility for interconnected tasks which cannot be
> accomplished individually. (p. 391)

Gray (1989) added to the definition of cooperation, explaining that it is an

arrangement that has no formal rules between already existing organizations and is

focused on individual (or individual organization) goals. On one end of the continuum is

cooperation, which is the kind of organizing that two or more organizations can engage in

without altering structures, or having to reach agreements pertaining to resources,

activities, or power (Bryson & Crosby, 2008). As one moves along the continuum,

coordination is next, and with it, a shift towards the need of additional capabilities to

achieve goals, and also the recognition of interdependences. Coordination is "at the

middle of the continuum and is defined as an interaction between participants in which

formal linkages are mobilized because some assistance from others is needed to achieve

organizational goals" (McNamara, 2012, p. 391). Gray's (1989) research aligned with

this definition of coordination, keying in on the utilization of "formal institutionalized

relationships among existing networks of organization" (p. 91). The largest difference

between cooperation and coordination is the increased formality that comes when

organizations are engaged in shared tasks (coordination). Despite this difference, there

are also key similarities between cooperation and coordination that set them apart from

collaboration. Both cooperation and coordination use networks that are already established and are still focused on achieving each organization's goals.

Collaboration. The literature defined collaboration broadly as organizations that are working together on a mutual goal across disciplines, sectors, or other organizational lines because of the interdependency that exist between them (Bryson & Crosby, 2008; Gazely, 2008; Gray, 1989; Huxham & Vangen, 2005; Slater, 2006). Gray (1989) provided one of the most detailed definitions of collaboration, which is "a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible" (p. 5).

Gray (1989) continued and outlined five elements that are involved in collaboration: "stakeholders are interdependent, solutions emerge by dealing constructively with differences, joint ownership of decisions is involved, stakeholders assume collective responsibility for the future direction of the domain, and collaboration is an emergent process" (p. 11). These elements, while not necessarily explicitly stated as Gray has done, were supported by the literature on collaboration. In particular, Gray's second element of "solutions emerg[ing] via differences" (p. 11) is noted in the literature by several scholars through their recognition of the importance and value that diversity (in members, organizations, ideas, etc.) brings to the collaboration (Connelly, Zhang, & Faerman, 2008). The literature continued to assert that, unlike coordination, collaboration is much more dynamic, evolving, emergent, or even a phenomenon (Connelly et al., 2008), which supported Gray's assertion that collaboration is an emergent process. Collaboration also differs from coordination, as it involves a higher level of mutuality,

alignment, and commitment, and, therefore, shared responsibilities and expectations (O'Leary, Gazely, McGuire, & Bingham, 2009), which once more supported the elements that Gray identified. McNamara (2012) stressed this shared responsibility in her definition of collaboration as "interaction between participants who together pursue complex goals based on shared interests and a collective responsibility for interconnected tasks which cannot be accomplished individually" (p. 391). Similarly, O'Leary et al. (2009) stated that collaboration is the "conscious alignment of goals, strategies, agendas, resources and activities; an equitable commitment of investment and capacities; and the sharing of risks, liabilities and benefits" (p. 5).

Why collaboration is needed. The literature overwhelmingly agreed that collaboration, while complex, is needed because there are problems that one independent organization cannot address on its own (Clarke, 2005; Connelly et al., 2008; Gray, 1989; Huxham, Vangen, & Eden, 2000; Slater, 2006). Connelly et al. (2008) argued that one of the main factors of why collaboration is needed is because "problems are not neatly bounded by the organizational lines (of a single agency)" (p. 17). Through collaboration, the perspectives of each individual stakeholder are captured, and a more comprehensive appreciation and understanding of the problem exists, resulting in the development of more comprehensive solutions (Gray, 1989).

The literature went on to identify several cases when collaboration should be considered. These include situations when resources are scarce, there is a need to share risk, when environments are turbulent, and also for learning (Gray, 1989; Huxham & Vangen, 2005).

Trans-Organization Development

This section explores literature relating to trans-organizational development. The literature discussed is divided into the following subsections: (a) trans-organizational development defined, (b) phases of trans-organizational development process, (c) the history of trans-organizational development, (d) the importance of the trans-organization development process, (e) potential shortcomings and gaps in the literature concerning the trans-organizational development process, and (f) complexity of collaboration and the trans-organizational development process.

Trans-organization development defined. Scholars agreed that TD is a process that is used to facilitate multiorganizational planned change when the network is looking to collaborate and the involved networks are underorganized (Boje & Hillon, 2008; Clarke, 2005; Cummings & Worley, 2009; Halley, 1994; Mangiofico, 2013; Worley & Parker, 2011). Additionally, the literature noted that TD processes are used to improve the effectiveness of a network (Halley, 1994). These networks are also known as a trans-organizational system (TS), which Cummings (as cited in Cummings & Worley, 2009) defined as "groups of organizations that have joined together for a common purpose. . . . TSs are functional social systems existing intermediately between single organizations on the one hand and societal systems on the other" (pp. 562–563). The TD process itself is a collection of interventions (Halley, 1994), and ultimately these interventions amount to negotiations on how the trans-organizational work will be done (Halley, 1994; Mangiofico, 2013). It is important to point out that these negotiations focus on the development of new or modified linkages and sense making between the involved organizations (Halley, 1994; Mangiofico, 2013).

Phases of the trans-organization development process. The TD process, as designed by Cummings (as cited in Cummings & Worley, 2009), has four phases: identification, convention, organization, and evaluation. These four phases are supported by themes in the literature concerning successful collaboration. The identification phase occurs when potential and existing network members are considered (Cummings & Worley, 2009; Worley & Parker, 2011). The next phase is the convention phase, which occurs when potential members are brought together to discuss the feasibility, motivations, desirability, and how they each perceive the task (Clarke, 2005; Worley & Parker, 2011). These two steps are often grouped together in other processes mentioned in the collaboration literature.

The identification step of TD is noted in the literature by several different terms, but the actual process of recognizing the needed stakeholders is key, as when key stakeholders have been left out or not identified the process was impaired (Gray, 1989). During the convention phase, which Gray (1989) termed problem setting, the network decides whether or not to proceed, and if so, the network moves on to the third phase, organization. The organization phase is when the network determines how the work will be done. This includes mechanisms for communication and interactions, roles and responsibilities, and other structures that the network determines are needed to accomplish the common goal (Worley & Parker, 2011). Again, this phase was recognized as critical by the literature because it addresses the differences in opinions held by each organization as to how the work should be accomplished (Bryson & Crosby, 2008; Cummings & Worley, 2009; Gray, 1989; Huxham et al., 2000; Worley & Parker, 2011).

The fourth phase is evaluation. This phase is concerned with "assessing how the network is performing" (Worley & Parker, 2011, p. 193). This phase has been deemed critical in the literature because of the complex nature of the problems that the network is addressing and the inherent complexity that exists in trans-organizational work, which requires consistent evaluation to make sure the network is on point (Mangiofico, 2013). The TD process differs from some collaboration processes, as it focuses not just on outcomes, but also on the network relationships or member satisfaction (Gray, 1989). This is an important distinction, as Gray (1989) pointed out, because if member participants are unsatisfied with how the collaboration occurs, the network may not be effective.

History of trans-organization development. The TD process was developed based on collaboration research and the need for the field of organization development to address more than a single organization (Boje & Hillon, 2008; Clarke, 2005; Halley, 1994). The TD process originated with storytelling as a form of learning and interacting across organizations, and then transitioned to using open-systems frameworks as a model, which was introduced by Cummings (as cited in Cummings & Worley, 2009) into the four-phase process that is outlined above (Boje & Hillon, 2008; Worley & Parker, 2011). The inter-organizational work of Emery and Trist (as cited in Worley & Parker, 2011) also provided key foundational elements to the TD process, specifically turbulent environments, which will be discussed in the Importance of the Trans-Organizational Development Process section that follows.

The importance of the trans-organizational development process. As mentioned above, the use of the TD process has been focused primarily on complex

problems, which require the involvement of more than one organization because of the interdependency that exists between organizations (Boje & Hillon, 2008; Clarke, 2005; Halley, 1994; Trist, 1983; Worley & Parker, 2011). It is not surprising that this aligns with the reasoning of why collaboration is important since the TD process is a way to facilitate collaboration. The literature went on to suggest that the need for TD will only increase as globalization occurs and interdependencies between organization increase (Boje & Hillon, 2008; Worley & Parker, 2011).

The need and importance of the TD process is different than collaboration in general, as it attempts to address the dynamics that occur when multiple organizations come together to work on a common goal (Clarke, 2005; Halley, 1994). During collaboration when using the TD process, the phrase common goal refers to the term Trist (1983) developed "inter-organizational domain" (p. 1), which is a "set of problems, or a societal problem area, which constitutes a domain of common concern for its members" (p. 269; see also Worley & Parker, 2011). As compared to other organizations, TSs are by their nature, underorganized (Worley & Parker, 2011). Huxham et al. (2000) explained the importance of having a process, such as TD, in a "highly complex world of inter-organizational relationships in which the inherent—and necessary—diversity is, if left to its own devices, more likely to have a negative effect than to lead to collaborative advantage" (p. 352). The TD process, primarily through the convention phase, brings the common goal or the "inter-organizational domain" (Trist, 1983, p. 269) to the forefront for all the organizations (members) to focus and agree on. Trist stressed the importance of this focus, "Since problématiques, meta-problems or messes—rather than discrete problems—are what societies currently have to face-up to, the cultivation of domain-

based, inter-organizational competence has become a societal project" (p. 270).

Additionally, Emery and Trist's (1965) research on turbulent environments, which are

environments that are complex and dynamic where organizations "relevant uncertainty"

(p. 31) increase, supported this idea.

> Turbulent fields demand some overall form of organization that is essentially different from the hierarchically structured forms to which we are accustomed… This means relationships (between organizations) that will maximize cooperation and which recognize that no one organization can take over the role of the "other" and become paramount. (Emery & Trist, 1965, p. 29)

> Worley and Parker (2011) identified that the TD process "maps well" (p. 194) to

the factors that research has determined are critical for success in trans-organizational

networks. The identified factors for success are

> following a well-defined sequence of stages with early stages focused on "domain definition" or agreeing on problem boundaries and trust building (which aligns with Convention); ensuring participant legitimacy and inclusiveness; recognizing interdependence; finding members with similar motivations regarding communitarian values and utilitarian beliefs (which aligns with Identification); and having the capacity to implement the partnership's decision whatever the distribution of power (which aligns with Organization). (Worley & Parker, 2011, pp. 193–194)

Potential shortcomings and gaps in literature concerning the trans-

organizational development process. Clarke (2005) identified that the linear process of

TD does not address the complexities and fails to realize that "change as (being)

evolutionary" (p. 32). Clark also argued that the shared aim or goal that the TD process

strives to achieve during the convention phase may be limiting, especially when

compared to the ambiguity that a search conference can result with. This has been tied to

the success of search conferences, as it allows for more than one outcome (Clarke, 2005).

Additionally, the literature also suggested that because the entire network must be

willing to participate in the TD process for it to be successful, a great deal of buy-in and

motivation to participate throughout the process is needed for any chance of success (Clarke, 2005; Halley, 1994; Worley & Parker, 2011). Another potential shortcoming identified by the literature is that the TD process requires significant time to be effective (Worley & Parker, 2011). Perhaps because of the time required, little research has been completed to test the true effectiveness of the TD process, such as by experimentation or case studies (Clarke, 2005; Mangiofico, 2013; Worley & Parker, 2011). Boje and Hillon (2008) suggested that the TD process has not been thoroughly explored due to traditional, commonplace bureaucracies and hierarchal structures that are not compatible with the lateral, interorganizational processes that TD supports.

Complexity of collaboration and the trans-organizational development process. Researchers have argued that collaborating in general, and by extension the TD process, is a messy, complex process (Hibbert & Huxham, 2010), so complex in fact that some scholars warn not to attempt collaboration unless it is absolutely necessary (Bingham, Sandfort, & O'Leary, 2008; Huxham & Vangen, 2005). When multiple organizations come together, conflict can come about for a number of reasons, such as a change to working in a lateral organization as opposed to a more hierarchal structure and differences in philosophies, leadership styles, and organizational cultures, including organizational procedures (Clarke, 2005; Halley, 1994; Huxham et al., 2000; Mangiofico, 2013; Worley & Parker, 2011). Organizations that come together to work in an interorganizational network have their own way of working, and as Hibbert and Huxham (2010) identified, these "traditions" (p. 526) of organizations are how they construct the future, and also are their "truths" (p. 528), and may be in conflict with other organizations. Slater (2006) continued on to explain, "The forces that work against such a

collaboration lie within the organization itself and the people who inhabit and enact their lived experiences through the organizational lens" (p. 215). Huxham and Vangen (2005) referred to these forces as tensions and stated, that only "those who have sophisticated understanding of the tensions underlying collaborative practices generally do manage to collaborate" (p. 29).

Additionally, when organizations are collaborating, each must try to balance the needs of its own agency, while supporting the needs of the common goal of the collaboration network (Connelly et al., 2008; Gray, 1989). This paradox is what makes collaboration both appealing and unappealing to organizations that are considering participating in a joint effort (Connelly et al., 2008). When considering collaboration as planned change, individuals must be able to look at the change from an organizational level, a personal belief level, and from the collaborative network lens to address this paradox (Huxham et al., 2000; Slater, 2006).

Furthermore, the ambiguous nature of collaboration, especially trans-organizational collaboration, also causes such initiatives to be complex (Huxham et al., 2000). Mangiofico (2013) pointed out that because of the emergent nature of trans-organizational work, a "precise structure and future [cannot] be predetermined" (p. 40), and this lack of structure contributes to the complexity and ambiguity. Gray (1989) added that the distributed decision-making power involved in collaboration (which may not be equal) adds to the complexity, particularly during the developmental stages when many elements are still undefined. This is especially true amongst new networks when trust may not be established.

A lack of understanding of what it means to collaborate may also contribute to complexity of interorganizational collaborative efforts. As mentioned above, Huxham et al. (2000) has identified various drivers of collaboration, each of which carry their own assumptions of what it means to engage in a collaborative effort and what will result.

Collaboration and Disaster Response

As evidenced by the literature review, there is agreement among scholars that collaboration should be used when organizations are tackling complex problems. Disaster responses by their very nature are complex situations. Drabek and McEntire (2002) described disasters and the need for collaboration:

> Disaster, by their very disruptive and dynamic nature, create such significant demands on the affected community that well-executed, multi-organizational responses become not only necessary, but essential. In other words, . . . no single department or agency has sufficient resources to deal with the disaster at hand. In addition, disasters often require the assistance of outsiders and multiple levels of government, thereby leading to multijurisdictional responses. (p. 206)

Emergency management, including disaster response, is one of the most complex fields because of the need to involve nongovernmental organizations, working with other professions that have well-established cultures, the multitude of disciplines that may need to be involved, and because of the potentially quick onset of disasters, many of which occur with little to no warning (McGuire, 2009; Hicklin, O'Toole, Meier, & Robinson, 2009; Waugh, 2009). Hicklin et al. (2009) noted, "If the scale of the disaster is great and especially if the timing cannot be anticipated, some of the resulting needs, including the needs for collaboration, cannot be programmed in advance – certainly not in intricate detail" (p. 97).

Further complicating disaster response is the possibility that plans, structures, and information sources may be inadequate or unavailable (Majchrzak et al., 2007). Most

disasters, especially catastrophic disasters, require ad-hoc responses, as no jurisdiction has a plan that can account for all the consequences of a disaster, and those responding need to be more sensitive to common goals, and less sensitive to the existing structures and authorities (Majchrzak et al., 2007; Waugh & Streib, 2006). The literature also noted that disaster response collaboration needs to be flexible, adaptable, and creative (Waugh, 2009; Waugh & Streib, 2006). As a result of the need for adaptive, flexible, and creative responses, some scholars have raised concerns about the use of the incident command system (ICS), which is mandated by the National Incident Management System, because it uses a hierarchal structure: "The ICS and NIMS [National Incident Management System] structures are not flexible, adaptive or creative enough to deal with major disasters of any sort" (Waugh, 2009, p. 165).

Emergency managers and collaboration. The literature suggested that there is room for improvement concerning the collaborative ability of emergency managers and emergency management organizations (McGuire, 2009; Waugh & Streib, 2006). In July 2009, a U.S. Government Accountability Office report found, "While effective collaboration has helped to facilitate recovery in past disasters, experiences from the 2005 Gulf Coast hurricanes reveal that more can be done in this area" (p. 19). The literature also raised questions around what type of training emergency managers are receiving and if it addresses the ability to collaborate sufficiently. In particular, McGuire (2009) identified that most emergency management training does not focus on the dynamics of interorganizational networks or how to successfully collaborate. While the literature fully supported the use of collaboration during disaster response and identified the need for more effective collaboration during disasters, the literature also raised the

question of whether or not the current systems that are being used to manage disaster response support or hinder collaboration (Majchrzak et al., 2007; McGuire, 2009; U.S. Government Accountability Office, 2009; Waugh, 2009; Waugh & Streib, 2006). As mentioned above, some scholars argued that the command-and-control hierarchy that is used by many disaster response agencies does not allow for effective collaboration, as these structures are inconsistent with the idea of shared responsibilities and shared authority; as such, current structures are opposite of what management theory suggests if organizations are to be highly adaptable and innovative (Waugh, 2009). Waugh (2009) argued, "More collaborative approaches at the operational and policy-making levels would greatly facilitate the disaster response" (p. 175).

While there is overwhelming research to suggest that collaboration is needed to solve complex problems, such as a disaster, there is also research that suggested some organizations may increase their insularity during the disruptive times of disaster (Hicklin et al., 2009). The literature suggested that the networking response that an organization will take during routine or disruptive times will be based on past experience with collaboration and their existing networks (Gray, 1989; Hicklin et al., 2009).

Gaps in disaster response collaboration literature. There is a stark difference between collaboration in general and collaboration during disaster response. Most collaborative efforts that have been studied occurred during times when organizations were operating along their normal patterns, and not during times of crisis (Hicklin et al., 2009). This area of research needs to be expanded on further.

Another area that the literature did not have consensus on concerning disasters and collaboration is regarding the importance of setting up collaborations ahead of time

versus during the disaster (Kapucu, Augustin, & Garayev, 2009; Majchrzak et al., 2007). While most would agree that making plans and relationships ahead of time is generally a positive approach, especially given that trust has been recorded as a key factor in successful collaboration, others would argue that the needs of disaster response cannot be foreseen and that relying on preexisting networks and collaboration may limit the needed response (Majchrzak et al., 2007). Waugh and Streib (2006) argued, "It is a mistake to assume that a response can be completely scripted or that the types of resources that are available can be fully catalogued" (p. 134). Exploring the use of the TD process during disaster response aims to see if collaboration networks can be effectively established regardless of preexisting plans, relationships, and networks.

Some of the concerns mentioned in the literature concerning collaboration during disaster response is whether or not there is time to organize collaborative networks during times of crisis, and the effect that current patterns and cultures in disaster response organizations have on collaboration (Hicklin et al., 2009). This is another area that would benefit from further research.

While there is a great deal of literature about collaboration as a general concept and also the use of collaboration in disaster response, there is a gap in the literature on how to effectively establish and proceed with a collaborative process during disaster response. The aim of this research was to explore whether or not the TD process can be used as a guide for collaboration during disaster response.

Conclusion

This chapter has outlined the current literature concerning collaboration, the TD process, and collaboration during disaster response. The following chapter will outline

the methods that were used to explore whether or not the use of the TD process would

improve the effectiveness of disaster response collaboration.

Chapter 3

Research Methods

The purpose of this study was to explore if the TD process can be utilized during disaster response to improve the effectiveness of disaster response collaborations. This chapter describes the research methods that were used to collect data for this study. This chapter also reviews the details of the research method that was chosen, participant criteria and selection, and the development of the data collection processes, including how the data were collected and how data were analyzed.

Mixed Method Research Design

This study used a mixed-method design. Both qualitative and quantitative methods of data collection were used enhance the data set and provided several different perspectives. The use of a mixed-method approach allowed for a deeper understanding of the complexities involved in collaboration and disaster response operations by capturing multiple perspectives and by comparing the data. The quantitative data collection process captured measurements such as frequency of activities and the rating of importance of some elements of the TD process. The qualitative data collection was appropriate for capturing the processes and experiences of the study participants. The ability to compare experiences, the value that participants assigned to aspects of the TD process, and the frequency at which the processes occurred allowed for deeper understanding of what participants valued, versus what was prescribed during disaster response and what had actually been experienced.

Participation Criteria

This study included interviews and an online survey, both of which had requirements for participation. A total of 11 individuals were interviewed, and 50 individuals participated in the online survey. Individuals who met criteria for the interviews were also allowed to participate in the survey if they desired. This next section describes the selection criteria used for both samples.

Interview participant criteria. Study participants who were interviewed met the following criteria:

- Interviewees were professionals or volunteers in disaster or emergency services with experience in a disaster response lasting longer than 48 hours in which collaboration was required.

- Interviewees had firsthand experience in facilitating collaboration during a disaster response.

- Interviewees were over 18 years of age.

Professionals or volunteers were allowed to participate in interviews to allow for greater diversity in the sample selection. In addition, because disaster response collaboration often times requires both the involvement of professional and volunteer organizations, the researcher felt both perspectives were valuable and would help to prevent a bias from being reported if only one type of participant was allowed. The requirement of having experience in a disaster response that lasted longer than 48 hours was included, as there is a higher likelihood for the need to collaborate on longer incidents. This is primarily because the longer an incident lasts the greater potential for scarcity of resources to exist and for immediate emergency response protocols, which are

generally carried out by first responders, to not address the scope of such an incident. The need for collaboration is also dependent on the size of an incident and the resources available to an organization, but because this varies so greatly from organization to organization, the requirement that the participant have experience with an incident lasting longer than 48 hours and requiring collaboration was selected. Interviewees were also asked to have direct experience in facilitation during disaster response so that they were able to speak directly about their firsthand experiences. The interview consent form, which included the selection criteria, can be found in Appendix A of this document. Due to the fact that the interviewees that participated in this study are from the researcher's professional network, the researcher was able to confirm that each interviewee met the selection criteria through firsthand knowledge and experience.

Survey criteria and selection. Study participants who completed the online anonymous survey met the following criteria:

- Respondents were professionals or volunteers in disaster or emergency services with experience in a disaster response lasting longer than 48 hours in which collaboration was required.

- Respondents were over 18 years of age.

Survey participants need not have to have firsthand experience facilitating collaboration during disaster response, which was a requirement of those being interviewed. This requirement was not selected for those who completed the survey, as the researcher felt it was important to allow the opportunity for those that have not facilitated collaboration during disaster response to provide their perspectives to capture

the broader consequences of collaborative efforts on disasters, as well as their general perceptions of disaster response collaboration.

Survey participants acknowledged that they met the selection criteria by providing consent at the start of the online survey. The online survey consent form can be found in Appendix B of this document.

Participant selection process. Study participants who were selected to be interviewed were initially identified by convenience sampling through the use of the researcher's professional network, and from there, chain sampling was used to identify additional interview participants who met the above criteria and were deemed to be an individual who could provide critical information on the topic of disaster response collaboration. To facilitate the chain sampling, at the end of each interview, participants were asked if they had a recommendation on additional individuals who should be interviewed, who met the outlined criteria.

The researcher's aim at the initial interviewee selection process was to select participants with diverse experiences based on the types of disasters they had responded to in terms of scope, type, and complexity. Additionally, the researcher made every attempt to speak with those who worked for different disaster response sectors, as well as individuals who had different levels of experience.

Those who met the criteria and expressed an interest in being interviewed were sent an interview consent form via email, which also outlined the purpose of the study. All the interviews were conducted during the spring of 2014. Two of the 11 interviews were conducted in person. All other interviews were conducted over the phone.

Interviewees were not required to answer any of the questions that they were asked during the interview, and all data collected from interviews were kept anonymous. All personal, incidental, or organizational identifying information that may have been included in interview responses were not included in the presented data to protect the anonymity of those who were interviewed.

Similar to those who were interviewed, sampling selection for survey respondents originated with convenience sampling, and then progressed to chain sampling. Again, starting with the researcher's professional network, emails with the survey link were sent, which requested individuals to complete the survey if they met the criteria and consented to taking part in the research. The online survey started with the survey consent form and the criteria necessary to complete the survey. Those within the researcher's network who were requested to take the survey were also requested to forward the link and survey information on to others they felt met the criteria and could provide useful insights about disaster response collaborations.

A total 50 individuals provided answers to the survey questions.[1] All survey responses were anonymous, and any personal, incidental, or organizational identifying information that may have been included in open-ended responses were not included in the presented data to protect the anonymity of those surveyed. Survey participants were not required to answer any of the questions on the survey and could stop the survey at any point.

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[1] A total of 84 individuals consented to the survey, but only 50 of the 84 completed the survey questions.

Participant Descriptions

A total of 61 participants took part in this study, 11 interviewees and 50 survey respondents. The interviewees were also invited to participate in the survey; however, only one interviewee chose to complete the survey. Data were collected across both groups concerning participants' years of experience, the sector of disaster or emergency services that they participated in, and the type of incidents that they responded to. This information can be found in chart format in Appendix C of this study.

Data Collection Management

Data for this study were collected in two different manners. The survey data were collected using an online survey tool, which allowed responses to be anonymous and was able to be formatted to allow for open-ended survey questions as well as questions that were answered with a rating scale (e.g., frequency or importance). Furthermore, use of this tool allowed for additional questions to be asked if a particular survey question had been answered.

Those who were interviewed, both on the phone as well as in person, were asked permission to have their interviews recorded so that the researcher could capture the entire interview more effectively than just with written notes alone. The audio recordings were then used to analyze the data provided by the interviewees. The survey results, audio recordings, and all related transcribed notes from the recordings will be kept securely for 2 years and then destroyed.

Development of Interview and Survey Questions

Both the interview and survey questions were developed to capture the participants' perspective on collaboration during disaster response, as well as whether the

use of the TD process would improve the effectiveness of disaster response collaborations. As a start, both pools of participants were asked to define or describe collaboration to gain a baseline of participants' understanding of collaboration and how their understanding of collaboration compared to the literature. This was deemed an important area to cover because cooperation, coordination, and collaboration may occur during a disaster response. Additionally, responses to this question provided a baseline of participants' understanding of collaboration, which the literature indicated could effect the network members' expectations of the collaboration.

Both pools of participants were also asked what they felt contributed to effective collaboration during disaster response. Those who were interviewed were also asked to describe what collaboration during disaster response looked like in their organization as well as in general during a multiagency disaster response (not specific to their organization). Interviewees were asked these additional questions to allow for greater descriptive responses about collaboration during disaster response, including their experiences.

Questions for both the survey and interview were also developed to address specific phases of the TD process to gain an understanding of what participants feel occurs during disaster response collaboration concerning each phase and to what extent. To address specifics of the identification phase (Cummings & Worley, 2009), the following questions were developed for the survey:

1. To what extent does your organization intentionally identify existing and potential organizations to collaborate with during disaster response?

2. What effect does not being familiar with or not having a prior relationship with another organization have on collaboration?

In the first question, participants were asked to rate the frequency to gain an understanding of the number of instances participant organizations were intentional about their identification of who they may need to collaborate with. The second question provided information regarding how familiarity with, or prior relationships, affected the collaborative network development. Those who were interviewed were only asked how intentional, during past disaster experiences, their organization was at identifying existing and potentially new organizations as collaborators. This was done to limit the amount of time needed for interviews, yet still gain information that was specific to this phase of the TD process.

Similar to the questions that were specific to the identification phase (Cummings & Worley, 2009), questions were also asked of both groups of participants about the processes that would occur during the convention phase (Cummings & Worley, 2009). For the survey the questions were as follows:

1. To what extent do you agree there is value in organizations having multiple perspectives with regard to disaster response?

2. When considering a collaborative effort during disaster response, to what extent is there an opportunity for organizations to discuss and understand motivations and differing aspects of the problem or task at hand?

Both of these questions provided a rating scale for survey responses. These questions were asked to gain an understanding of what, if any, processes or concepts of

Cummings' (as cited in Cummings & Worley, 2009) convention phase were already occurring during disaster response collaboration, and with that frequency.

Interviewees were asked slightly different questions concerning Cummings' (as cited in Cummings & Worley, 2009) convention phase in order to promote more descriptive responses than the ratings that were collected from the survey. Interviewees were asked the following questions, which were selected to gain knowledge about both the perceptions of the interviewees concerning the intent of the convention phase, and also what their relative past experiences had been:

1. How can multiple perspectives of a problem influence the response to a disaster?

2. Considering your past experiences, when your organization was considering a collaborative effort, was there an opportunity for organizations to discuss and understand each organization's motivation and how they perceived the problem at hand?

3. If you were to assign a percentage, how often do you feel there was task consensus amongst the organizations participating in disaster response (collaboration)?

For Cummings' (as cited in Cummings & Worley, 2009) organization phase, survey participants and interviewees were asked about formal structures and mechanisms that promoted communication and interaction between (network) member organizations and about decision-making processes. Once again, survey respondents were asked to rate the importance of such structures and mechanisms, and if the importance was rated high, they were asked what that key components were. These questions helped to answer what

value the processes that are supposed to occur during the organization phase provide. Survey participants were also asked to rate when collaborating during disaster response, how often a decision-making process was determined among the participating organizations. Interviewees were asked the same questions, but were able to provide open-ended responses to allow for more descriptive responses.

Finally, for Cummings' (as cited in Cummings & Worley, 2009) evaluation phase, both the survey and interview participants were asked, when collaborating during disaster response in the past, if there were ongoing feedback processes that considered not only the effectiveness of the collaboration but also member satisfaction. Again, the survey participants were asked to provide a rating of the frequency with which this occurred, and interviewees were asked the open-ended question format to allow for more descriptive answers.

At the end of both the survey and the interviews, participants were asked about the entire TD process. Survey respondents were asked to rate to what extent they felt each of the TD phases would be important in creating effective disaster response collaborations. Interviewees were asked a slightly different open-ended series of questions to allow for slightly different perspectives. Interviewees were asked if they felt each phase of the TD process would provide benefit if utilized during disaster response when collaboration was needed, and then asked to explain why or why not. The intent of these final questions was to pull together a concluding question for each process that looked at the complete TD process. All interview and survey questions can be found in Appendices D and E to this document.

Data Analysis

This thesis utilized both quantitative and qualitative data. The quantitative data were used to provide a broad overview of the value that people who participate in disaster and emergency services assign to each phase of the TD process, specific aspects of the TD process, and the frequency with which aspects of the TD process are utilized during disaster response. To accomplish this portion of the data analysis, I compared the relative frequencies of the survey responses that asked participants to either rate their perspectives or the frequency of occurrences based on their experiences. By asking each survey respondent to rate the level of importance of each phase of the TD process, I could then compare each phase to see on which aspects disaster practitioners placed the greatest value. In addition to the rating of importance of each of the TD phases, I also examined how often participants reported each TD phase had occurred (rated using the options Always, Often, Sometime, Rarely, or Never). This provided an interesting comparison between the reported value participants assigned to each phase and the actual occurrence.

The qualitative data provided much more in-depth detail and a richer understanding of disaster response collaboration. For each interview question, and for the open-ended survey questions, coding responses allowed the researcher to identify common themes. These themes were then used to organize responses for further analysis. The first group of themes centered on collaboration, in general, and collaboration during multiagency disaster response. By identifying the common themes from the related interview questions, insight was gained into the general topic of collaboration in the field of disaster response and on disaster response collaborations and how these related to the TD process. The second set of themes pertained to questions related to each of the TD

phases. These questions allowed the researcher to probe deeper into the perspectives of the participants on each phase of the TD process. By examining the common themes that resulted from these questions, a deeper understanding was gained of why particular phases offered value, or why some concern or hesitation may exist. Themes were then identified that concerned the frequency with which some TD aspects are used.

Finally, after completing the analysis of both the quantitative and qualitative data, both sets of data were synthesized and common themes from across the research were identified. The synthesizing of the data helped to set a foundation for the conclusions of the research.

Conclusion

This chapter outlined the research methods that were used to collect data for this study as well as the rationale for the design of the study, data collection questions, participant criteria and selection. The next chapter will present the findings and conclusions that were derived from the data collected through this design.

Chapter 4

Results

The focus of this research was to explore whether the use of the TD process, developed by Thomas Cummings (as cited in Worley & Parker, 2011), would improve the effectiveness of collaboration during disaster response. This chapter presents the analysis of the data collected from survey respondents and interviewees. Quantitative survey data results are presented first, followed by qualitative results from both the survey and interviews.

A total of 50 participants completed an online survey and 11 study participants were interviewed. Both the survey and interview questions, though slightly different, asked study participants about their understanding and experiences with collaboration during disaster response and about the application of Cummings' (as cited in Cummings & Worley, 2009) TD process to disaster response collaboration. To ensure participant anonymity, all direct quotations from participants' responses are cited as study participant, interviewee, or survey respondent.

Quantitative Data

This section presents the quantitative data results that were captured primarily through the online survey. Those who completed the online survey were asked to answer a series of questions regarding the importance of each of Cummings' (as cited in Cummings & Worley, 2009) phases of the TD process. The definition of each of the four phases of the TD process were provided to survey respondents, and they were then asked to rank the importance of each phase concerning creating effective collaborations during

disaster response. Survey respondents were also asked additional questions related to the attributes of the four phases as they relate to collaboration during disaster response.

TD Phase 1: Identification. Identification was defined in the survey as the phase when potential and existing network members (organizations) are identified (Cummings & Worley, 2009). In total, 85% of participants ranked the importance of the identification phase as very important, the highest ranking (see Figure 1). The remainder of the respondents (15%) indicated that this phase was somewhat important.

Figure 1. The importance of the identification phase of the trans-organization process as indicated by survey participants.

With 85% of respondents reporting that the Identification phase of the TD process is very important, it is not surprising that additional survey data indicates that 90% of respondents reported that their organizations are always or often intentional about identifying existing and potential organizations (network members) to collaborate with during disasters.

It is also worth noting that there were no responses ranking this phase as marginally or not important. This is in contrast to the other phases, where the distribution of importance was wider.

TD Phase 2: Convention. Convention was defined for survey respondents as the phase that brings organizations together to determine if the network is desirable and

feasible, and to discuss task perception (understanding of the task at hand). Most

respondents felt that this was very important (49%). Of the remaining participants, forty

percent of the respondents found it somewhat important and eleven percent deemed it
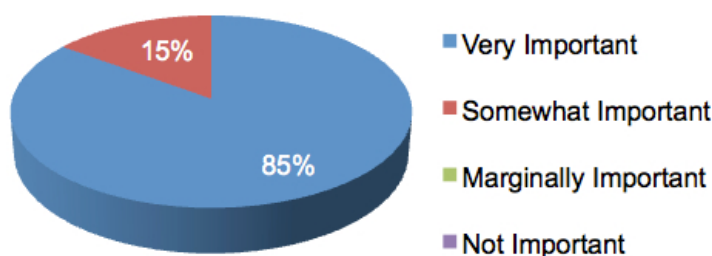
marginally important (Figure 2).

Figure 2. The importance of the convention phase of the trans-organization process as
indicated by survey participants.

Additional survey results that related to Cummings' (as cited in Cummings &

Worley, 2009) convention phase included what value, if any, having multiple

perspectives provides during disaster response collaborations, and the frequency of

opportunity disaster response organizations have to discuss and understand differing

aspects of the problem or task at hand during disaster response.

Survey respondents were asked to identify the value of having organizations with

multiple perspectives during disaster response. The majority of respondents strongly

agreed (40%) or agreed (51%) that there was value in organizations having multiple

perspectives with regard to disaster response (8% of participants reported either neutral or

no value). However, despite 91% of respondents agreeing that multiple perspectives

provided value, limited opportunities actually existed for organizations to discuss and

understand motivations and differing aspects of the problem or task at hand during

disaster response. Only 13% of respondents reported that there were "always"

opportunities for such discussions; other results reported discussion opportunities occurred "often" (38%), "sometimes" (32%), "rarely" (15%), or "never" (2%).

Additional quantitative data concerning Cummings' (as cited in Cummings & Worley, 2009) convention phase, specifically relating to task consensus, were gathered from interviewees. When asked to assign a percentage of how often there was task perception consensus during past disaster response collaboration experiences, interviewees' responses ranged widely from 10% to 90% (median 80%). Several interviewees reported task perception consensus varied from disaster to disaster and as personnel changes within the organization occurred. Three interviewees were unable to provide a percentage, but indicated that achieving consensus has improved overtime.

TD Phase 3: Organization. Organization was defined for respondents as the phase that formalizes structures and mechanisms to promote communication and interactions between members (Cummings & Worley, 2009). Most respondents ranked this as very important (72%; see Figure 3). There was greater consensus amongst respondents with this phase when compared to the convention phase.
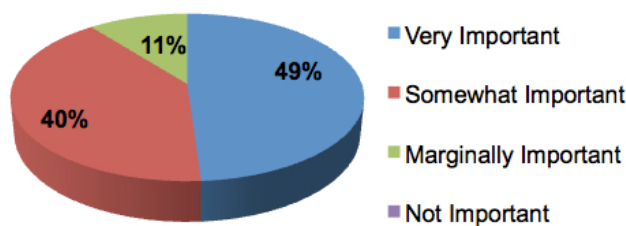

Figure 3. The importance of the organization phase of the trans-organization process as indicated by survey participants.

Additional survey results regarding the importance of formal structures and mechanisms that promote communication and integration among organizations that collaborate during disaster response were consistent with the ranking of the importance of

Cummings' (as cited in Cummings & Worley, 2009) organization phase of the TD

process. Of the survey respondents, 77% reported that these formal structures and

mechanisms are very important, 19% reported they are somewhat important, and only 4%

reported them to be marginally important.

Respondents were also asked about joint decision-making processes, an element

of Cummings' (as cited in Cummings & Worley, 2009) organization phase that the

literature indicated is important for successful collaboration. This process would likely be

determined during the organization phase of the TD process. When asked if during past

disaster response collaboration experiences there was a decision-making process jointly

determined by participating organizations, the largest number of respondents (38%)

reported that this was often the case. A total of 30% of respondents reported that this

decision-making process sometimes occurred, 19% said it always occurred, 11% reported

that it rarely occurred, and 2% indicated such a decision-making process never occurred.

TD Phase 4: Evaluation. Evaluation was defined for participants as the phase

that assesses how the network (of member organizations) is performing (Cummings &

Worley, 2009). Most respondents ranked this phase very important (75%). This is the

only phase that received a ranking by some respondents as not important (2%; see Figure

4).

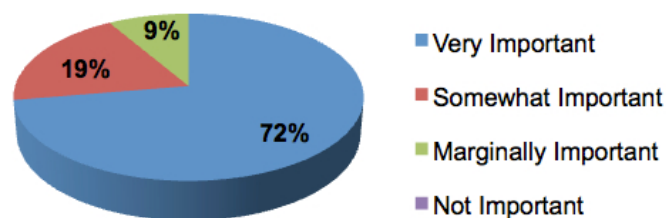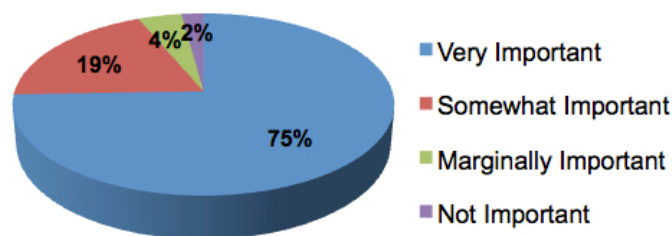*Figure 4.* The importance of the evaluation phase of the trans-organization process as
indicated by survey participants.

Respondents were also asked to what extent during past disaster response experiences were ongoing feedback processes utilized that considered not only the effectiveness of the collaboration, but considered also member satisfaction. The majority of respondents (36%) reported that there was "often" such a feedback process, 34% reported that these processes occurred "sometimes," 15% reported that "rarely" were these processes in place, and 9% reported such processes were "never" in place. None of the respondents reported that ongoing feedback processes were "always" in place.

Discrepancy between reported importance and occurrence of trans-organization development phases. Based on the data presented above from the survey respondents, there is a discrepancy between the reported importance of each phase of the TD process and how often the phases occurred during survey respondents' past experiences. Figure 5 illustrates the potential gap by showing the rated importance (reported by participants as "very" or "somewhat") and the rated occurrence (reported by participants as "always" or "often" occurring). Survey respondents were not asked specifically about the rate of occurrence for Cummings' (as cited in Cummings & Worley, 2009) organization phase, and as such an occurrence rate is not included for organization in the chart below.
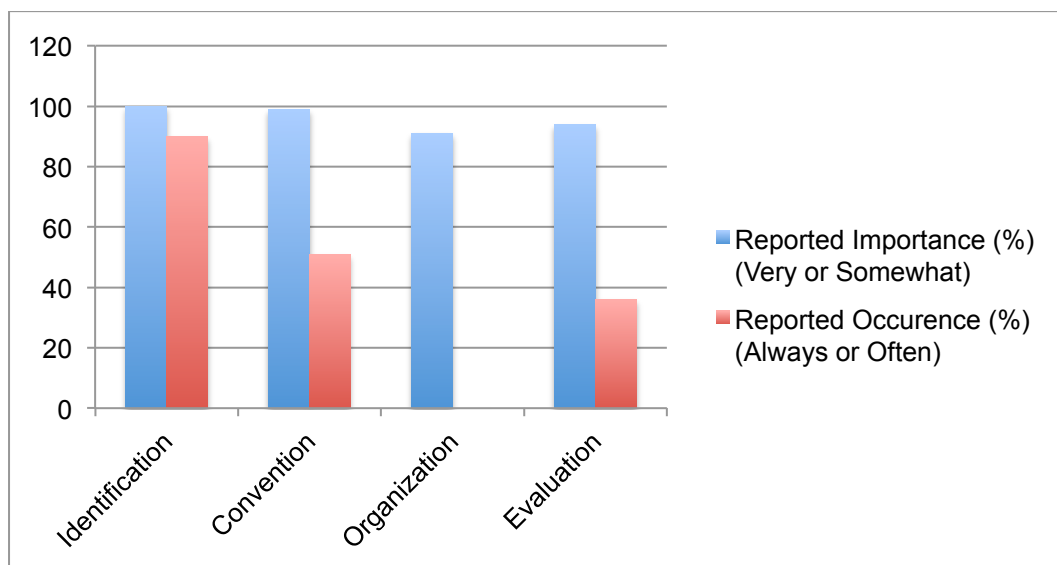
Figure 5. The potential gap between participants' reported importance and the reported occurrence.

Qualitative Data

This section examines the qualitative data collected by the online survey and interviews. Data collected about collaboration, effective collaboration, and collaboration during disasters are presented, followed by a discussion of the qualitative data that pertain directly to the TD process or were attributes of each of the TD phases.

Defining collaboration. As part of this research, to set a baseline of understanding of collaboration amongst emergency managers and service providers, both survey respondents and interviewees were asked to define or describe collaboration. When examining the responses from both pools of the sample population several components emerged; the most common component (54% of respondents of survey respondents and 80% of interviewees) for the definition of collaboration was organizations working together toward a common goal. For the purpose of this research the term common goal is defined using study participants' responses such as "mutual goals," "mutually agreed-upon objectives," "common objectives," "agreed-upon end-

state," "common mission," and "shared goals." Eight additional study participants

identified "working together to achieve a goal"; however, because a common goal was

not explicitly stated, these responses were not included in the 54% noted above. It is

important to note that working together does not necessarily imply collaboration, but may

instead be cooperation or coordination.

Interviewee responses relating to the term common goal included "effectively

bringing together organizations to accomplish a single mission" and "multiple parties

coming together to work on a solution for something."

Gray (1989) defined collaboration as "a process through which parties who see

different aspects of a problem can constructively explore their differences and search for

solutions that go beyond their own limited vision of what is possible" (p. 5). The

definition that was provided by a study participant that most closely aligned with Gray's

definition was an interviewee who defined collaboration as follows:

> Collaboration is not you coming to work for me, you're doing me a favor, or you
> meeting my needs. We are going to sit down and talk about what our mutual goals
> and our mutual needs, and come to a consensus on how we will accomplish our
> tasks.

However, this definition does not specifically address the difference in perspectives that

Gray highlighted. Another interviewee defined collaboration as "bringing people

together, and listening, to different ideas, and deciding as a unit what we are going to do."

While this definition addresses the utilization of differences that network members bring,

it does not specifically highlight the independency of the solutions being "beyond their

own limited vision of what is possible" (Gray, 1989, p. 5).

Other survey responses defining collaboration included, "Working together with

diverse elements, sometimes within organizations, with other organizations, or other

interested stakeholders in order to achieve a result," and "People with different backgrounds different levels of expertise, different perspectives working together towards a common goal."

Additionally, Gray (1989) identified the following five key aspects within her definition: "The stakeholders are interdependent, solutions emerge by dealing constructively with differences, joint ownership of decisions is involved, stakeholders assume collective responsibility for the future direction of the domain, and collaboration is an emergent process" (p. 227).

When comparing the data to Gray's (1989) description of the aspects of collaboration, as outlined above, only three survey responses aligned with at least one of the aspects. Two responses aligned with the concept that solutions emerge by dealing constructively with differences, and one response aligned with the concept of interdependency. Interestingly, however, the majority of interview definitions of collaboration included at least one if not more than one of the aspects outlined by Gray.

Disaster response collaboration. Interview participants were asked to describe what multiagency (trans-organization) disaster response collaboration looks like in general and within their organizations. The overarching theme from the interviews was the idea of identifying common goals, which is consistent with the data collected on the definition of collaboration. All the other responses varied widely and covered topics such as preplanning, having a structured system in place, resource pools, and establishing relationships. An interesting observation about this particular question was that nearly half of the interviewees either started their answer with a joke about multiagency disaster response collaboration as being "awful," "ugly," asking "how it works or how it should

work?" and offering stories of problems that they have experienced.[2] The following is an example of interviewee responses:

> It [multiagency collaboration during disaster response] can work really effectively if that common goal is established. The tension that I see in the collaborative process is when people are putting their goals and end states, and vision ahead, and you don't have alignment across, and you end up with divergent missions. People believe they are doing the right thing for the reason but if that end state is not shared it gets messy.

Effective collaboration. Since the premise of this study was focused on creating more effective collaborations during disaster response, both survey and interview participants were asked what they believe contributes to effective collaboration during disaster response. Survey respondents were also asked how they determine successful collaboration during disaster response.

The most commonly identified theme for effective collaboration was communication, which includes the ability to have open, clear, and cohesive communication, and systems that support this type of communication. The second most identified theme was willingness to work together. It should be noted that this theme is separate from the theme of agreeing to a common purpose, the third most identified theme, as agreement on task perception does not explicitly infer a willingness to work together. The fourth theme that was most identified was previous training or planning. For the purpose of this study, the theme of previous training or planning includes "being well-trained," "exercising and preparedness," "drills," "preplanning," and "preparing together in advance." Other themes mentioned infrequently included having established relationships, knowledge of the networks skills and capabilities, having standardized

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[2] The majority of stories or incident specific examples were excluded from this document, as the descriptions of the incidents, jurisdictional agencies involved, and issues raised risked compromising the anonymity of interviewees.

organization structures and protocols, and the least identified theme for what contributes to effective collaboration was leadership.[3]

There is some alignment between Cummings' (as cited in Cummings & Worley, 2009) four phases of the TD process and the responses received from participants concerning effective collaboration. The most prevalent theme, "communication," aligns with the third phase of the TD process (organization), in which Cummings (as cited in Cummings & Worley, 2009) specifically called communication out as the need for "structures and mechanisms that promote communication and coordination" (p. 576).

Participants identified "commitment and willingness to work together," which is also the entire purpose of Cummings' (as cited in Cummings & Worley, 2009) convention phase in the TD process: "to determine if the network is desirable and feasible" (p. 575). The theme of "agreed to common purpose" identified by participants also aligns with Phase 2 of the TD process, convention. This phase considers task perceptions and agreement on the task.

Study participants also identified established relationships and previous training or planning as important and included preparing together in advance, individuals being well trained, and joint training, planning, and exercising. These activities support the ability to identify established members of the network, which support Cummings' (as cited in Cummings & Worley, 2009) identification and organization phases of the TD process.

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[3] Two survey responses were not included, as they did not answer the survey question: "What do you think contributes to effective collaboration during disaster response?"

Those who were surveyed were asked how they determine if a collaboration during disaster response is effective or not. Over half of the respondents reported that having a positive or successful outcome was how they determined if collaboration was successful. For the purposes of this study a positive or successful outcome includes "objectives being met," "advancement of the mission," "progress toward goals," "goals being met," and other similar participant responses. The less frequently reported themes, each of which represented 11% or less of responses, included effective use of resources (11%), synchronized operations (11%), effective information sharing (9%), network members understanding and agreeing on how work will be done (9%), and finally network members feel they contributed healthy participation (7%).

Further examination of the trans-organization development process phases. The following sections investigate how participants' qualitative responses correlate to each phase of Cummings' (as cited in Cummings & Worley, 2009) TD process, and whether or not these phases, if used during disaster response, would provide benefit. Interviewees were provided the following definitions for each of the phases of the TD process:

- *Identification* identifies potential and existing network members (organizations).

- *Convention* brings organizations together to determine if the network is desirable and feasible.

- *Organization* is the formalization of structures and mechanisms that promote communication and interactions between members.

- *Evaluation* is assessing how the network (of organizations) is performing.

Interviewees were then asked if they felt each phase of the TD process would provide

benefit if utilized during disaster response when collaboration is needed, and why or why

not. The following sections detail these responses.

   Identification. All of those who were interviewed agreed that Cummings' (as

cited in Cummings & Worley, 2009) identification phase of the TD process would

provide benefit. Responses from the interviewees included "Yes, clearly. That is a simple

yes," while others went into more detail as to why this phase of the TD process would be

of benefit:

> We try to do this, because if you are looking at existing and potential, then you
> are looking at a broader scale of what your resources are, and you are also looking
> at a broader scale of your area of effectiveness and a broader scale of who and
> what will be impacted. So you are looking more holistically at the incident from
> the start. . . . I think we are trying to take a broader view as much as we can [in
> this jurisdiction], but the hard part is, even if you take a broader view and you
> make the invitation [to stakeholders], it doesn't always mean you are going to get
> them. (Interviewee)

> While all interviewees agreed there was value in this phase, some felt that

identification should be done beforehand, while others expressed strong feelings that it

needed to be done during a disaster:

> Yep, absolutely. I think this is what we try to do beforehand, to try to identify
> who we would call on [for resources]. We try to have the conversations in
> advance so we are not doing it in the midst of a crisis. (Interviewee)

> Another interviewee said,

> It would be awesome. As I look at this [process], I think this ought to be part of a
> checklist. . . . Is everyone here that needs to be here? Is everyone invited that
> needs to be invited? That is an essential and very helpful tool.

> Since Cummings' (as cited in Cummings & Worley, 2009) identification phase of

the TD process considers both the organization's existing and potential network

members, those who were interviewed were also asked how intentional their

organizations were at identification during past disaster response experience. The majority of those interviewed reported that their organizations are intentional about considering both existing and potential network members, but most also stressed that this should, at least initially, occur during the planning process prior to the disaster.

Additionally, survey respondents were asked what effect not being familiar with or not having a prior relationship with another organization has on collaboration. Of the identified themes, the most common was a difficulty in knowing how to work together, which can cause the response to slow down. Reasons for this difficulty occurring were identified as not being familiar with another organization's capabilities or their leadership: "It [not knowing one another] slows things down, as each organization needs to feel out the other organizations to learn their strengths and weaknesses" (Interviewee). The second most commonly identified theme was difficulty with establishing trust, which can also slow down a response. The other themes that were identified were an unwillingness to delegate tasks and to move out of the organization's defined roles. This theme was kept separate from the first theme of difficulty in knowing how to work together, as they are not mutually inclusive.

There were also several responses of note in the survey data related to established relationships. One survey respondent reported that the level of involvement and the dependency that an organization had in a collaboration made prior relationships more or less important: "The significance of the collaboration make the effect more or less relevant." Additionally, another survey respondent identified that it is not just whether or not organizations are familiar or have a relationship, it also matters if the relationship is

positive. Finally, a respondent stated that is it more important to be familiar with another organization than to have a relationship.

Convention. All interviewees saw value in the concept of Cummings' (as cited in Cummings & Worley, 2009) convention phase to determine if a network is feasible and desirable. An interviewee stated that this phase would be

> an exceptional tool to use, as it would allow in the planning and decisions-making process the most efficient use of resources. You have people and organizations that would be better informed about what "A," "B," "C" organizations can do, and, therefore, you can put them in the most effective positions.

The convention phase also helps to "make sure we know that people are willing and capable to do the tasks" (Interviewee). Which directly connects to the task feasibility aspect of the convention phase.

It is important to stress that participants felt there is value in the theoretical concept of Cummings' (as cited in Cummings & Worley, 2009) convention phase; however, participants also expressed hesitation in the practical application. Time-sensitive needs that can exist during a disaster may not allow for time to carry out what is outlined in this phase. For example, one interviewee stated,

> [This phase is] absolutely beneficial. The question is how to apply it in a time-sensitive or time-limited environment. During an incident the challenge is getting those people to buy-in in a matter of minutes as opposed to a matter of days, weeks, or years.

Another concern was related to the ability to revise or update what had been decided during the initial convention phase: "[This phase] needs to be flexible. In other words there's a goal we are shooting for, but there needs to be revisions as we go through. We are going to need to add people. It is ever changing" (Interviewee).

Additionally, most interviewees felt that the processes within Cummings' (as cited in Cummings & Worley, 2009) convention phase usually occurred at some level during disaster response collaborations:

> I think it is going to happen anyway. Some the of these words and phrases that this [process] is using are different than what we are trained in right now by FEMA [the Federal Emergency Management Agency] and others. . . . I think putting it on a structure with a different slant about how it works is helpful; to get people thinking about it differently is good. I think right now we go into an event and we pull in everyone that we think of, and we hope that everyone does the same thing. (Interviewee)

Not all interviewees agreed that the concept of convention is being carried out:

> I do think that it would be beneficial because you'll be looking more strategically at that point. You are looking at would this be an effective group to respond, and if not let's tweak it. I think that what happens though, is that, I don't think it happens. I don't think anyone looks at it strategically. I don't think anyone does much strategically, actually. I am not sure if it is because they are happy to get whoever they get at the table, and then its just "this is great, these are the people we have that are willing to work on it. Let's just see what they come up with." Instead of making the extra effort of "we don't really need this group, but you know who we would need, let's work hard on getting those people to the table." So yes, I think it would be effective, but I don't think we look at it strategically. (Interviewee)

Multiple perspectives during disaster response. Cummings' (as cited in Cummings & Worley, 2009) convention phase is an opportunity for network members to address their perspectives of the task or problem at hand. Interviewees were asked how multiple perspectives could influence disaster response. The most common theme identified was that multiple perspectives are a positive influence, as they help to inform the decision-making process and allow those managing a disaster to have a wider or more comprehensive view of the incident and its consequences than they may have concluded without differing or multiple perspectives. One interviewee noted,

> Multiple perspectives give you a wider angle. It is like you put the periscope up to get a wider perspective. . . . The more perspective you've got on something you

are more likely to properly diagnose what the problem is and come up with more creative solutions to solve it.

Another interviewee described multiple perspectives as

> key, because we all view things from our particular perspective, and one of the most important things to be able to do is recognize that the view from your fox hole is different than the view from my EOC [emergency operations center]. We view it from different levels. . . . Some folks are viewing it from way up close, some are viewing it from the balcony, some are viewing it from helicopters. They all see different things, and by sharing those perspectives that allows for the most complete picture of the incident and the most functional way to determine which actions and strategies are going to be most effective.

While there was agreement that multiple perspectives, when combined, result in a consensus and are positive during disaster response, a number of interviewees warned that there can be a negative influence to multiple perspectives on a disaster.

> One of my core beliefs is you don't make a good decision unless you have multiple perspectives. Unless you look at something from all angles, you are not going to make the best decision for the whole. However, you can end up with multiple perspectives, but they [organizations] are all doing multiple things to respond. This is key to the topic of collaboration. It is one thing to have multiple perspectives, but it is only effective if you collaborate on those perspectives. If you looking at it from all those perspectives and then doing what you think needs to be done, within your lane, then you are not being effective. (Interviewee)

Another interview responded,

> We want to avoid that [multiple perspective] if we can. That is why it is so critical up front to get agreement on sources of information that we consider valid and when we will evaluate that information. If the difference is critical and they [disaster managers/incident commanders] have to act on it in the next hour or 90 minutes, or can we take time to get consensus, is the first question that needs to be asked. We may need to take action and move on it. If we have time, we can take the time to reach agreement on what we are seeing here.

As a follow-up question, interviewees were also asked to consider their past disaster response experiences when their organization was considering a collaborative effort, and if there was an opportunity for organizations to discuss and understand each agency's motivations and how they perceived the problem at hand. The majority of

responses stated that there was an opportunity to do so. One interviewee stated, "Very

intentional. Very critical, almost mandatory, because we don't have enough resources to

solve the problem without it." However, one interview participant disagreed and reported

the opposite and explaining that there was not intentionality to understand motivations,

but that organizations move directly to taking action over understanding how each

organization perceives the problem at hand:

> We tended to fall into a false sense of confidence. . . . We had tunnel vision. We
> were focused on how to get out of this [disaster]. How do we mitigate the fact.
> Public safety in general, when we are in the midst of it, we put a higher priority
> on action than planning, which probably doesn't work to our benefit.

Another interviewee reported that time, as identified as a concern earlier, was the issue

that prevented discussions of multiple perspectives from occurring:

> The challenge is time—you are working within a planning clock to meet the
> identified need, and it is harder to sit down and talk when you have a very fixed
> need. It makes it difficult to understand the various missions of the groups coming
> to the table, and I'm thinking in particular the nongovernmental organizations.

Organization. Interviewees were asked if benefit would be gained by using the

third phase of Cummings' (as cited in Cummings & Worley, 2009) TD process,

organization, in disaster response collaboration. Every interviewee strongly agreed that

the organization phase is a must for effective collaboration, but many also hinted that

organization does not necessarily occur as well as it could, and possibly should.

Some interviewees recognized standardization efforts in the United States and

elsewhere were related to this phase:

> FEMA [Federal Emergency Management Agency] has already decreed what the
> organization should look like. Internationally, they have that with the cluster
> system. I also think we when go into an incident that a lot of organizations don't
> realize how they fit into an event [event structure], and are maybe not completely
> ready to do all the stuff they can do in that situation, and they have to learn as
> they go through it. (Interviewee)

The value of Cummings' (as cited in Cummings & Worley, 2009) organization phase was highlighted by a number of interviewees, with one interviewee stating, "I think assigning the tasks and making sure they are properly organized is vital." Another interview participant stated,

> It would provide for the for the maximization of the limited resources available and put in place a mechanism where by we can communicate in time about what is actually occurring and fill the gaps that are being discovered and then clarify going forward. It is really important. It [organization] puts everyone on the same page.

One respondent saw value in this phase, but in expressed that the processes for organization needed to happen prior to the disaster.

> I do [see value], but I do think that it [the organization phase] is something that has to be fostered before the response, not just necessarily during the response, because that collaboration piece is not necessarily a natural process, it has to be practiced. It needs to be formalized otherwise people may or may not buy into it. (Interviewee)

Interviewees were asked to describe any formal structure or mechanism that promoted communication and interaction between established member organizations. Responses varied with some interviewees referencing the United States National Incident Management System as "the single standard for incident command, the single concept for multi-agency coordination systems, and Joint information centers that has driven collaboration" (Interviewee), while others cited more simplistic items or processes such as daily briefings, reports, and the use of emergency operation centers.

Survey respondents who identified the use of structures and mechanisms to facilitate coordination and communication as "very important" or "somewhat important" were asked to identify the key components. The most identified theme was the need and importance for formal structures. Survey respondents reported that formal structures are

"a starting point" provide "chain of command" and that the ICS should be used. Survey respondents also stressed the importance of hierarchy within structure, with one survey participant stating, "ICS and the planning process, they add structure to what would otherwise be chaos."

A jointly agreed-upon decision-making process is another essential element of Cummings' (as cited in Cummings & Worley, 2009) organization phase, as it helps the network members work and coordinate with each other. Interviewees' experiences with a jointly determined decision-making process were varied. One interviewee stated, "It varies every time [every incident] because there is no agreed upon process," and another interview participant reported, "I think somebody always has to make a decision. I think the decisions are collaborative, but there is no formal process system. I think it just happens. And some of it is based on styles and personalities." Similarly, another interviewee stated,

> It has been more of a gentleman's handshake agreement. There has never been a "sign on the dotted line" agreement. It's been a "Yes! This is how we are going to do it" leave the room and never really commit to it.

While some of the examples that were provided by study participants were not formal in nature, all were decision-making processes.

Several interviewees stated that during their past disaster response collaboration experiences there was a jointly determined decision-making process in place. However, as these interviewees described the process since no explicit examples of jointly determined decision-making processes were provided, it is likely that, again, these the jointly determined decision-making processes were emergent and informal.

Evaluation. The fourth phase in Cummings' (as cited in Cummings & Worley,

2009) TD process involves evaluation, and interviewees were asked if this phase would

provide benefit if used during disaster response when collaboration is needed. Every

interviewee reported that there would be benefit in using this phase, including the

increased ability to address issues up front that network members may experience and to

mitigate negative consequences, which may prevent members of the network from

leaving. One interviewee stated,

> Yes, because I am assuming that all the participants are autonomous and don't
> have to be part of this. If you are not gathering their perspective[s] or their input
> as things involve, I think you run the risk of them disengaging or something bad
> happening.

Other interviewees identified the opportunity to have feedback is often lost because

people are moving on to the next objective or the next operational period, but if time was

allowed for feedback, incidents may avoid misusing and incorrectly assigning resources.

This would also allow for better application of those resources and, therefore, better

satisfaction as the incident moves forward, enabling people to plan for the next event.

One interviewee stated, "I do, I think it provides a lot of value. Evaluating what you came

up with if your objectives are being met, and did everyone do their part." Another

interviewee identified and reinforced the concern of time availability to implement such a

process:

> The concept would be of great value because you would actually be checking that
> your work is resulting in the desired outcome. I question the ability to do this in
> the compressed time frame of disaster response. Preincident and recovery I can
> see you having that formal feedback process. I think the real challenge is if it is
> going to be a formal process, it would have to be simplified to the point that it
> required no training for new stakeholders to walk in and say, "Okay, this is how I
> provide feedback."

Interviewees were also asked if during past collaborative experiences there were ongoing feedback processes that considered not only the effectiveness of the collaboration, but also member satisfaction. All interviewees reported that there was a feedback process, but rarely was it ongoing. Additionally, interviewees reported that feedback processes that considered members' satisfaction were not common.

> I think that member satisfaction or feedback is a relatively new concept, since 2005 or 2007 since we started to standardize our exercise process. There was an influx of "is everyone happy with the outcome" and "is there a feedback mechanism through the different meetings, conference, or reviews?" I would say the latest version of Homeland Security Exercise and Evaluation Program where we look at actual events as well as exercises for the after action reports and improvement plans, I think that is starting to get into what you are looking for. I don't think it existed in most organization in the past few years. (Interviewee)

Other participants reported that there was no feedback process: "No, and I am not sure I can elaborate on that, past a solid no. That has not been my experience" (Interviewee).

Survey respondents who identified the evaluation process as something that occurred "always" or "often" were then prompted to identify if the process had been formal or informal. Eleven of the 18 responses reported that there were both formal (e.g., After Action Reports) and informal (e.g., informal dialogue between responders). Two observations stood out from the data, both regarding the effectiveness of the evaluation process. One survey respondent reported, "We IDENTIFY areas for improvement pretty well. However, we fail to take the final steps at actually implementing corrective action to improve the process." Similarly, another survey respondent stated, "Formal 'After Action Reviews' are a norm, but not always effective."

Summary

This chapter presented the data findings collected from both those who completed the online survey and those who were interviewed. The first part of this chapter detailed

the quantitative results, which resulted primarily from the survey, and the second section

examined the qualitative results. The data between the two data sets, in regards to the

value of the TD process appear to be consistent. Table 1 presents the major themes that

emerged from the data.

Table 1.
Major Themes and Supporting Evidence from the Data

Major Theme	Supporting Quotes and Evidence
There is a discrepancy between the reported value of each phase of the TD process and the actual occurrence of each phase during disaster response.	• "I do think that it [Convention Phase] would be beneficial because you'll be looking more strategically at that point. You are looking at would this be an effective group to respond and if not let's tweak it. I think what happened though, is that, I don't that it happens. I don't think anyone looks at it strategically" (Interviewee).
There is no consensus within the emergency management field on what it means to collaborate in general, or during disaster response, and the provided definitions do not align with the literature on collaboration.	• The only overarching theme from the interviews (about multiagency disaster response collaboration) was the idea of identifying common goals, which is consistent with the data collected on the definition of collaboration.
Disaster response collaborations generally do not go as planned or do not occur easily.	• Nearly half of the interviewees either started their answer with a joke about multiagency disaster response collaboration as being "awful," "ugly," or asking "how it works or how it should work." • "The tension I see in the collaborative process is when people are putting their goals and end states, and vision ahead and you don't have alignment across and you end up with divergent missions" (Interviewee).

Major Theme	Supporting Quotes and Evidence
There is alignment between what participants reported as things that contribute to effective collaboration and the TD process.	• The most prevalent theme, "communication," aligns with the third phase of the TD process (Organization), where Cummings (as cited in Cummings & Worley, 2009) specially called communication out as the need for "structures and mechanisms that promote communication and coordination" (p. 576). • Participants identified "commitment and willingness to work together" (Interviewee), which is also the entire purpose of the Convention phase.
There is perceived value in the theoretical use of the TD process during disaster response collaboration; however, there are concerns about the practical application.	• Relating to the Identification phase: "Yep, absolutely [there is value] I think this is what we try to do before hand, to try to identify who we would call on for resources" (Interviewee). • Relating to the Convention phase: "Absolutely beneficial. The question is how to apply it in a time-sensitive or time-limited environment. During an incident the challenge is getting those people to buy-in in a matter of minutes as opposed to a matter of days, weeks, or years" (Interviewee).

Note. TD = Trans-Organization Development.

Chapter 5 will draw conclusions based on the data presented in this chapter. Chapter 5 also details gaps that need to be addressed, further research recommendations, limitations of the study, and recommendations to the field of emergency management and organization development.

Chapter 5

Conclusions

The purpose of this study was to explore if the use of the TD process developed by Cummings (as cited in Cummings & Worley, 2009) would improve the effectiveness of collaborations during disaster response. This chapter reviews the study's conclusions, implications, and recommendations, including directions for future research and limitations.

Consensus on Collaboration

No consensus was found amongst disaster response practitioners on the definition of collaboration, and limited alignment was found within the literature's definitions of collaboration. "Working together towards a common goal" was the only consensus on definition across survey respondents and interviewees. Participants' responses varied widely in the essential elements of the definition and most often included the general act of cooperation or coordination, as well as specific activities such as "information sharing" and "integration of resources," but none were identified consistently. Participants' definitions showed little connection to some important elements of collaboration, as highlighted by academic literature, such as interdependency, shared responsibility, multiple perspectives, and the emergent nature of collaboration (Gray, 1989).

These results pointed to different, and perhaps inconsistent, understandings of collaboration and its detailed elements, and suggested that when organizations set out to collaborate during disaster response, each group is approaching the collaborative effort with different expectations about how and what it means to collaborate. This in turn

could slow the collaborative process and introduce conflict. In the long term, this may cause an organization to be wary of collaborative efforts or specific organizations as collaborators, and may skew the expectations of what is expected and needed for successful collaboration.

As identified in the literature, when organizations' expectations (as to what is meant by collaboration) are not met, the collaborative effort may be much more difficult to achieve (Huxham et al., 2000). Additionally, the literature has identified stark difference between cooperation, coordination, and collaboration, each which require very different actions and willingness of those who are engaging in the interorganizational relationship (McNamara, 2012). An additional question that may have yielded interesting and valuable data would have been to ask study participants whether (or how) collaborative efforts would be affected by differences in an organization's understanding of collaboration leading into a disaster response, or how they would address a difference in understanding during a response.

Disaster response environments are ripe for creating or recognizing interdependencies between organizations. As such, these results suggest that it may be of benefit to gain further clarification within the disaster response field of what it means to cooperate, coordinate, and collaborate so that disaster response organizations can have a better understanding and expectations of the type of relationship they are considering or engaging in.

Inconsistent Use of Aspects of the Trans-Organization Development Process

Elements of the Cummings' (as cited in Cummings & Worley, 2009) TD process are currently being used during disaster response collaborations. Use of these elements is

inconsistent and not applied in the recommended sequence. Additionally, there is discrepancy between the reported importance and value of the TD elements in disaster response when compared to the study participants' actual experiences.

The majority of participants identified that the processes that would occur in Cummings' (as cited in Cummings & Worley, 2009) identification phase of the TD process are generally already occurring to some level during disaster response collaborations, particularly with established network members. A large number of participants identified that these processes should occur during the planning process, prior to the onset of a disaster.

There was a lack of agreement as to whether or not aspects of Cummings' (as cited in Cummings & Worley, 2009) convention phase currently occur during disaster response collaborations. Participant responses varied widely on whether or not there was opportunity to discuss the feasibility and desirability of the network, to discuss member motivation, and to reach consensus on task perception.

Interviewees strongly agreed that Cummings' (as cited in Cummings & Worley, 2009) organization phase is a must for effective collaboration, with some identifying that these processes could be done better. The need for a hierarchal structure commonly found during disaster responses, such as the ICS, were reported as an essential elements in provision of effective organization. Despite this, the practice of jointly determined decision making within these hierarchal structures was identified as being sometimes emergent and possibly inconsistent. Participants reported processes consistent with Cummings' (as cited in Cummings & Worley, 2009) evaluation phase as disaster response collaborations that sometimes occurred. In particular, the results suggested that

evaluation of what the network was trying to achieve were often prioritized over network members' satisfaction. Participants also reported that evaluation generally occurred formally after the incident concluded, rather than during the incident. If evaluation did occur during the incident, it occurred generally as informal dialogue, or by comparing the tasks assigned to those tasks that were completed.

When reviewing the literature, these findings were consistent with what some scholars have suggested occurs when Cummings' (as cited in Cummings & Worley, 2009) TD process is not considered, as well as some the difficulties of using the TD process. For example, when the TD process is not used, collaboration generally does not focus on network or member satisfaction as part of the evaluation process (Gray, 1989; O'Leary et al., 2009). It is not surprising that using TD inconsistently was one of the difficulties identified in the literature and that there was the need for the entire network to buy-in to the use of the TD process for it to be successful (Clarke, 2005; Halley, 1994; Worley & Parker, 2011).

The potential inconsistent use of some aspects of Cummings' (as cited in Cummings & Worley, 2009) TD process may indicate practitioners employing an erratic approach to forming and executing disaster response collaboration. The out-of-sequence use of some of the TD process aspects suggest that disaster response organizations may be making assumptions of what the network is, what it is focused on, and how it will function. Furthermore, the inconsistent approach to forming and executing disaster response collaborations may lead to a longer or prolonged response process, introduction of conflict, or an inability to meet organizations' expectations. It may also make the

collaborative effort more difficult as expectations of a participating organization may vary greatly.

With inconsistent application the TD processes, it may be possible that all necessary network members may not be included, and there may be shortcomings in the understanding and examination of the network and its feasibility, desirability, and tasks. Organizational structures and processes that do not consider membership or tasks and lack system evaluation will limit network improvement. For example, while the use of the ICS may help the network communicate or coordinate better, there is a possible underlying assumption that this structure will always be used and is the most effective method, which may be a shortcoming. During a disaster response when working with a military unit, one interviewee recognized that trying to fit the military unit into a classic ICS structure was not effective, and that the military's structure was appropriately designed to handle the task. This brings up the question of whether or not the use of predetermined structures during disaster response is always appropriate. Does the use of predetermined structures skip the important step of determining the appropriate way to organize based on the agreed-upon task consensus reached during convention? Such predetermined structures do not follow the sequence that is proposed by Cummings (as cited in Cummings & Worley, 2009).

Those who are familiar with and have successfully used the ICS and the associated processes may object to the idea that there is an inconsistent approach to disaster response collaboration, at least in the United States. These discussions are based on a relatively small sample size, and further investigation is certainly required to reveal how current procedures that address disaster response collaboration and Cummings' (as

cited in Cummings & Worley, 2009) TD process align, and if in fact there is inconsistency with the use of current procedures.

Value in Using the Trans-Organization Development Process

Although Cummings' (as cited in Cummings & Worley, 2009; Worley & Parker, 2011) theoretical TD process was identified as likely to provide benefit if used during disaster response collaboration, some potential challenges in the practical application of the TD process were also highlighted by study participants. Those surveyed and interviewed said there was value to the TD phases, and that the processes that support effective collaboration during disaster response are often insufficiently executed. These two conclusions raised concerns as to whether or not the TD process phases could be conducted in a timely fashion under the common time restraints that are often a reality during disaster response. These findings are consistent with what was revealed by the literature, which was that little testing has been completed to know the true effectiveness of the TD process (Clarke 2005; Mangiofico, 2013; Worley & Parker, 2011). Additionally, the literature also highlighted the concern around the amount of time it takes to use the TD process (Worley & Parker, 2011).

Recommendations

The recommendations provided below are associated with each of the above conclusions and are presented for two audiences. The first are the recommendations for those in the field of emergency or disaster management. This section is comprised of recommendations that the researcher suggests would be universally beneficial, if implemented. The second section provides recommendations for future research to advance the understanding of Cummings' (as cited in Cummings & Worley, 2009) TD

process related to the effectiveness of disaster response collaborations, or to explore fine-tuning the TD process concept for suitability for disaster response collaborations.

Recommendations for the emergency management practitioners.

The following recommendations for further academic research were developed based on the results of this study. Recommendations include comparison between current disaster response collaboration and Cummings' (as cited in Cummings & Worley, 2009) TD process, retrospective assessments of past incidents to analyze where the TD process was utilized or deficient, and to conduct an experiment using the TD process during an actual disaster response.

Recommendation 1: Further clarify and then educate practitioners on what it means to collaborate within the context of disaster response. The findings of this study present a wide array of understandings or interpretations of what it means to collaborate during disaster response. Outside of the common theme of having a common goal, there is very little consistency, which could lead to disparate expectations.

Current doctrine or guidelines concerning disaster response collaboration could be reviewed to determine any expectations or assumptions of what it means to collaborate. Comparing how these expectations and assumptions align with the broader understanding of collaboration from literature (i.e., a gap analysis) would be an essential analysis for the emergency management field. This assessment would provide a definition of collaboration that aligns with the broader literature and provide a clear delineation between collaboration, coordination, and cooperation for practitioners in the field. Merging the assessments into a modern definition of collaboration within disaster response could then be explicitly stated in doctrine, procedures, and other appropriate

materials so that there is a common understanding and expectation of what it means to collaborate within the field of emergency management.

Recommendation 2: Review current best practices and procedures for disaster response and training materials for alignment with the trans-organization development process to assess deviations from the process. The data from this study suggested Cummings' (as cited in Cummings & Worley, 2009) TD process is used, albeit inconsistently, and not precisely as the classic TD phases would prescribe. Additionally, the study participants suggested that there is value in the concepts presented in the TD process; therefore, it would be helpful to identify what aspects are already included in organizations' response and training procedures. This would provide a possible outline for areas to improve procedures for disaster response collaboration. An effective starting point for this may be with procedures for organizations that are likely to have interdependency with one another and will be required to collaborate. An example of such a relationship is local emergency operation centers and local (i.e., type III) incident management teams, or with public information officers who are responsible for joint information centers. An alternative approach is a gap analysis with a focus on collaboration, using the TD process as a measuring tool, while reviewing past incidents when collaborative efforts did not go as well as the organizations had hoped.

Recommendation 3: Explore and experiment with using the trans-organization development process for preparedness and planning activities. While the data suggested a strong support of Cummings' (as cited in Cummings & Worley, 2009) TD process as being important for effective collaboration, participants expressed concerns about its use during disaster response collaborations because of the time-sensitive nature that

commonly exists during response. It is recommended that emergency management practitioners initially apply the TD process to preparedness and planning collaborations to improve nonresponse collaborations. Use during nonresponse times will increase the familiarity of the process and comfort for implementation during an actual response.

Recommendations for further academic research.

The following recommendations for further academic research were developed based on the results of this study. Recommendations include comparison between current disaster response collaboration and Cummings' (as cited in Cummings & Worley, 2009) TD process, retrospective assessments of past incidents to analyze where the TD process was utilized or deficient, and to conduct an experiment using the TD process during an actual disaster response.

Recommendation 4: Conduct further academic research to compare in depth the current procedures used during disaster response collaborations to see how they align with the trans-organization development process and determine gaps that may exist. As the data suggested that some concepts of Cummings' (as cited in Cummings & Worley, 2009) TD process are already used during disaster response collaboration, it would be of benefit to explore from an academic research approach the gaps that exist relative to the TD process, which TD processes are used, and the benefit they provide. The difference in perspective between practitioner and researchers will help to provide a more holistic view. In addition, researchers could passively observe disaster response organizations implementing collaborative approaches during an incident and identify which aspects of the TD process are used, in addition to the successes and shortcomings of the collaboration.

Recommendation 5: Conduct retrospective assessments of past disasters when collaboration was determined to be successful or appeared to breakdown and review what aspects of the trans-organization development process were utilized or were deficient. The study data identified that some practitioners already use aspects of Cummings' (as cited in Cummings & Worley, 2009) TD process. Therefore, reviewing past successful disaster response collaborations to see which, if any, aspects of the TD process were used could provide additional data as to the effectiveness of the process for disaster response collaborations. Additionally, if aspects of the TD process are found to potentially increase the effectiveness of disaster response collaborations, further research or refinement of the TD process should be explored to better address the unique disaster response environment. To potentially refine the TD process, it is recommended that additional disaster response case studies be researched to determine which aspects of TD would prove beneficial for and what aspects would need refinement for use during disaster response.

Recommendation 6: Conduct an experiment using the trans-organization development process during an actual disaster response. Conducting an actual experiment in the field would allow researchers to better understand if the complete application of Cummings' (as cited in Cummings & Worley, 2009) TD process in disaster response collaborations is feasible, and to identify any potential challenges or refinements that would need to be made for TD to be used during disaster response. A similar approach could be taken for a mock exercise if applying the TD process to a real disaster response is not possible.

It is also recommended that the field of emergency management, including practitioners, those who create policy guiding disaster response, as well as academics, continue to explore how to increase effective collaboration during disaster response to enable better use of time, personnel, and resources that are involved or available. Continued research and refinement of Cummings' (as cited in Cummings & Worley, 2009) TD process may help to bridge the gap between theory and practical application and possibly improve disaster response collaborations.

Implications for Organizational Development Practitioners

This study raises several areas of consideration for organizational development (OD) practitioners. The first consideration is how OD concepts apply to emergent networks that come about in a short-time frame. The membership of these emergent networks that occur during disaster responses are difficult to predict since the necessary organizations may not be known until the onset of a disaster. In addition, OD practitioners should also consider how they can assist these emergent networks in the moment, as there is not necessarily time to prepare prior to the disaster and the needs of the organization may shift dramatically or unexpectedly once in a disaster environment.

The disaster environment itself is another consideration for OD practitioners, namely the time constraints with which disaster response organizations must work under to meet life-saving and safety needs. Practitioners must consider how to assist organizations on tighter timelines and in a manner that does not impede in disaster operations. Additionally, OD practitioners should consider that when working in disaster response they might be working with government, military, nonprofit, and even for-profit

organizations. Each of these organizations will have different cultures, strategies, reward systems, and so forth that will have to be considered when designing an intervention.

Finally, OD practitioners should also consider the role that jurisdiction and politics play in disaster response. This is important to consider as jurisdictional control can create expectations and assumptions of responsibility and roles for organizations and how they will interact. An example of when disaster response is hampered by assumptions was the 2010 BP Oil Spill when the Gulf States assumed that the Robert T. Stafford Act (2007) would be used, when in fact the Federal government used the National Contingency Plan and considered the response from a National perspective, not from a state perspective (Birkland & DeYoung, 2011).

Limitations

This section presents the limitations to this study. The limitations are presented in the following subsections: case-specific participants, follow up, and methodology.

Case-specific participants. Study participants provided perspectives based on different experiences from different disaster incidents. As participants were not asked questions pertaining to a specific incident, it is difficult to determine if their perspectives of the disaster response collaborative process they experienced was in fact collective or not. Had all study participants been surveyed or interviewed about a specific incident that they all had experienced, the findings would have been more robust, including the ability to identify personal bias. To avoid this limitation in the future, it is recommended that several participants from specific incidents are selected to take part in the inquiry, and several incidents that vary in type, location, and severity are selected to be studied.

Follow up. For this study there was an inability to follow up with survey respondents concerning the open-ended questions that were asked because of the anonymous nature of the survey. Following up on these questions would provide greater clarity to answers and assumptions within their responses. For example, at times, it was not possible to know if a survey respondent was alluding to collaboration as defined in the literature or to coordination and cooperation. Follow-up questions related to Cummings' (as cited in Cummings & Worley, 2009) organization phase would have been beneficial. To avoid this limitation in the future, it is recommended that survey questions be restricted to quantitative considered questions, and all open-ended or those with qualitative answers be captured via interviews.

Methodology. While the methodology of interviews and a survey provided excellent data as an initial exploration of the use of Cummings' (as cited in Cummings & Worley, 2009) TD process during disaster response collaborations, discussing past experiences and concepts in terms of theory are often different than what is experienced in the field. In addition, participants from this study did not necessarily take part in the same disaster response collaborations. An experiment of using the TD process (facilitated) during several different actual disaster responses with experienced emergency and disaster responders (for comparison to past experiences) would provide the highest yield of data. It may be difficult to address this limitation due to the inability to predict most disaster response operations, not to mention the need for collaboration, and the need to be sensitive to not disrupt or delay life-saving or sustaining operations by experimenting with new processes.

Summary

The study found that while there is clear value in the concepts that Cummings (as cited in Cummings & Worley, 2009) proposed in the TD process, it was inconclusive as to whether or not the process would improve the effectiveness of collaborations during disaster responses, namely due to concerns regarding the ability to apply the process in a time-sensitive environment. Despite these concerns, participants identified that several aspects of the TD process are already being used during disaster response collaborations. However, the application of such aspects are inconsistent and do not follow the sequence proposed by Cummings' TD process. There also appeared to be a lack of consensus concerning the understanding in the emergency management field of the extensive details of what it means to collaborate, as well as a lack of alignment with what the literature says about collaboration.

The need for collaboration during disaster response, as defined in the literature (Drabek & McEntire, 2002), is almost an absolute certainty. Understanding how to effectively collaborate during high-stake disaster responses is for the benefit of those being served, those who are collaborating, as well as individual organizations. This study provided an initial exploration of the possible application of Cummings' (as cited in Cummings & Worley, 2009) TD process for improving the effectiveness of disaster response collaborations. Further academic research that is recommended includes an in-depth comparison of the current procedures used during disaster response collaborations with the TD process to determine what gaps the TD process may suggest, and where there is alignment with the TD process. A review of disaster response case study should be completed with a focus on successful collaborations, and whether or not the TD

process or aspects were used. Finally, an experiment using the TD process preferably during actual disaster response collaborations should completed.

While the focus of this study was on exploring whether or not Cummings' (as cited in Cummings & Worley, 2009) TD process has a role in improving disaster response collaboration, the study also brought to focus that there is room for improvement in disaster response collaborations. While disaster response may always be somewhat chaotic, continual improvement should be sought, including learning and exploring how traditional nondisaster concepts, frameworks, and models may be applied in a meaningful and beneficial manner. The TD process is an OD concept that may not seem to fit with disaster response at first glance; however, when the apparatus, technologies, and other tools of disaster response are stripped away, all that remains is how disaster response personnel and disaster response organizations interact with one another to get the job done. The TD process and OD concepts in general may be a missing link to help reduce the frustrations of response personnel, save time and money, improve the use of resources, and most importantly facilitate providing aid to those who need it in a more effective manner.

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Appendix A: Interview Participant Selection Criteria and Consent

Interview Consent Form – Sent via email to potential subjects

Dear Disaster Response Professional or Volunteer,

You are invited to participate in a one-on-one interview in support of Lacey Croco's thesis through Pepperdine's Master of Organization Development Program. You have been identified as someone that has been involved in a disaster response that lasted at least 48 hours, which required collaboration, and as someone that has first hand experience facilitating collaboration in disaster response. The purpose of this study is to explore if the use of Trans-organization Development processes would improve collaborative efforts between response organizations during emergent disaster incidents.

Please read the following for more information on this research project. If you wish to participate in this study, please indicate so by replying 'Yes' to this email.

TITLE OF THE STUDY:

Please understand your participation in the study is strictly voluntary. The following is a description of what your participation entails, the terms for participating, and a discussion of your rights as a study participant. Please read this information carefully before deciding whether or not you wish to participate.

RESEARCHER'S NAME & AFFILIATION: Lacey Croco, Candidate for Master of Science in Organization Development at the Graziadio School of Business and Management, Pepperdine University, Malibu, CA, as part of a graduate program of study.

PURPOSE: The purpose of this study is to explore if the use of Trans-organization Development processes would improve collaborative efforts between response organizations during emergent disaster incidents.

PROCEDURES: If you decide to participate in an interview, you will be asked to share your perceptions and experiences from collaborative efforts during disaster response that you and/or your organization has been involved in. The researcher will take notes, which will be stored in a secure place during the research and then destroyed. The interview will also be audio-recorded.

If you should decide to participate and find you are not interested in completing the interview, you have the right to discontinue at any point without being questioned about your decision. You also do not have to answer any of the questions that you prefer not to answer. Terminating your participation at any time will not affect you professionally in any way.

PARTICIPATION: Participation in this study is voluntary. You are under no obligation to continue with this project and have the option to withdraw from the study at any time without penalty. Your job, nor that of the researcher, will not be affected in any way by the refusal to participate or withdraw from the study. Any information you provide during the interview is at your discretion.

RISKS AND BENEFITS: There are no direct benefits to you for participating in the study. The data will be kept in a secure manner for two (2) years, at which time the data will be destroyed.

CONFIDENTIALITY: The results learned from the interviews may be published in the researcher's final thesis; however, you or your organization will not be identified by name. Only the researcher will have direct access to the data. The confidentiality of individual records will be protected during and after the study, and anonymity will be preserved in the publication of the results. No names will be used to identify anyone who takes part. No comments will be attributed to any individual or organization. Your responses will be pooled with others and summarized only in an attempt to see themes, trends, and/or patterns.

QUESTIONS: If you have any questions regarding the information that I have provided above, please do not hesitate to contact me, Lacey Croco, at [email address] or [telephone number]. You may also contact Ann Feyerherm, Faculty Advisor, at [email address] or [telephone number] with any questions or concerns. If you have questions about your rights as a research participant, contact Thema Bryant-Davis, Chairperson of the Institutional Review Board, Pepperdine University, at [email address] or [telephone number].

Thank you for taking the time to read this information, and I hope you decide to participate.

Sincerely,

Lacey Croco

Candidate, Master of Science in Organization Development
Pepperdine University
Graziadio School of Business and Management
[Mailing Address]
[Email Address]

CONSENT: By participating in this interview you are acknowledging that you have read and understand what your participation entails, and are consenting to participate in the study.

Do you wish to participate in this study? Please reply to this email to indicate.

Appendix B: Survey Participant Selection Criteria and Consent

Survey Consent – First Page of Online Survey

This is a research project in support of Lacey Croco's thesis through Pepperdine's Master of Organization Development Program. You are invited to participate in this research because you've been identified as someone with experience in disaster response, as a professional or volunteer, lasting at least 48 hours, which required collaboration. The purpose of this study is to explore if the use of Trans-organization Development processes would improve collaborative efforts between response organizations during emergent disaster incidents.

This survey will take approximately 15-20 minutes to complete. All data will be kept confidential. Only aggregate data will be reported in the thesis. Data collected will not be attributed to participants or their organization.

Your participation in this study is voluntary. If you decide to participate, you may withdraw at any time, without penalty. Any information you provide in this survey is at your discretion.

There are no direct benefits to you for participating in the study. Data will be kept in a secure manner for two (2) years, at which time the data will be destroyed.

If you have any questions about the study, please contact Lacey Croco at [email address] or [telephone number]. You may also contact Ann Feyerherm, Faculty Advisor, at [email address] or [telephone number], with any questions or concerns.

If you have questions about your rights as a research participant, contact Thema Bryant-Davis, Chairperson of the Institutional Review Board, Pepperdine University, at [email address] or [telephone number].

ELECTRONIC CONSENT

Clicking on the "Agree" button below indicates that:

- You have read the above information
- You voluntarily agree to participate
- You are at least 18 years of age
- You are a disaster response professional or volunteer with disaster response experience lasting at least 48 hours

If you do not wish to participate in this study, please select the "Disagree" button below.

- Agree
- Disagree

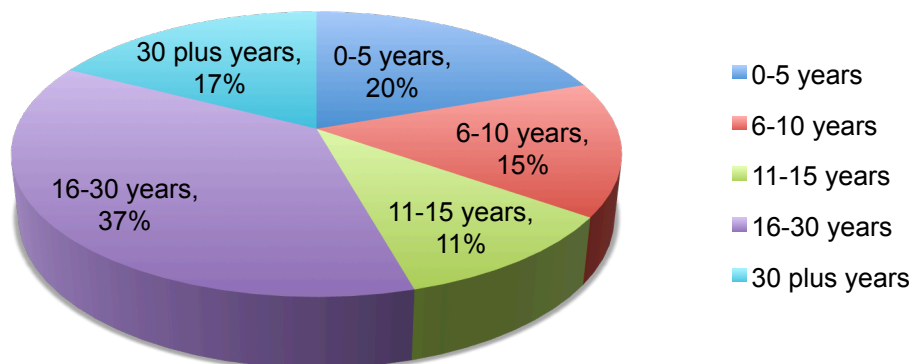**Appendix C: Study Participant Data**

Survey Participant Data

Figure C1. Participants' years of experience.
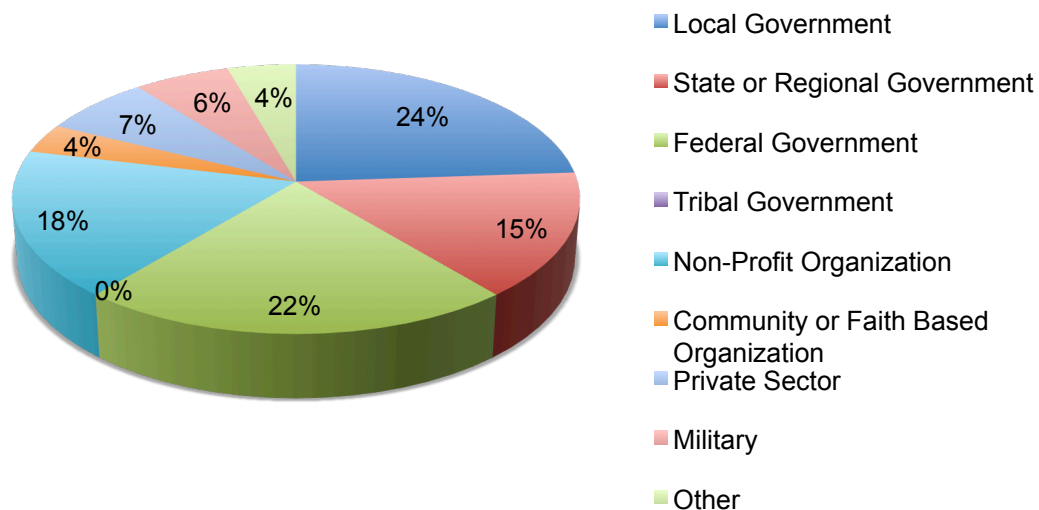

Figure C2. Participants' sectors.

Appendix D: Interview Questions

Interview Questions

1. How do you define collaboration?

2. How does collaboration look within your organization during disaster response?

3. Describe collaboration during a multi-agency disaster response?

4. What do you think contributes to effective collaboration during disaster response?

5. How can multiple perspectives of a problem influence the response to a disaster?

6. Recalling your past experiences, how intentional was your organization at identifying existing and potential organizations as collaborators? Can you describe what this process looks like?

7. Again, considering your past experiences, when your organization was considering a collaborative effort, was there an opportunity for organizations to discuss and understand each organization's motivations and how they perceived the problem at hand? If so, please describe this process.

8. If you were to assign a percentage, how often do you feel there was task consensus amongst the organizations participating in disaster response?

9. Considering past collaborative efforts, describe any formal structure or mechanism that promoted communication and interaction between established member organizations.

10. During these past experiences, was there a jointly determined decision making process in place?

11. When collaborating in the past, were there on-going feedback processes that considered not only the effectiveness of the collaboration, but also member satisfaction?

12. The Trans-organization Development process developed by Cummings suggests that organizations can achieve more effective collaborations by following these steps:

    - *Identification:* Identifies potential and existing network members (organizations).

    - *Convention:* Brings organizations together to determine if the network is desirable and feasible.

    - *Organization:* Formalization of structures and mechanisms that promote communication and interactions between members.

    - *Evaluation:* Assessing how the network (of organizations) is performing.

Do you feel that this process would provide benefit if utilized during disaster response when collaboration is needed, why or why not?

Appendix E: Survey Questions

Survey Questions

1. How do you define or describe collaboration?

2. How do you determine if collaboration during disaster response is effective?

3. What do you think contributes to effective collaboration during disaster response?

4. What effect does not being familiar with, or not having a prior relationship with, another organization have on collaboration?

5. To what extent do you agree that there is value in organizations having multiple perspectives with regard to disaster response?
   - 5 (strongly agree)
   - 4 (agree)
   - 3 (neutral)
   - 2 (disagree)
   - 1 (strongly disagree)

6. To what extent does your organization intentionally identify existing and potential organizations to collaborate with during disaster response?
   - 5 (Always)
   - 4 (Often)
   - 3 (Sometimes)
   - 2 (Rarely)
   - 1 (Never)

7. When considering a collaborative effort during disaster response, to what extent is there an opportunity to for organizations to discuss and understand motivations and differing aspects of the problem/task at hand?
   - 5 (Always)
   - 4 (Often)
   - 3 (Sometimes)
   - 2 (Rarely)
   - 1(Never)

8. How important are formal structures and mechanisms that promote communication and interaction among organizations that collaborate during disaster response?
   - 4 (Very important)
   - 3 (Somewhat important)
   - 2 (Marginally important)
   - 1 (Not important)

   If very or somewhat important, what are key components of these structures and mechanisms?

9. When collaborating during disaster response, is a decision making process determined among the participating organizations?
   - 5 (Always)
   - 4 (Often)
   - 3 (Sometimes)
   - 2 (Rarely)
   - 1 (Never)

10. When collaborating in the past, to what extent was there on-going feedback processes that consider not only the effectiveness of the collaboration, but also member satisfaction?
    - 5 (Always)
    - 4 (Often)
    - 3 (Sometimes)
    - 2 (Rarely)
    - 1 (Never)

    If always or often, has this process been formal or informal?

11. The Trans-organization Development process developed by Cummings suggests that organizations can achieve more effective collaborations by following these phases: Identification, Convention, Organization, Evaluation

    To what extent do you feel each of these phases would be important in creating effective disaster response collaborations?

    Identification phase - Identifies potential and existing network members (organizations).
    - 4 (Very important)
    - 3 (Somewhat important)
    - 2 (Marginally important)
    - 1 (Not important)

    Convention phase - Brings organizations together to determine if the network is desirable and feasible.
    - 4 (Very important)
    - 3 (Somewhat important)
    - 2 (Marginally important)
    - 1 (Not important)

    Organization – Formalizes structures and mechanisms that promote communication and interactions between members.
    - 4 (Very important)
    - 3 (Somewhat important)
    - 2 (Marginally important)
    - 1 (Not important)

Evaluation - Assesses how the network (of organizations) is performing.

- – 4 (Very important)
- – 3 (Somewhat important)
- – 2 (Marginally important)
- – 1 (Not important)