Interagency Trust in the Comprehensive Approach: An Empirical Study

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ABSTRACT

*An important component of successful Comprehensive Approach missions is building and maintaining trust among the various players in an interagency collaboration. Despite its importance, few studies have examined trust within the interagency context. This research begins to examine critical questions of trust in the context of effective interagency collaboration: What bolsters initial interagency trust levels, what are the most effective trust repair strategies in an interagency context, and are there any factors that serve to buffer trust violations? We then present the results of an empiricial study of these issues: To our knowledge, we are the first researchers to conduct an experiment exploring the role of interagency knowledge in maintaining and repairing trust in an interagency context. Using a scenario-based experimental paradigm, military participants (*N = *150) read a scenario in which a fictional military and Other Government Department (OGD) are required to collaborate to assist in reconstruction projects in a war torn country. In order to investigate trust, in this scenario the OGD was depicted as engaging in trust violations against the military, and subsequently attempting to repair the broken trust. Embedded within the scenario were knowledge, trust violation, and trust restoration manipulations. Measures of trust were assessed at five points during the scenario: baseline, post knowledge, post violation, post repair, post redress. Results indicated that having knowledge of the OGD prior to collaborating in the field significantly increased the military's initial trust in the OGD, however knowledge of the OGD did not buffer against trust violations. Trust violations resulted in a significant decrease in trust in the OGD irrespective of receiving prior knowledge of the OGD. The apology issued by the OGD to the military did not significantly improve trust perceptions; however, a redress plan issued by the OGD to the military significantly improved trust. These results have implications for pre-deployment training as well as initial guidance for how to improve interagency collaboration if derailed. First, pre-deployment training should incorporate mission-relevant knowledge of partners in order to optimize the potential for collaboration. Second, should a trust violation occur, including a redress plan of how the committed violations will be avoided during future collaborations in addition to an apology will best assure improved trust.*

1.0 INTRODUCTION

Mission success in domestic and international crises often involves a complexity that precludes the use of military force alone. Increasingly the Comprehensive Approach (CA) to Operations, which brings previously independent agencies into closer collaboration to solve complex problems in a coordinated manner to achieve national policy objectives, is considered essential. For instance, as a member of the Canadian CA team, the Canadian Armed Forces worked with other Canadian government departments (OGDs), as well as international partners, and various levels within the Afghan government to achieve success in the Afghan mission. Similar interagency coordination was undertaken in the Canadian mission to Haiti.

Despite its importance, reports from the field detail the challenges of effective interagency collaborations [1,2]. These same reports suggest that an important component of successful interagency collaborations in the CA is building and maintaining trust among the various players in an interagency collaboration. Despite its stated importance, however, few studies have systematically examined trust within the CA context. Nonetheless, the existing interpersonal and organizational trust literature does provide some initial guidance in this regard. Indeed, the importance of trust as a critical enabler in successful collaboration has been documented in various other complex organizational domains, including communication, leadership, negotiation, and self-managed work teams [3,4,5,6,7,8].

Using this literature and selected insights from past Comprehensive Approach missions as a foundation, we designed an experiment to examine questions critical to trust within interagency collaborations: 1) what are initial trust levels in an interagency team; 2) how does knowledge of the mission and mandate of the other players affect trust; 3) how do trust violations impact interagency trust; and 4) what strategies might restore interagency trust after a violation; and 5) will reparation strategies allow trust recover to pre-violation levels? Although anecdotal and field research are undoubtedly important, the use of an experimental approach allows us to better isolate the effects of variables of interest (e.g., level of partner knowledge, type of trust violation and repair approach), enabling a better understanding of the impact of each variable than is possible in a field setting. Thus, these results also represent an important contribution to better informed policy and training recommendations for developing and maintaining effective interagency collaborations to optimize operational success.

1.1 Trust Development, Violation, and Repair in the Organizational Literature

Trust is the confident expectation that another will meet our needs and is usually based on the other's demonstrations of competence (e.g., abilities, skills, and knowledge), benevolence (e.g., one's positive, unselfish motives with respect to another), integrity (e.g., adherence to an acceptable set of principles), and predictability (e.g., future reliability) [9]. While these dimensions may be positively correlated, they are considered to be distinct, i.e., someone's genuine concern for us may, or may not be related to how competently they will respond to our needs.

Research has found trust to be a key factor in promoting new and on-going cooperative and collaborative behavior among individuals, groups, and organizations as well as organizational performance and commitment [9, 10, 11]. Trust has also been termed an essential ingredient in the effectiveness of inter-firm alliances [12], in which diverse organizations contribute distinct areas of expertise for synergistic effect to achieve new and overarching goals [13], characteristics clearly relevant to the Comprehensive Approach context.

Particularly relevant to a CA context, trust becomes an issue under conditions of task and team interdependence, and risk [9]. Also importantly for the CA context, trust is thought to be especially important in a crisis and when unforeseen contingencies arise [14]. In these cases, high trust is assumed to promote: 1) appropriate decentralization of authority and decision making structures; 2) continued honest and open communication, and 3) the sharing of scarce resources and 4) the extension of goodwill and assistance [14].

Traditional models of have depicted interpersonal trust as beginning at a neutral point, increasing as a result of evidence of the positive behaviors and intentions of others in response to our needs [15]. However, the existing organizational literature suggests that, in the initial stages of a relationship, a level of trust may be granted presumptively as an individual operates under the assumption that trust is warranted as long as there is no evidence to the contrary [16].

As rare as empirical studies of inter-organizational trust are, still fewer have explored the equally important issue of how trust violations and repair [17]. Yet it is clear that unexpected or unpredicted events, attitudes and behaviors can play a part in any interdependent relationship. When this occurs in the context of some amount of risk and vulnerability, and involves a failure to provide something that is needed and was expected, it is often considered to be a violation of trust. Trust violations can occur with respect to any of the trust dimensions (competence, integrity, predictability, benevolence), any type of trust (e.g., calculus, knowledge, or identification-based trust), and at any stage of a relationship. Once lost, or violated, trust can take a long time to rebuild and, in some cases, it may never be restored. Importantly, some violations may cause trust to plunge to a level that may be below that of the initial trust level. These cases represent a particular a challenge to repair, and potentially require different strategies than those required for building it in the first place [19]. Notably, a trust violation may lead an individual to become "unwilling to take risks and demand greater protection against betrayal" [18]. Research also suggests that lost, or violated, trust can take a long time to rebuild and that, in some cases, it may never be restored [19].

Once breached, the extent to which trust is reparable and the effectiveness of different repair mechanisms can vary greatly. Although not the only perspective [19], the literature generally supports the existence of universal repair mechanisms that will adequately address any type of trust violation, regardless of stage of the relationship and/or trust dimension implicated [20]. Specifically, in the case of any trust violation, the perpetrator should recognize and acknowledge that a violation has occurred, understand the cause of the violation, admit that act was destructive, accept responsibility for his/her part in the violation, and offer atonement or action to undo the violation and begin to rebuild trust (e.g., an apology).

2.0 TRUST IN INTERAGENCY COLLABORATIONS

As noted earlier, collaborating in a CA context is especially challenging due to the sheer complexity of international peace and security missions. Indeed assessments of recent CA missions document the wide array of barriers to interagency collaboration. These include "conflicting political agendas, or incompatible objectives; disparities in organizational structures (e.g., hierarchical and centralized vs. flat and decentralized); incompatible financial and knowledge management and communication systems; different planning and operational terminology to describe similar processes (and vice versa); little or no corporate memory and few formal lessons learned mechanisms; poor funding and personnel shortfalls; organizations believing that they are a higher priority than others [21, 22]; and even "competition for resources and agency profile" [1, p. 13]. In general, it appears that while CA successes do occur, they are often seen as ad hoc and based on the personalities of those directly involved [1, 2, 23].

Given these myriad barriers to effective CA collaboration, and the documented benefits of high trust to collaborative work relationships from the organizational literature, it is perhaps not surprising that trust also has been hypothesized to be integral to effective collaboration in a CA context [24]. It has similarly been suggested that building trust between different "cultures", be they within the Canadian Armed Forces, Government of Canada departments, or NGOs [Non-Governmental Organizations], is a critical prerequisite" for an effective CA to operations [25]. Indeed, the success of the CA collaboration in the response to the earthquake in Haiti was attributed, in part, to a shared sense of trust and partnership [6].

Critical questions concerning the role of trust in CA missions remain however. First, what are the initial trust levels between CA partners? Do these initial levels reflect the gradual developmental model of trust, i.e., beginning at a neutral level and growing slowly as a result of repeated positive collaboration experiences, or is trust granted presumptively (i.e., reflected in moderate to high levels of initial trust), as long as there is no reason

to assume otherwise? Second, are there factors that can influence this initial level of trust? For instance, some CA research has cited a lack of knowledge of CA partners as a challenge to cooperation and collaboration in the context of multinational and interagency operations [4]. This is consistent with civilian and military evaluations of interagency training and educational opportunities that have cited the gaining of knowledge of other CA organizations as a major benefit of such activities [25, 26, 27]. Third, based on the organizational trust literatures and accounts of CA missions what is the effect of breaches of trust in a CA context? Fourth, does prior knowledge buffer the effects of these breaches of trust? Finally, also applying findings from the organizational trust literature, we explore the efficacy of two trust repair strategies: apologies and reparation plans.

3.0 PURPOSE OF STUDY

The goal of the study was to integrate the social psychological and organizational trust literatures with findings from accounts of CA missions to more systematically explore the nature of trust between various interagency departments, such as the Canadian Armed Forces and OGDs. More specifically, we sought to: 1) determine initial levels of trust in a CA context; 2) determine the impact of trust violations and 3) identify the trust restoration strategies which most efficiently and effectively restore trust in the CA context. In addition, 4) we examine the extent to which knowledge of an OGD partner prior to collaboration in the field increases trust with the OGD partner and buffers against subsequent trust violations. Finally we summarize participant generated recommendations for how an OGD partner can help restore trust.

4.0 METHOD[1]

4.1 Participants

This study was conducted with 150 Canadian Armed Forces participants (128 male, 22 female), ranging in age from 18 – 47 or older. The majority of participants were Corporal/Master Corporal (n=63, 53.1%), while the remainder of the sample consisted of Junior Officers (n=29, 19.3%), Sergeants/Warrant Officers/Master Warrant Officers (n=31, 20.6%), Privates (n=20, 13.3%), and Senior Officers (n=7, 4.6%). At least half of the participants had previously interacted with OGDs in the field at least once (65 participants interacted with OGDs in the field 1-4 times; 4 participants interacted with OGDs 5-9 times; and 11 interacted with OGDs 10 or more times). 46% of the sample indicated that they had no previous interaction with OGDs.

4.2 Procedure

The study was conducted on-line in order to increase the ability to access as many participants as possible. Accordingly, participants read a fictional scenario in which they imagined themselves as a fictional military that would be working together with an OGD to assist in reconstruction and development projects in a war torn country. Although all details of the scenario, including the names of the military, the mission and the OGD involved were fictional the details of the scenario and experimental manipulations were loosely based on subject matter expert accounts of working in a CA context, as well as from the wider organizational literature.

[1] The methodology utilized an online survey tool was approved for use with Canadian Armed Forces personnel. The method and questionnaires were reviewed and approved by the DRDC Human Research Ethics Committee and all participants received remuneration according to DRDC guidelines.

As indicated in Figure 14-1, participants were randomly assigned to one of 6 conditions which experimentally manipulated levels of OGD knowledge, trust violation and trust repair. Specifically, the OGD was depicted as engaging in trust violations against the military (or not), and subsequently attempting to repair the broken trust

Table 14-1: Overview of trust study conditions (N=150).

OGD Knowledge							
Yes				No			
		Trust Violation				Trust Violation	
		Yes	No			Yes	No
Trust Repair	Yes	n=25	--	Trust Repair	Yes	n=25	--
	No	n=25	n= 25*		No	n=25	n=25*

Notes: -- indicates no participants (as there is no trust violation, no repair strategies required)
* indicates a control condition

(or not). Also included were two conditions that acted as controls for the effects of trust violation and repair. In these instances, indicated by * in Table 14-1, OGD knowledge was varied, but no trust violations occurred; hence no trust repair strategies were required or indeed made sense to include.

An overview of the study design and procedures is presented in Figure 14-1. Accordingly, participants were told that the study was designed to assess perceptions of the relationship between military organizations and the OGD partner within a CA context. All participants first read an information letter describing the study, followed by the voluntary consent form, and biographical data form. Participants then read an initial phase of a scenario outlining the background of an interagency mission in a war-torn country (*baseline*) (see Figure 14-2 for full design overview). Next, the survey software randomly assigned participants to experimental conditions, with half of the military participants either received a page of information outlining the mandate of the fictional OGD as well as its roles and responsibilities and the OGDs previous accomplishments in past missions or received no information about the OGD (i.e., the *knowledge* manipulation). In the next phase of the scenario, different groups of participants read that the OGD partner had delivered, or had failed to deliver on previously agreed upon, important resources for the military (i.e., *trust violation manipulation*). Next, one group of participants in the trust violation condition experienced either an apology trust repair or no trust repair (*trust repair manipulation*). Based on recent empirical data in the area of trust [18], the apology was constructed to contain a specific acknowledgement that a trust violation was committed prior to the apology itself, while in the control condition no trust repair was offered (as no trust violation was committed). Finally, also following from the trust literature [20], a specific plan to redress the trust violation was offered following the apology delineating how infractions would be addressed moving forward. Trust measures were administered at five points during the scenario: baseline, post-knowledge, post-violation, post-repair, and post-redress, allowing us to track the variations in level of trust after each of the experimental manipulations.

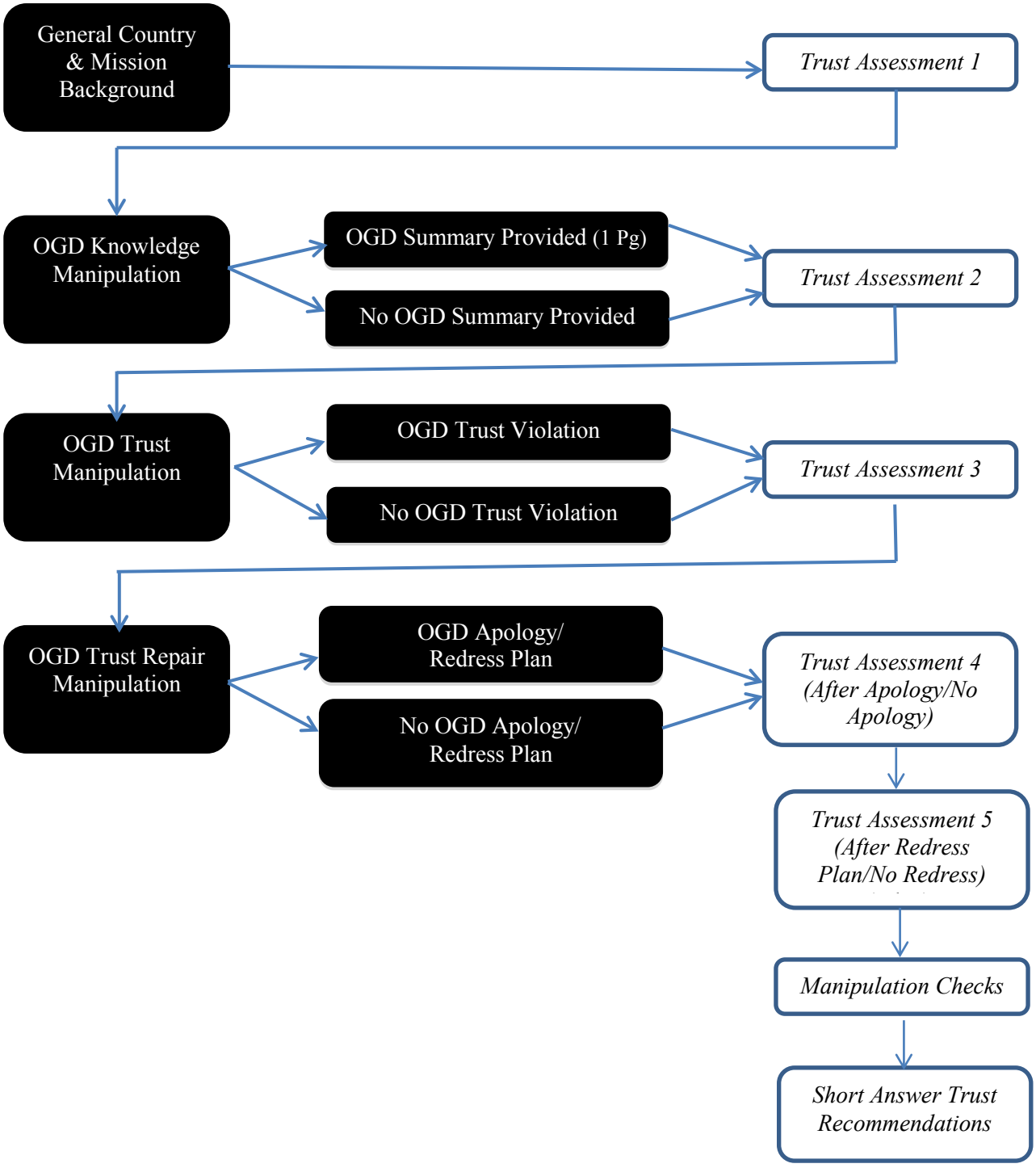

Figure 14-1: Overview of Experimental Procedure.

4.3 Measures[2]

Expectations of OGD. Seven items assessed participants' expectations of the OGD (MADO) organization (e.g., "The MADO representatives and Massey military will work well together," "The MADO representatives seem to have good training"). Reliability analyses for the measure were excellent, being .90 and above.

Trust dimensions. Seventeen items, reflecting the three most prominent trust dimensions were adapted from a Trust Survey developed by DRDC Toronto [28]. Competence was assessed via 6 items (e.g., "The MADO representatives are very capable of performing their job"). Benevolence was measured via 5 items (e.g., "The MADO representatives are very concerned about the safety and mission goals of the Massey military, and integrity was assessed via 6 items (e.g., "The MADO representatives have a strong sense of justice). Scale reliabilities for all measures at each assessment point in the study were all excellent (Cronbach's alphas ranging from .89 (baseline Benevolence) to .98 (post-redress Competence).

Intentions to trust. Five items assessed participants' propensity to trust the OGD (e.g., "I would have no problem letting the MADO representatives continue to have influence over important operational decisions I make for the duration of their mission in Safia"). This measure also had excellent reliability. Cronbach's alphas ranged from .87 at baseline to .95 post violation.

Willingness to risk. Seven items measured the degree to which participants agreed with statements such as: "If the MADO representatives and I were in a high risk negotiation situation with Safian rebels, I would be able to rely on the MADO representatives to 'watch my back'". This measure also had excellent reliability; Cronbach's alphas ranged from .94 at baseline to .98 post violation.

Manipulation checks. At the end of the questions concerning the scenario, participants also answered five multiple-choice questions that assessed the following:

1. Knowledge manipulation 1 - Whether participants recognized that they had received specific knowledge about MADO responsibilities.
2. Knowledge manipulation 2 - Whether participants recognized that they had received specific knowledge about the mandate of MADO.
3. Trust violation manipulation 1 - Whether they recognized that a trust violation had occurred or not. This question asked participants to indicate whether the MADO representatives were a reliable or unreliable whole of government (WOG) partner.
4. Trust violation manipulation 2 - Whether they recognized that a trust violation had occurred or not. This question asked participants to indicate whether the MADO representatives were a dependable or an undependable partner, or again that they had no opportunity to assess the dependability of the MADO representatives.
5. Apology manipulation - Whether participants recognized that the MADO representatives had apologized or not.

[2] All scales employed a Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Except where indicated, scales were administered at baseline, post-knowledge, post-violation, post-repair and post-redress (see Figure 14-2).

Open-ended Trust Repair Strategy. Finally, all participants were asked the following open-ended question: as a member of the military, what would you have liked the OGD partner to have said or done to have gained your trust?

5.0 RESULTS

5.1 Preliminary Analyses and Manipulation Checks

Results of cross-tabulation analyses indicated that the experimental manipulations were largely quite successful. One exception was that an average of 66% of participants in the control condition also correctly identified MADO's roles and responsibilities despite not being provided this information

Preliminary analyses also revealed that there were significant decreases in trust from baseline to post trust violation among those who experienced the trust violation manipulation for all dependent variables (i.e., expectations of the OGD, perceived competence, perceived integrity, perceived benevolence, trust intentions, and willingness to risk relying on the OGD in the future.[3] Also supporting the efficacy of our experimental manipulations, there was a significant increase in trust from baseline to post trust violation for those who did not experience a trust violation (i.e., for those in the control condition) for all dependent variables.[4]

5.2 Effects of knowledge, trust violation, and repair strategies on trust, expectations of OGD, intentions to trust, and future willingness to risk.

Six mixed model 6 (Condition[5]) x 5 (Assessment[6]) ANOVAs were conducted on the trust-relevant ratings (perceived competence, perceived benevolence, perceived integrity, expectations of OGD, intentions to trust, and future willingness to risk). As the pattern of results were consistent across the set of dependent variables, the pattern of results are depicted only once in Figure 14-3. Readers can find the full results in the Appendix.

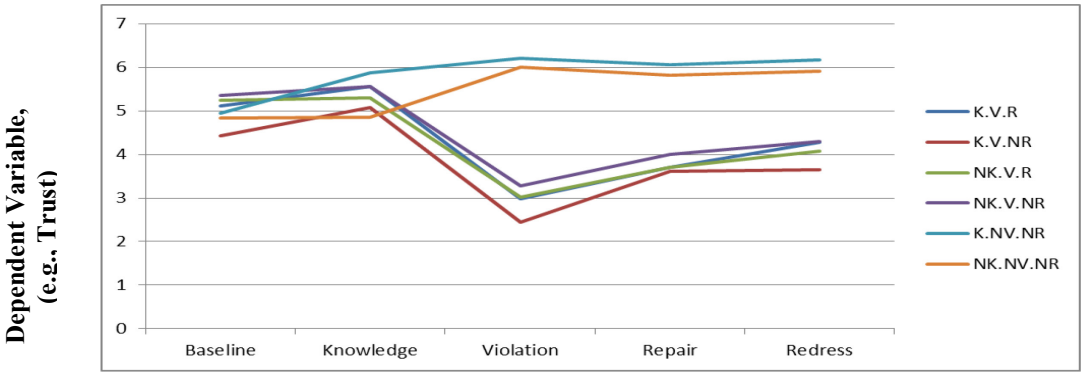

Figure 14-3: Perceptions of OGD Across Time and Condition.

Legend: K.V. R.: OGD Knowledge/Trust Violation/Trust Repair; **K. V. NR**: OGD Knowledge/Trust Violation/No Trust Repair; **NK. V. R.**: No OGD Knowledge/Trust Violation/ Trust Repair; **NK. V. NR.:** No OGD Knowledge/Trust Violation/No Trust Repair; **K. NV. NR.:** OGD Knowledge/No Trust Violation/No Trust Repair; **NK NV. NR.:** No OGD Knowledge/No Trust Violation/No Trust Repair

[3] all p's < .001, η^2's = .84.

[4] all p's <05.

[5] e.g., OGD Knowledge/No OGD Knowledge, Trust Violation/No Trust Violation, Trust Repair/No Trust Repair

[6] e.g., Baseline, Post-violation, Post Repair Assessment

i) Does knowledge of an organization improve initial trust in a CA partner prior to collaboration? (i.e., Comparisons of Baseline – Knowledge Manipulation Assessments)

The Baseline to Knowledge portion of Figure 14-3 depicts the pattern of results that speak to this question. These analyses revealed that initial knowledge of the roles, responsibilities, and mandate of the OGD partner increased perceptions of the military participants' assessments of the competence, integrity, expectations of OGDs, and future willingness to risk in settings involving the OGD partner. The only exception to this pattern was perceived benevolence which did not increase significantly as a result of the knowledge manipulation[7]. Notably, this result may be attributed to the fact that benevolence was not described in the OGD knowledge manipulation.

ii) Does an apology restore trust in the OGD partner after a violation? (i.e., Comparison of Trust Violation – Trust Repair Assessments)

As the pattern of results depicted in the trust violation to repair portion of Figure 14-3 indicates, ratings of OGD competence, integrity, benevolence, future expectations of the OGD, future willingness to risk relying on the OGD, and ratings of intentions to trust all increased significantly, and unexpectedly did so whether an apology was issued or not. Importantly however, trust levels did not recover to pre-violation (i.e., baseline) levels.

iii) Does offering a redress plan further restore trust following an apology? (i.e., Comparisons of Repair to Redress Assessment Points)

In general, significant main effects of the ANOVA analyses, depicted in the repair to redress portions of the Figure 14-3 were observed with respect to competence, integrity, benevolence, future willingness to risk, and intentions to trust in the future. For each of these variables, offering a redress plan as to how to avoid similar trust violations in the future significantly increased subsequent ratings of trust, relative to conditions in which a redress plan was not provided. Only one exception occurred: Future expectations regarding the OGD did not increase as a result of the introduction of a redress plan[8].

5.3 Participants Recommendations for Trust Repair

We also explored participants' recommendations for trust restoration in this context by analysing their short answer responses to the following question: "In order to gain your trust, what would you have liked the OGD partner to have said or done to gain your trust." Their responses were coded using a five-category coding scheme (i.e., competence integrity, benevolence, predictability, and a miscellaneous category) by two independent coders using NVivo8 [29], a qualitative research data-analytic software package. Sentences that referred to more than one theme (e.g., referred to both benevolence and competence) could be coded as reflecting more than one category. The inter-rater reliability (overall mean kappa) was 0.87, which is considered to be excellent agreement [30], and the percentage agreement between the raters' was 98%.

Results revealed that all four trust dimensions were reflected in the participant-generated recommendations for trust restoration: predictability (98.88%), competence (98.23%), integrity (98.66), and benevolence issues (96%). More specifically, recommendations surrounding predictability focused on the OGD providing a clear, communicated plan of their timelines, roles, and responsibilities so the military would have a clear understanding of what to expect. This included weekly updates with military counterparts, consulting with the military from the outset of collaboration, and stating goals clearly. Recommendations implicating the competence dimension of trust focused on the OGD developing knowledge of the situation in theatre and of

[7] All F's (p>.05).

[8] All F's (p>.05).

military capabilities, allowing for the skills and capabilities of both OGD and military to be applied without misunderstanding or duplication of effort. With respect to integrity, several participants commented upon the importance of the OGD fulfilling stated promises as agreed upon and outlined in their mandate. 'Actions speaking louder than words' was also raised as being important in regaining trust; specifically, how actions need to be observed consistently over a long period of time before restoring trust as well as the OGD coming into the field in order to see the issues clearly versus from an office. Finally, in the case of benevolence, participants commented upon the importance of the OGD looking out for the interests of the military, the OGD taking an interest in collaborating with the military, as well as more willingness to cooperate with military objectives. Visiting the area of operations was also raised as a way to restore trust as it would show that the OGD care about the area and are willing to gain a better perspective of the needs of locals.

Several participants commented upon the importance of meeting all CA partners earlier in the collaborative process to discuss areas of cooperation to achieve more of a CA approach and develop a CA common vision. The importance of having interagency pre-deployment training in order to increase trust was also mentioned by some participants. Several other recommendations focused on the importance of the OGD visiting the military in the field or area of operation in order to gain a clearer understanding of the daily challenges the military faces as well as their perspective and join the military on a tour of the village.

6.0 DISCUSSION

The current experiment is one of the first to apply findings from the organizational trust literature and lessons learned from previous interagency collaborations to examine trust in the CA using experimental techniques. To this end, military personnel read a CA scenario, based on operational accounts, and indicated their level of trust at five specified points in the scenario. In addition, prior knowledge of the OGD partner, trust violation, and trust repair strategies were systematically varied. An experimental approach provides valuable insights for discussions of the role of trust in CA missions because it allows for the systematic manipulation of variables and more precise measurement of variables of interest (e.g., knowledge, trust violation, repair strategies). This reduces the effects of confounds that occur in field studies. Given the nascent stages of the literature, the current results certainly illuminate and inform, providing a vital piece of the puzzle concerning the role of trust in CA missions.

In general, our results suggest the impact of violated expectations on subsequent trust. Moreover, our results indicated that receiving some prior knowledge significantly increased initial levels of trust in the OGD for these military participants, relative to having no prior information. This result supports other findings that have cited lack of knowledge of CA partners as a challenge to cooperation and collaboration in the context of multinational and interagency operations [4]. Notably however, our experimental results also revealed that initial knowledge of another organization may not be sufficient to maintain trust when needed and agreed upon resources are not forthcoming. Specifically, trust levels were significantly reduced by the trust violation manipulation, regardless of whether participants had prior information or not. With respect to the mechanisms of trust repair, our results also suggested some naturally occurring regaining of trust after a violation occurred, and that an apology alone did not improve the level of this rebound of trust, relative to no apology. It is of note however, that trust did not return to pre-violation levels in either case. Moreover, including a specific redress plan of how the committed violations will be avoided by the OGD during future collaborations did appear to improve subsequent trust, more than did an apology alone. Importantly however, trust still did not return to levels equivalent to pre- violation levels. Future research should determine the impact of these factors on subsequent trust in an on-going collaboration. For instance, would trust ever return to initial levels, and if so, how many instances of positive collaboration would be necessary for this to occur?

The recommendations provided by our military respondents concerning how trust between a military and OGD partners might be restored are also enlightening. Indeed, the comments largely reflect the dimensions of trust as well as the strategies suggested by past lessons learned in CA missions, including consistent interaction with civilian and military counterparts, regular meetings to ensure all parties share information, aligned priorities, and consistent communication [8].

It is important to note that the experimental findings concerning the effects of knowledge on initial levels of trust were obtained in this study even though the information provided about the fictional OGD was quite minimal, contained on a basic one page summary. While this may make the knowledge effects on initial trust levels all the more compelling, it may also account for the fact that knowledge did not buffer against the impact of a trust violation in this study. It is quite likely that providing a greater amount of knowledge regarding organizational identities, traditions, operational terminologies, security concerns, cultures, and goals may provide greater and longer lasting benefits to trust and collaboration in CA contexts. Just as importantly, it may be that knowledge of how the partner organizations might most effectively work together (i.e., the strengths that each partner can contribute to achieving to CA goals, the organizational constraints of each partner,) would yield even greater benefits. Applying this knowledge of the CA team in a realistic training scenario may prove to produce the most optimal effects, serving as invaluable opportunities to minimize stereotypes and misconceptions, while gaining accurate knowledge of organizations in order to foster the development of trust prior to entering the stress and intensity of the mission space.

In conclusion, our experimental results highlight both the role of trust and its dynamic nature in the context of CA missions. These results are certainly consistent with prior cited lessons learned analyses and interviews of military and civilian personnel who have participated in CA teams and have suggested that trust, understanding and cooperation are all essential for operational success [7, 31]. By extension this research begins to suggest the importance of trust-building steps such as ensuring a true interagency approach to complex missions, and its potential for positive impacts on operational success in complex missions. Additional research, combining controlled laboratory experiments such as the work begun here and carefully constructed field studies will clarify the magnitude of this impact.

7.0 APPENDIX I: DETAILS OF ANALYSES OF VARIANCE RESULTS BY RESEARCH QUESTION AND DEPENDENT VARIABLE

I) Does knowledge of an organization improve initial trust in a CA partner prior to collaboration? (i.e., Comparisons of Baseline – Knowledge Manipulation Assessments

Competence: ($F(20,568) = 6.54$, $p < .001$, partial $\eta^2 = .187$). Follow-up comparisons: Participants who received knowledge of the OGD prior to collaboration had greater initial trust in the OGDs competence relative to participants who did not receive initial knowledge (knowledge-violation-no repair: ($F(4,140) = 24.83$, $p < .001$, partial $\eta^2 = .415$); (knowledge-no violation-no repair: ($F(4,140) = 10.74$, $p < .001$, partial $\eta^2 = .235$)

Integrity: ($F(20,568) = 6.54$, $p < .001$, partial $\eta^2 = .187$). Follow-up comparisons: Participants provided initial knowledge of the OGD prior to collaboration had greater trust in the OGD's integrity than those who received no initial knowledge (knowledge-violation-no repair: ($F(4,139) = 24.94$, $p < .001$, partial $\eta^2 = .418$); (knowledge-no violation-no repair: ($F(4,139) = 6.67$, $p < .001$, partial $\eta^2 = .161$)

Expectations of the OGD Partner: ($F(20,572) = 7.05$, $p < .001$, partial $\eta^2 = .201$). Follow-up comparisons: Participants who received knowledge of the OGD prior to collaboration had more positive expectations of the OGD than those who did not receive initial knowledge (knowledge-violation-repair: ($F(4,140) = 26.98$, $p < .001$, partial $\eta^2 = .435$); (knowledge-violation- no repair: ($F(4,140) = 36.64$, $p < .001$, partial $\eta^2 = .511$); (knowledge-no violation-no repair: ($F(4,140) = 7.87$, $p < .001$, partial $\eta^2 = .184$).

Future willingness to risk with the OGD Partner: ($F(20,576) = 7.01$, $p < .001$, partial $\eta^2 = .196$). Follow-up comparisons: Participants who received initial knowledge of the OGD had greater inclinations to risk trusting the OGD partner in future collaborations, relative to participants who did not receive initial knowledge (knowledge-violation-no repair: ($F(4,141) = 18.45$, $p < .001$, partial $\eta^2 = .344$), and (knowledge-no violation-no repair: ($F(4,141) = 7.19$, $p < .001$, partial $\eta^2 = .170$)

II) Does an apology restore trust in the OGD partner after a violation? (i.e., Comparison of Trust Violation – Trust Repair Assessments)

Competence: ($F(20,572) = 7.21$, $p < .001$, partial $\eta^2 = .201$). Follow-up comparisons: Participant ratings of OGD competence increased post violation whether they were in the apology or the no apology (i.e., control) condition (knowledge-violation-repair: ($F(4,140) = 25.68$, $p < .001$, partial $\eta^2 = .423$); (knowledge-violation-no repair: ($F(4,140) = 24.83$, $p < .001$, partial $\eta^2 = .415$); (no knowledge-violation-repair: ($F(4,140) = 21.38$, $p < .001$, partial $\eta^2 = .379$) (no knowledge-violation-no repair: ($F(4,140) = 19.39$, $p < .001$, partial $\eta^2 = .363$) (see Figure 14-3, violation to repair)

Integrity: ($F(20,568) = 6.54$, $p < .001$, partial $\eta^2 = .187$). Follow-up comparisons: Ratings of OGD integrity increased after the violation, irrespective of whether participants were in the apology or no apology (i.e., control) condition (knowledge-violation-repair: ($F(4,139) = 26.90$, $p < .001$, partial $\eta^2 = .436$); (knowledge-violation-no repair: ($F(4,139) = 24.94$, $p < .001$, partial $\eta^2 = .418$); (no knowledge-violation-repair: ($F(4,139) = 24.72$, $p < .001$, partial $\eta^2 = .416$) (no knowledge-violation-no repair: ($F(4,139) = 14.58$, $p < .001$, partial $\eta^2 = .296$).

Benevolence: $F(20,576) = 7.11$, $p < .001$, partial $\eta^2 = .198$). Follow-up comparisons: Irrespective of whether participants received an apology from the OGD partner or not for a trust violation, perceptions of benevolence in the OGD still increased (knowledge-violation-repair: ($F(4,141) = 34.60$, $p < .001$, partial $\eta^2 = .495$); (knowledge-violation-no repair: ($F(4,141) = 19.44$, $p < .001$, partial $\eta^2 = .355$); (no knowledge-violation-repair: ($F(4,141) = 30.86$, $p < .001$, partial $\eta^2 = .467$) (no knowledge-violation-no repair: ($F(4,141) = 16.34$, $p < .001$, partial $\eta^2 = .317$)

Future Expectations of OGD Partner: ($F(20,572) = 7.05$, $p < .001$, partial $\eta^2 = .198$). Follow-up comparisons: Whether participants were in the apology or no apology condition, expectations of the OGD still increased from post violation (knowledge-violation-repair: ($F(4,140) = 26.98$, $p < .001$, partial $\eta^2 = .435$); (knowledge-violation-no repair: ($F(4,140) = 36.64$, $p < .001$, partial $\eta^2 = .511$); (no knowledge-violation-repair: ($F(4,140) = 32.46$, $p < .001$, partial $\eta^2 = .481$) (no knowledge-violation-no repair: ($F(4,140) = 27.32$, $p < .001$, partial $\eta^2 = .438$) (see Figure 7, violation to repair).

Future Willingness to Rely on OGD Partner: $F(20,576) = 7.01$, $p < .001$, partial $\eta^2 = .196$). Follow-up comparisons: Whether participants received an apology from the OGD partner or not for a trust violation, their ratings of future willingness to risk with the OGD still increased from post violation at this assessment point (knowledge-violation-repair: ($F(4,141) = 22.46$, $p < .001$, partial $\eta^2 = .389$); (knowledge-violation-no

repair: ($F(4,141) = 18.45$, $p < .001$, partial $\eta^2 = .344$); (no knowledge-violation-no repair: ($F(4,141) = 12.90$, $p < .001$, partial $\eta^2 = .268$)

Intentions to Trust OGD Partner: ($F(20,576) = 6.05$, $p < .001$, partial $\eta^2 = .174$). Follow-up comparisons: Irrespective of receiving an apology from the OGD partner for a trust violation, intentions to trust the OGD still increased from post violation to receiving the apology (knowledge-violation-repair: ($F(4,141) = 15.33$, $p < .001$, partial $\eta^2 = .303$); (knowledge-violation-no repair: ($F(4,141) = 16.98$, $p < .001$, partial $\eta^2 = .325$).

III) Does offering a redress plan further restore trust following an apology? (i.e., Comparisons of Repair to Redress Assessment Points

Competence: ($F(20,572) = 7.21$, $p < .001$, $\eta^2 = .201$). Follow-up comparisons: Participants who read the OGD redress plan had greater trust in the OGD's competence than did those who did not read the redress plan (knowledge-violation-repair: ($F(4,140) = 25.68$, $p < .001$, $\eta^2 = .423$)

Integrity: ($F(20,568) = 6.54$, $p < .001$, $\eta^2 = .187$). Follow-up comparisons: Participants who read the OGD redress plan had greater trust in the OGD's integrity than those who did not (knowledge-violation-repair: ($F(4,139) = 26.90$, $p < .001$, $\eta^2 = .436$)

Benevolence: ($F(20,568) = 6.54$, $p < .001$, $\eta^2 = .187$). Follow-up comparisons: Participants who read the OGD redress plan had greater trust in the OGD's benevolence than those who did not (knowledge-violation-repair: ($F(4,141) = 34.60$, $p < .001$, $\eta^2 = .495$)

Willingness to Trust: ($F(20,576) = 7.01$, $p < .001$, partial $\eta^2 = .196$). Follow-up comparisons: Participants in the redress condition indicated a higher willingness to trust the OGD in the future than those who had not read a redress plan (knowledge-violation-repair: ($F(4,141) = 22.46$, $p < .001$, $\eta^2 = .489$); (no knowledge-violation-repair: ($F(4,141) = 24.65$, $p < .001$, $\eta^2 = .412$)

Future Intentions to Trust: ($F(20,576) = 6.05$, $p < .001$, partial $\eta^2 = .174$). Follow up comparisons: Participants who read the OGD redress plan by the OGD indicated greater future intentions to trust the OGD than those who did not read the redress plan (knowledge-violation-repair: ($F(4,141) = 15.33$, $p < .001$, $\eta^2 = .303$); (no knowledge-violation-repair: ($F(4,141) = 22.66$, $p < .001$, $\eta^2 = .391$)

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