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THESIS

"WE NEED A BOMB TECH . . . "
INTEGRATING THE BOMB SQUAD WITH SWAT

by

Richard L. Klok Jr.

December 2020

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Special weapon and tactics (SWAT) teams and public safety bomb squads (PSBSs) need to better collaborate to effectively and efficiently respond to the joint hazards that the United States faces. After-action reports, as in the case of the 1999 Columbine High School attack in Littleton, Colorado, and the 2016 Pulse nightclub massacre in Orlando, Florida, highlight the need for PSBS to address integration and better collaboration with SWAT teams before an actual critical incident. Such collaboration between SWAT and PSBS might seem easy in theory, but challenges exist. Evaluating those challenges through the lens of trust, this thesis finds that cultivating trust between the two different disciplines requires socialization and frequent joint hazard training. Such barriers as independence of training and frequency of common missions, unit organization, and culture can inhibit SWAT and PSBS from collaborating, developing trust, and discovering collective weaknesses before a critical incident occurs. The ultimate goal, in practical terms, is the formation of cross-functional teams (CFTs). This thesis concludes by giving specific examples of boundary-spanning activities for SWAT and PSBS to foster the CFT approach, so that a better collaborative effort can emerge, thereby encouraging trust between SWAT and PSBS that will be beneficial in a critical joint hazard incident.

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"WE NEED A BOMB TECH . . . " INTEGRATING THE BOMB SQUAD WITH SWAT

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ABSTRACT

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LIST OF ACRONYMS AND ABBREVIATIONS

CBRNE	chemical, biological, radiological, nuclear, explosive
CFT	cross-functional team
EOD	explosive ordnance disposal
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
HDOC	Hazardous Devices Operation Center
HDS	Hazardous Devices School
IACP	International Association of Chiefs of Police
ICC	inter-organizational collaborative capacity
ICS	Incident Command System
IED	improvised explosive device
IID	improvised incendiary device
NBSCAB	National Bomb Squad Commanders Advisory Board
NTOA	National Tactical Officers Association
PSBS	public safety bomb squad
SWAT	special weapons and tactics
TBT	tactical bomb technician
TMS	trans-active memory system
VBIED	vehicle-borne improvised explosive device

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EXECUTIVE SUMMARY

On the morning of April 20, 1999, two Columbine High School students in Littleton, Colorado, attacked their school with firearms and explosives.[1] The rampage lasted an hour, and the shooters, Eric Harris and Dylan Klebold, ultimately killed 12 students and one teacher. Before committing suicide, the shooters placed multiple improvised explosive devices (IEDs) throughout the school. When SWAT teams entered the school, they were effectively stopped by the threat of the IEDs.[2] The local PSBSs on the scene, already aware of the presence of IEDs, were not integrated with the special weapons and tactics (SWAT) teams that entered the high school. Had bomb technicians been deployed with SWAT, they could have guided SWAT around the IEDs and more quickly rescued the students and faculty still inside the school. According to a case study published by Harvard's Kennedy School of Government, Columbine established the importance of cultivating a collaborative effort between law enforcement tactical teams and bomb experts for a joint response.[3] The collaboration problem between SWAT and PSBS resurfaced 20 years later in Orlando, Florida. The after-action report for the Pulse nightclub massacre criticized SWAT and bomb squad integration, just as the report for Columbine did.

This thesis asks how special weapons and tactics teams and bomb squads can better integrate to prepare for and respond to joint hazard responses, such as active shooter and domestic terrorist events where guns and bombs are present. This thesis hypothesizes that mutual trust between SWAT teams and public safety bomb squads (PSBSs) is largely and fatefully absent, especially in response to such critical incidents as domestic terrorism, where both disciplines are needed. Role ambiguity, minimal relationships, and a shortage

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[1] John R. Cashman, "The Massacre at Columbine High School," in *Emergency Response Handbook for Chemical and Biological Agents and Weapons*, 2nd ed. (Boca Raton, FL: CRC Press, 2008), 45–58, https://doi.org/10.1201/9781420052664.

[2] Susan Rosegrant, "The Shootings at Columbine High School: Responding to a New Kind of Terrorism: Sequel," C16-01-1612.1 (Cambridge, MA: Kennedy School of Government, Harvard University, 2001).

[3] Rosegrant.

of time spent working together can cause a lack of trust. This thesis explores the value of trust and its role in collaborative organizational efforts in crisis-response teams, specifically SWAT units and PSBSs.

Both the National Tactical Officers Association (NTOA) and the National Bomb Squad Commanders Advisory Board (NBSCAB) note the desirability for SWAT and PSBS to collaborate their response to complex joint hazards, such as domestic terrorism and active shooter incidents.[4] However, neither NTOA nor NBSCAB outline how to collaborate. A collaborative gap persists, yet SWAT and PSBS remain mostly unconnected, which begs the question of what exactly hinders integration. This thesis evaluates how to achieve that integration and examines the value of trust in a crisis with a focus on its distinct role in crisis response and management.

The comparison of SWAT and PSBS shows that there is often insufficient time for trust to develop between the two disciplines—all the more so if they are unfamiliar with each other in the first place. First of all, SWAT teams are individually trained, and this training widely varies, while PSBS are centrally trained at a single school that serves the entire nation. Because SWAT and PSBS do not train together initially, a SWAT operator's or bomb technician's career might not concentrate on integrated response operations. Furthermore, the equipment for SWAT and PSBS is dissimilar enough to cause integration problems, as traditional PSBS equipment is too bulky for SWAT applications. Also, SWAT and PSBS spend most of their training time focused on the missions they most commonly undertake—serving high-risk warrants versus recovering explosives and responding to suspicious packages, respectively. Aggravating the problem is the diffusion of SWAT teams in relation to PSBSs nationally, which five times more SWAT teams than PSBSs. Furthermore, differences in personality, group culture, and narratives promote distrust,

[4] National Tactical Officers Association, *Tactical Response and Operations Standards for Law Enforcement Agencies* (Colorado Springs: National Tactical Officers Association, 2018); National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians* (Washington, DC: Federal Bureau of Investigation, 2016).

which also hinders effective collaboration and integration. These factors promote what Warren Street calls "norms of non-involvement," a failure or refusal to collaborate.[5]

A critical examination of trust has been well studied and researched, yet its role in emergency response is still in its infancy. The author's research concludes that trust is indeed a vital component of crisis response. Even though it has been largely overlooked in practice, recent research suggests its potential value to first responders in how collaboration works or fails. Tangible components of trust include clarity of roles, knowledge transfer, and communication, but they are prone to distortion and distrust. The concept of a cross-functional team can, thus, apply to better integrating SWAT and PSBS. Such teams, composed of small groups from diverse specialized areas of an organization or profession, are boundary spanners.[6] A lack of boundary work and awareness, suggests Anderson, results in a "silo mentality," yet a better understanding of boundary lines "is important in enhancing organizational resilience."[7] If SWAT and PSBS had a clearer understanding of boundary-spanning tasks, they might have broken from the siloed response approach at Columbine.

This thesis presents actionable recommendations that can help socialize and cultivate mutual trust between SWAT and PSBS to improve their collaborative potential. By focusing on boundary-spanning activities, SWAT and PSBS can develop better boundary awareness and mutual trust. Five joint training examples are outlined in this thesis: robotic operation, explosive breaching, booby trap awareness, suicide bomber response, and special event planning and operations. Together, these activities constitute the major boundary-spanning activities between SWAT and PSBS that will help develop trust and collaboration before a crisis demands it. Confidence building, problem solving, and better role clarity and knowledge transfer will surely benefit. The reward is an

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[5] Warren R. Street, "Brainstorming by Individuals, Coaching and Interacting Groups," *Journal of Applied Psychology* 59, no. 4 (1974): 433–36, https://doi.org/10.1037/h0037273.

[6] Sheila Simsarian Webber, "Leadership and Trust Facilitating Cross-Functional Team Success," *Journal of Management Development* 21, no. 3 (2002): 201–14, https://doi.org/10.1108/02621710210420273.

[7] Annika Andersson, "In Case of Emergency: Collaboration Exercises at the Boundaries between Emergency Service Organizations" (PhD diss., University West, 2016), 98, http://hv.diva-portal.org/smash/get/diva2:924967/FULLTEXT01.pdf.

increased overall response capability for both SWAT and PSBS. Hopefully, this thesis will build an interdependent relationship between the two specialties, better able to flourish in the threat environment this nation finds itself. Future research can explore whether the boundary-spanning activities presented in this thesis help cultivate trust and improve the collaborative efforts between a SWAT and PSBS enterprise.

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I. INTRODUCTION

This thesis explores the question: How can special weapons and tactics teams and bomb squads better integrate to prepare for and respond to domestic terrorist events?

A. PROBLEM STATEMENT

Although more commonly seen on distant battlefields in the ongoing war on terror, the combination of guns and bombs took center stage at an American high school on April 20, 1999, in Littleton, Colorado. To be sure, the Columbine High School shooting in 1999 changed law enforcement in several ways.[1] First, radio communication systems, long an Achilles heel of emergency response, eventually improved with newer interoperable radio systems used by multiple jurisdictions and agencies. No longer would first responders be frustrated by their inability to openly talk to other first responders from other agencies without significant problems. As technology caught up with demand, newer radios capable of supporting numerous frequencies became the standard.

Second, and more significantly, no longer would patrol officers and deputies wait for special weapons and tactics (SWAT) to arrive before initiating tactical action to reduce active threats.[2] At Columbine, 12 students and one teacher were killed during the rampage while law enforcement more or less waited outside for hours.[3] Rather than establishing a perimeter, staging resources, and standing by for SWAT to arrive, law enforcement agencies after Columbine embraced active-shooter training for all officers, designed to stop the killing as soon as possible.[4] The 2018 shooting at Marjory Stoneman Douglas High

[1] Susan Rosegrant, "The Shootings at Columbine High School: Responding to a New Kind of Terrorism: Sequel," C16-01-1612.1 (Cambridge, MA: Kennedy School of Government, Harvard University, 2001).

[2] Rosegrant, 4.

[3] Rosegrant.

[4] Rosegrant, 7.

School formed a stark reminder of the perils of not immediately acting to stop the threat.[5] Active shooter training today remains part of basic police training in most jurisdictions.

A third lesson that has again emerged more recently is the concept of cross-functional collaboration between SWAT and public safety bomb squad (PSBSs) in response to joint hazards.[6] At Columbine, SWAT and PSBS were forced to integrate, and the results were mixed, not least because the two organizations had not coordinated before.

1. Columbine: A Study in Delay

Tuesday, April 20, 1999, began ominously in metropolitan Denver. At 1122 hours, a road crew working three miles southwest of Columbine High School found two bags on the shoulder and tossed them aside, thinking they were trash.[7] Workers were startled when a small fire started after one of the bags of trash, casually tossed, exploded. Dylan Klebold and Eric Harris had placed improvised explosive devices (IEDs) inside the trash bags alongside the road as a diversion, their intent to draw emergency responders away from Columbine High School.[8]

At 1123 hours, the attack at Columbine High School began. Klebold and Harris, both seniors at the school, roamed the hallways, systematically shooting students and teachers alike. The first officer on the scene, a deputy sheriff from Jefferson County, exchanged gunfire with both Klebold and Harris, and the shooters retreated inside the school.[9]

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[5] Audra D. S. Burch and Alan Blinder, "Parkland Officer Who Stayed Outside during Shooting Faces Criminal Charges," *New York Times*, June 4, 2019, https://www.nytimes.com/2019/06/04/us/parkland-scot-peterson.html. At Marjory Stoneman Douglas High School, 17 students and faculty were killed and another 17 injured. The school resource officer present during the attack did not immediately engage the active threat, which is widely attributed to the high death count that day.

[6] Rosegrant, "The Shootings at Columbine High School," 8.

[7] John R. Cashman, "The Massacre at Columbine High School," in *Emergency Response Handbook for Chemical and Biological Agents and Weapons*, 2nd ed. (Boca Raton, FL: CRC Press, 2008), 45–58, https://doi.org/10.1201/9781420052664; U.S. Fire Administration, *Wanton Violence at Columbine High School: Littleton, Colorado*, USFA-TR-12 (Emmitsburg, MD: Department of Homeland Security, 1999), https://www.usfa.fema.gov/downloads/pdf/publications/tr-128.pdf.

[8] U.S. Fire Administration, *Wanton Violence at Columbine High School*, 9.

[9] Cashman, "The Massacre at Columbine High School," 50–51.

The attackers carried bags containing anti-personnel IEDs as they moved around the school, placing them in specific areas to cause more casualties on detonation.[10] Hallways, classrooms, the library, and the cafeteria were littered with IEDs. Klebold and Harris moved throughout the library and adjacent hallways shooting victims. They also lit and threw numerous pipe bombs. They tossed more pipe bombs into the cafeteria from an upper stairway—while some 488 students cowered beneath tables in fear.[11] Some IEDs detonated, while others were left unexploded.

In all, the attackers brought nearly 100 hazardous devices to the school that day. John Cashman notes five IEDs exploded in the library, six detonated in the hallways and classrooms, and six more exploded in the cafeteria.[12] Unexploded IEDs also littered the school. On the outside property of the school, thirteen IEDs were found, including one on the roof. The attackers' cars held an additional thirty, including two IEDs that were considered car bombs. Inside the library, twenty-six IEDs were deposited. The hallways and classrooms revealed fourteen more IEDs, and the cafeteria held four. Some IEDs were even taped on doors, suggesting other risks were present, such as booby traps and tripwires.[13]

In addition, the attackers had left multiple improvised incendiary devices (IIDs), including "two twenty-gallon propane tanks . . . [filled] with white gas, kerosene."[14] Molotov cocktails containing homemade napalm, and other gasoline-fueled IIDs, were placed throughout the school. Around 1205 hours, the attackers committed suicide inside the library after detonating one of the 20-gallon propane tanks in the cafeteria. This explosion activated the school's fire sprinkler system.[15]

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[10] U.S. Fire Administration, *Wanton Violence at Columbine High School*, 12.

[11] Cashman, "The Massacre at Columbine High School," 53.

[12] Cashman, "The Massacre at Columbine High School," 45; U.S. Fire Administration, *Wanton Violence at Columbine High School*, 10.

[13] U.S. Fire Administration, *Wanton Violence at Columbine High School*, 12.

[14] Cashman, "The Massacre at Columbine High School," 45.

[15] U.S. Fire Administration, *Wanton Violence at Columbine High School*, 14.

Law enforcement waited outside for the arrival of SWAT while the killings commenced inside. SWAT deployed inside, around 1220 hours, and met immediately with exploded and unexploded devices, smoke, and the activated fire and sprinkler systems. The presence of the IEDs, as reported by the U.S. Fire Administration, stopped SWAT's momentum, as it was "concerned about the obvious presence of explosive and incendiary devices."[16] Thus, at 1457 hours, students were still inside the school, and no one knew their condition. The reality was that the scene could not be made safe until all IEDs were secured.

Finally, at 1600 hours, two PSBS technicians entered the school under SWAT cover to evaluate the numerous IEDs inside the school.[17] Neither PSBS technician had a bulletproof vest, although one donned a full bomb suit, which weighed close to 80 pounds.[18] Such bomb suits are heavy and bulky, making the wearer too slow and too inflexible to be used in fast-paced SWAT missions. On the one hand, Klebold and Harris's plans for a major explosive aspect to their attack failed when so many of their devices failed to detonate. On the other hand, the proliferation of devices—amid an untrained and unintegrated response—significantly delayed rescue efforts.

2. Collaboration: Learned and Unlearned

Susan Rosegrant underscores the importance of involving PSBS personnel early on in tactical decisions when IEDs and other hazardous devices are present.[19] If, suggests Rosegrant, bomb technicians had deployed with SWAT elements inside the school in Columbine, they could have told SWAT that the IEDs "posed no risk as long as they were not moved."[20] In other words, bomb technicians could have assessed each crude device, rendered the device safe, or guided SWAT around each obstacle to reach the victims scattered throughout the school. Similarly, the U.S. Fire Administration report on Columbine claims that "it would have been a great benefit if the SWAT teams, EOD

[16] U.S. Fire Administration, 21.

[17] U.S. Fire Administration, 26.

[18] "EOD 10 Suit & Helmet," Med-Eng Holdings, accessed February 22, 2020, https://www.med-eng.com/product/eod-10-suit-helmet/.

[19] Rosegrant, "The Shootings at Columbine High School," 8.

[20] Rosegrant.

[explosive ordnance disposal] technicians, and fire/EMS [emergency medical service] personnel at Columbine had been able to train in joint operations."[21]

Even though some lessons learned from Columbine were eventually implemented, the lesson of collaboration was largely neglected.[22] This inattention was noted even a very short time after Columbine by the City of Arvada's (near Littleton) then-police chief: "There still wasn't enough opportunities to interact. . . . Everybody's busy, everybody's got staffing constraints."[23] This observation makes sense. Time, staffing, and budgets are limited resources. Turnover in personnel reduces the collective memory, and relationships begin to suffer.

The collaboration problem between SWAT and PSBS resurfaced 20 years later in Orlando, Florida. The after-action report for the Pulse nightclub massacre criticized SWAT and PSBS integration, just as the report for Columbine did.[24] A collaborative gap persists, yet SWAT and PSBS remain mostly unconnected, which begs the question of what exactly hinders integration. Fundamental differences in training, mission response, and organization and a lack of knowledge all play a role in limiting meaningful integration between SWAT and PSBS. Furthermore, differences in personality and group narratives promote distrust, which hinders effective collaboration and integration.

Both the National Tactical Officers Association (NTOA) and the National Bomb Squad Commanders Advisory Board (NBSCAB) note the desirability for SWAT and PSBS to integrate their response to complex joint hazards, such as domestic terrorism incidents.[25] However, neither NTOA nor NBSCAB outline how to achieve that desired integration. The threats are universal—explosives are used by terrorists and criminals alike throughout

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[21] U.S. Fire Administration, *Wanton Violence at Columbine High School*, 31.

[22] Rosegrant, "The Shootings at Columbine High School," 8.

[23] Rosegrant, 7.

[24] Frank Straub et al., *Rescue, Response, and Resilience: A Critical Incident Review of the Orlando Public Safety Response to the Attack on the Pulse Nightclub* (Washington DC: Office of Community Oriented Police Services, 2017), 74, https://cops.usdoj.gov/RIC/Publications/cops-w0857-pub.pdf.

[25] National Tactical Officers Association, *Tactical Response and Operations Standards for Law Enforcement Agencies* (Colorado Springs: National Tactical Officers Association, 2018); National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians* (Washington, DC: Federal Bureau of Investigation, 2016).

the world. Such law enforcement tactical units as SWAT are on the frontlines of this threat. Moreover, PSBSs have the knowledge, skills, and equipment that SWAT lacks in dealing with IEDs, booby traps, and other chemical, biological, radiological, nuclear, and explosive (CBRNE) threats.

B. LITERATURE REVIEW

During a joint hazard response—for example, a domestic terrorist event—not only must members of diverse disciplines interact with each other, but they also must do so under high-stress conditions. Too often, unfamiliar agencies, groups, and expertise come together only for (and amid) an immediate or demanding need.[26] At the moment of crisis, organizations must accept their vulnerabilities and ultimately depend on each other.[27] Acceptance often comes with incomplete information on the capabilities and intentions of the different disciplines involved.[28] Skepticism and wariness, assert Lewicki, McAllister, and Bies, can then prevail, promoting distrust and limiting integration's potential.[29] Thus, the lack of familiarity and suspicion during high-stakes events exacerbate the stress.

This literature review looks at the unique value of trust as well as its elusive definition, development, role in organizational outcomes, and relation to effective collaboration. Regarding the challenges of integrating SWAT and PSBS, trust may need to be of a particular kind for the teams to collaborate successfully in a crisis.

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[26] Steven Curnin et al., "A Theoretical Framework for Negotiating the Path of Emergency Management Multi-Agency Coordination," *Applied Ergonomics* 47 (March 2015): 300–307, https://doi.org/10.1016/j.apergo.2014.10.014.

[27] Annika Andersson, "In Case of Emergency: Collaboration Exercises at the Boundaries between Emergency Service Organizations" (PhD diss., University West, 2016), 27, http://hv.diva-portal.org/smash/get/diva2:924967/FULLTEXT01.pdf.

[28] Pierre Courtois and Tarik Tazdaït, "Learning to Trust Strangers: An Evolutionary Perspective," *Journal of Evolutionary Economics* 22, no. 2 (April 2012): 367, 377, http://doi.org/10.1007/s00191-011-0247-z.

[29] Roy J. Lewicki, Daniel J. McAllister, and Robert J. Bies, "Trust and Distrust: New Relationships and Realities," *Academy of Management Review* 23, no. 3 (July 1998): 445, https://doi.org/10.5465/AMR.1998.926620.

1. The Common Denominator: Trust

In an exploratory study by Amy Donahue and Robert Tuohy, such problems in incident response as communication, leadership, logistics, planning, resource management, public relations, and training stand out; these are called command problems.[30] The common denominator, the authors suggest, is a lack of trust.[31]

In a broader look at improving collaboration, Hocevar, Jansen, and Thomas discuss nine crucial domains in integration to discover "ways to overcome . . . barriers and work together more effectively."[32] A workshop involving homeland security professionals spanning federal, state, and local agencies formed the basis of their report. In one exercise, attendees were asked to think of a successful event that required collaboration between two agencies or organizations, as well as two events that were unsuccessful.[33] Analysis of the workshop shows that successful factors include the desire to collaborate to reach a common goal.[34] Conversely, the most cited barrier to collaboration was a lack of trust, followed by inhibiting attitudes and a lack of familiarity. Dirks and Ferrin agree with Hocevar, Jansen, and Thomas. They argue that trust is paramount to the success or failure of collaboration.[35] Trust can benefit partnerships, but the lack of trust can destroy them.

2. Trust: An Elusive Definition?

Despite this consensus, researchers disagree about the form and definition of trust itself. Indeed, Diego Gambetta suggests that the because the meaning of *trust* is "elusive,"

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[30] Amy K. Donahue and Robert V. Tuohy, "Lessons We Don't Learn: A Study of the Lessons of Disasters, Why We Repeat Them, and How We Can Learn Them," *Homeland Security Affairs* 2, no. 2 (July 2006): 1–28.

[31] Donahue and Tuohy.

[32] Susan Hocevar, Erik Jansen, and Gail Fann Thomas, *Building Collaborative Capacity for Homeland Security*, NPS-GSBPP-04-008 (Monterey, CA: Naval Postgraduate School, 2004), http://hdl.handle.net/10945/571.

[33] Hocevar, Jansen, and Thomas, 2.

[34] Hocevar, Jansen, and Thomas, 15.

[35] Kirk T. Dirks and Donald L. Ferrin, "The Role of Trust in Organizational Settings," *Organization Science* 12, no. 4 (August 2001): 450–67.

the word is overused and misunderstood.[36] Trust is studied, explain Das and Teng, in "psychology, philosophy, sociology, economics and organization theory."[37] Consequently, finding commonality in trust's nominal value across different professions proves difficult.[38] However, a definite interest in the study of trust and its value persists. One side perceives that trust has a diminished value in society. Nevertheless, another side sees a significantly rising demand for trust in relationships and societal organizations.[39] Thus, the consensus of what trust is and what value it holds varies from one organization to another.

Trust has many definitions. For example, Rotter defines trust as an expectation that one will honor his word and be reliable.[40] Conversely, Schlenker, Helm, and Tedeschi suggest trust relies on the word of another involved in an ambiguous and risky enterprise.[41] In yet another take, Sitkin and Roth conceive trust as referring to competence—the ability to perform a specific task under a particular circumstance.[42] Yet, Mayer, Davis, and Schoorman add that "trust is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action."[43] Each one of these definitions shows trust in a different light.

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[36] Diego Gambetta, ed., forward to *Trust: Making and Breaking Cooperative Relations* (Cambridge, MA: Basil Blackwell, 1988), https://www.nuffield.ox.ac.uk/users/gambetta/Trust_making%20and%20 breaking%20cooperative%20relations.pdf.

[37] T. K. Das and Bing-Sheng Teng, "The Risk-Based View of Trust: A Conceptual Framework," *Journal of Business and Psychology* 19, no. 1 (Fall 2004): 85–116, https://doi.org/10.1023/B:JOBU.0000040274.23551.1b.

[38] Roy J. Lewicki and Barbara Benedict Bunker, "Developing and Maintaining Trust in Work Relationships," in *Trust in Organizations: Frontiers of Theory and Research*, ed. Roderick M. Kramer and Tom R. Tyler (Thousand Oaks, CA: SAGE Publications, 1996), 114–39, http://dx.doi.org/10.4135/9781452243610.n7.

[39] Roderick M. Kramer and Tom R. Tyler, ed., *Trust in Organizations: Frontiers of Theory and Research* (Thousand Oaks, CA: SAGE Publications, 1996).

[40] Julian B. Rotter, "A New Scale for the Measurement of Interpersonal Trust," *Journal of Personality* 35, no. 4 (December 1967): 651–65, https://doi.org/10.1111/j.1467-6494.1967.tb01454.x.

[41] Barry R. Schlenker, Bob Helm, and James T. Tedeschi, "The Effects of Personality and Situational Variables on Behavioral Trust," *Journal of Personality and Social Psychology* 25, no. 3 (March 1973): 419–27, https://doi.org/10.1037/h0034088.

[42] Sim B. Sitkin and Nancy L. Roth, "Explaining the Limited Effectiveness of Legalistic 'Remedies' for Trust/Distrust," *Organization Science* 4, no. 3 (August 1993): 367–92, https://doi.org/10.1287/orsc.4.3.367.

[43] Roger C. Mayer, James H. Davis, and F. David Schoorman, "An Integrative Model of Organizational Trust," *Academy of Management Review* 20, no. 3 (July 1995): 712, https://doi.org/10.5465/AMR.1995.9508080335.

Even though one definition of trust is not universally accepted, scholars generally agree about the helpfulness of trust. Townley and Garfield maintain the importance of trust cannot be overstated, yet modern society lacks a good grasp of trust because it takes many forms.[44] For example, Rousseau et al. examined the various definitions of trust and better-defined the concept in terms of organizational science.[45] In their work, trust promotes adaptive organizational relationships, reduces harmful conflict, encourages the collaboration of ad hoc working teams, and promotes a better response to a crisis. Based on those outcomes, Rousseau et al. coin a definition of trust better suited to crisis response: "Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another."[46] This definition of trust also helps to explain hurdles to integration as well.

Two aspects of the aforementioned definition need explaining in relation to crisis response and hurdles to integration. First, accepting one's vulnerability is difficult to do because it involves taking a risk. If one had complete certainty about an incident or event, trust would be unnecessary. The condition of vulnerability concurs with Mayer, Davis, and Schoorman's definition of submitting oneself to the actions of another.[47] The second condition is interdependence, meaning a goal cannot be accomplished without the involvement of another party. As Rousseau et al. suggest, both risk and interdependence must be present for trust to emerge fully.[48] Mayer, Davis, and Schoorman also agree.[49] The definitions presented above show that trust, rather than being elusive, has truly tangible substance.

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[44] Cynthia Townley and Jay L. Garfield, "Public Trust," in *Trust: Analytic and Applied Perspectives*, ed. Pekka Mäkelä and Cynthia Townley (Amsterdam: Brill, 2013), vii–viii, ProQuest.

[45] Denise Rousseau et al., "Not So Different After All: A Cross-Discipline View of Trust," *Academy of Management Review* 23, no. 3 (July 1998): 393–404, https://doi.org/10.5465/AMR.1998.926617.

[46] Rousseau et al., 395.

[47] Mayer, Davis, and Schoorman, "Integrative Model of Organizational Trust," 716.

[48] Rousseau et al., "Not So Different After All," 395.

[49] Mayer, Davis, and Schoorman, "Integrative Model of Organizational Trust," 715, 725–26.

3. Components of Trust Development

Scholars offer slightly different models of trust development. Stephen M. R. Covey suggests that trust is not some elusive—Covey uses the term *illusive*—or soft quality, as stated by Diego Gambetta.[50] Instead, he believes, "Trust is a pragmatic, tangible, actionable asset that you create."[51] Covey suggests four factors facilitate the emergence and development of trust: intent, integrity, results, and capability.[52] Trust is made by character and competence. Not only is a person's integrity and intent important (character), but their ability and results (competence) are also vital; words and deeds must align.[53] To create trust, one must begin by first addressing self-trust and then building good character and competence. By focusing on Covey's components of trust, one can begin to nurture competence and credibility, the underpinning for sustained trust.[54] Thus, in Covey's model, trust develops from a person's character and competence.

Mayer, Davis, and Schoorman offer a more dynamic model than Covey does—an integrative model of organizational trust. As Figure 1 shows, the factors of trustworthiness are ability, benevolence, and integrity in this model.[55]

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[50] Stephen M. R. Covey, *The Speed of Trust: The One Thing That Changes Everything* (New York: Free Press, 2006), 2; Diego Gambetta, "Can We Trust Trust?," in *Trust: Making and Breaking Cooperative Relations*, ed. Diego Gambetta (Cambridge, MA: Basil Blackwell, 1988), https://www.nuffield.ox.ac.uk/users/gambetta/Trust_making%20and%20breaking%20cooperative%20relations.pdf.

[51] Covey, *The Speed of Trust*, 2.

[52] Covey, 29–31.

[53] Covey.

[54] Covey, 30.

[55] Mayer, Davis, and Schoorman, "Integrative Model of Organizational Trust," 714–20.

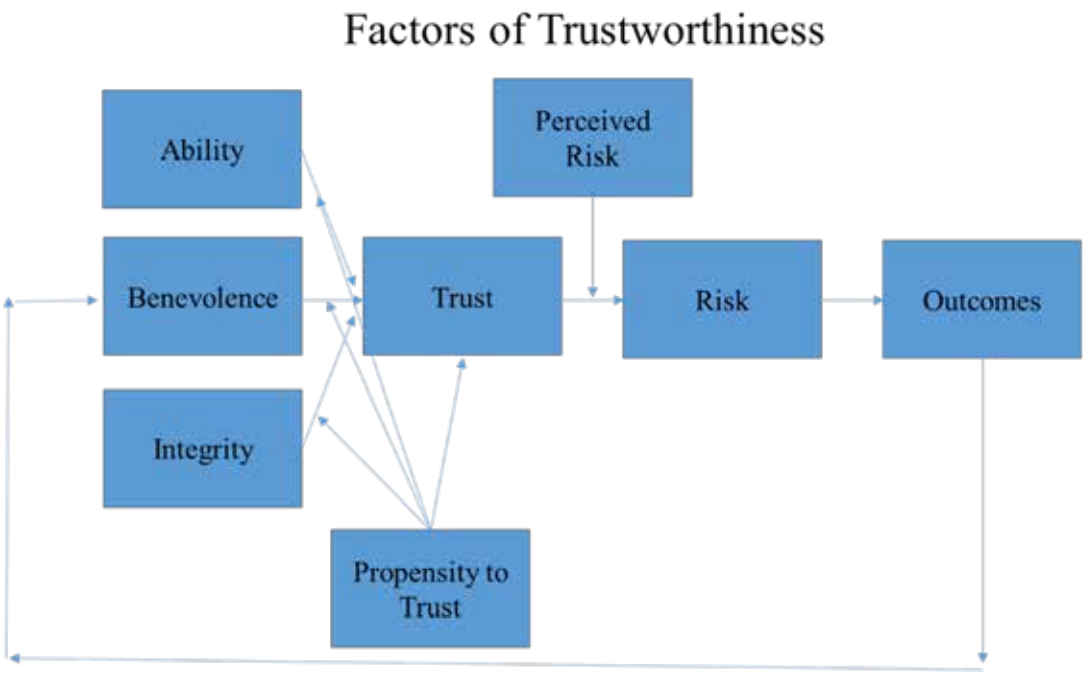

Figure 1. Integrative Model of Organizational Trust[56]

Ability, much like Covey's capability factor, includes skills and competencies in this model.[57] According to Mayer, Davis and Schoorman, "Benevolence is the extent to which a trustee is believed to want to do good," a definition similar to Covey's element of intent.[58] *Integrity*, again identical to Covey's model, is the relationship between one's actions and another's expectations. The model then diverges from Covey's with the *propensity to trust* (a stabilizer) and a *perceived risk* to overcome (a variable). The incorporation of a feedback loop in this model makes it distinctly different from Covey's, calling attention to the "dynamic nature of trust."[59] Trust, thus, becomes a fluid endeavor that deserves constant attention.

[56] Source: Mayer, Davis, and Schoorman, "Integrative Model of Organizational Trust," 715.

[57] Mayer, Davis, and Schoorman, "Integrative Model of Organizational Trust," 728.

[58] Mayer, Davis, and Schoorman, 718.

[59] Mayer, Davis, and Schoorman, 728.

4. Trust in Organizations: Outcome, Precursor, or Moderator of Collaboration?

Trust leads to higher levels of cooperation and better team processes and performance.[60] Dirks and Ferrin opine that trust increases the likelihood of accepting risk and interdependence rather than results from these two factors.[61] Trust also becomes a moderator, enhancing the conditions in which collaboration can develop further.[62] Dirks and Ferrin found that trust moderates group processes, motivators, and outcomes.[63] For example, de Drue and Van Vianen propose that trust can prevent disagreements from turning into conflict.[64] Trust is, undoubtedly, a central component in the routine activities of organizational life. However, the salience of trust is even more prominent during times of crisis because the need to depend on others is often greater.[65] Webb states, a crisis is an amplifying catalyst, "a magnifying loci for the enhancement or dissolution of trust."[66] Webb further explains that the "consequences of winning or losing . . . [go] up," and so does appreciation or resentment given the outcome.[67] Thus, a crisis has the potential to destroy an organizational relationship if trust is low.

In a crisis, first responders often deal with each other more in terms of roles and tasks than personality.[68] The concept of swift trust extends to role-based trust. Swift trust

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[60] Richard J. Klimoski and Barbara L. Karol, "The Impact of Trust on Creative Problem Solving Groups," *Journal of Applied Psychology* 61, no. 5 (October 1976): 630–33, https://doi.org/10.1037/0021-9010.61.5.630.

[61] Dirks and Ferrin, "The Role of Trust in Organizational Settings," 450–52.

[62] Dirks and Ferrin, 455.

[63] Dirks and Ferrin, 457.

[64] Carsten K. W. de Dreu and Annelies E. M. Van Vianen, "Managing Relationship Conflict and the Effectiveness of Organizational Teams," *Journal of Organizational Behavior* 22, no. 3 (May 2001): 310.

[65] Eugene J. Webb, "Trust and Crisis," in *Trust in Organizations: Frontiers of Theory and Research*, ed. Robert M. Kramer and Tom R. Tyler (Thousand Oaks, CA: SAGE Publications, 1996), 4–5, https://doi.org/10.4135/9781452243610.

[66] Webb, 5.

[67] Webb.

[68] Steven Curnin et al., "Role Clarity, Swift Trust and Multi-Agency Coordination," *Journal of Contingencies and Crisis Management* 23, no. 1 (2015): 31–33, https://doi.org/10.1111/1468-5973.12072; Nicola Power, "Extreme Teams: Toward a Greater Understanding of Multiagency Teamwork during Major Emergencies and Disasters," *American Psychologist* 73, no. 4 (2018): 481, https://doi.org/10.1037/amp0000248.

also focuses on functions and actions rather than personal relationships, but as Curnin et al. explain, swift trust can be helpful when there is no time to develop a trusting relationship, such as during critical incident response.[69] The concept of swift trust, thus, can manage "issues of vulnerability, uncertainty, risk, and expectations" when unfamiliar groups or disciplines are forced to integrate during a complex crisis that might be short in duration.[70] Swift trust can be useful when a relationship does not exist between groups forced to collaborate.

However, scholars contend that three factors hamper role-based and swift trust. In Curnin et al. and Zolin's view, role ambiguity hinders trust in groups engaged in a coordinated mission, caused by a lack of knowledge about a supporting unit's training, capabilities, and operational tempo.[71] Yet role clarity is vital in role-based and swift trust.[72] A person (or group) must clearly understand his (or its) particular task and role to perform in crisis situations. A lack of knowledge inhibits collaboration, and as Nicola Power adds, teams that exhibit role ambiguity usually operate in silos, thus decreasing cooperation.[73] Second, Zolin suggests that team members familiar with each other, for instance, from a close-knit community, are more likely to have commonalties, which increase the propensity to trust.[74] Thus, to her, a lack of personal connection reduces trust. Also, role-based trust or swift trust alone does not allow the power of influence to affect a situation. Because it is temporary in nature and breadth, swift trust, according to Stephen Draper, "can be lost at the slightest appearance of incompetence."[75] Role-based trust and swift trust do not produce lasting relationships necessary for teams that repeatedly interact in crises.

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[69] Curnin et al., "Role Clarity, Swift Trust," 29–35.

[70] Peder Hyllengren et al., "Trust at First Sight: Swift Trust in Leaders in Temporary Military Groups," *Team Performance Management* 17, no. 7/8 (2011): 355, https://doi.org/10.1108/13527591111182625.

[71] Curnin et al., "Role Clarity, Swift Trust," 31–33; Roxanne Zolin, "Swift Trust in Hastily Formed Networks" (Monterey, CA: Naval Postgraduate School, 2002), 4, http://hdl.handle.net/10945/36757.

[72] Curnin et al., "Role Clarity, Swift Trust"; Zolin, "Swift Trust."

[73] Power, "Extreme Teams," 483.

[74] Zolin, "Swift Trust," 4.

[75] Stephen R. Draper, "'EOD, Up!' How Explosive Ordnance Disposal Forces Can Best Support Special Operations Forces" (master's thesis, Naval Postgraduate School, 2006), 66, http://hdl.handle.net/10945/2758.

5. Trust Development within Relationships

Like a relationship, trust best develops over time, measured in small steps at first.[76] Lewicki, Tomlinson, and Gillespie examined the development of trust, suggesting that relationships mature over time with frequency, duration, and challenges faced together.[77] Levin and Cross studied the correlation of knowledge transfer in developing trust. The authors have assessed knowledge transfer as "a critical mechanism" in trustworthiness because it acts as a mediator.[78] Furthermore, Wilson et al. explain that knowledge transfer is synonymous with role clarity and can strengthen the ability to "coordinate implicitly rather than explicitly."[79] To be sure, effective knowledge transfer takes time. Supporting this idea, Rousseau et al. argue that repeated interactions among people, groups, and disciplines begin the development of a more stable form of trust, relationship-based trust. Thus, trust develops from within the relationship instead of being forced by a hectic and hazardous event.[80] Trust then has a better chance of survival and stability.

Building a stable relationship is difficult. For several reasons, relationships might not develop: the parties involved may lack time to invest in establishing a connection and developing trust, or as Lewicki and Bunker explain, they "have no desire for a closer relationship."[81] If the latter is the case, then personalities and value differences might play a role in the development of distrust.[82] Differences in personalities and values can be

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[76] Glenn Kautt, "How to Build Trust," *Financial Planning* 45, no. 3 (2015): 29, ProQuest.

[77] Roy J. Lewicki, Edward C. Tomlinson, and Nicole Gillespie, "Models of Interpersonal Trust Development: Theoretical Approaches, Empirical Evidence, and Future Directions," *Journal of Management* 32, no. 6 (2006): 991–1022, https://doi.org/10.1177/0149206306294405.

[78] Daniel Z. Levin and Rob Cross, "The Strength of Weak Ties You Can Trust: The Mediating Role of Trust in Effective Knowledge Transfer," *Management Science* 50, no. 11 (2004): 1477–90, https://doi.org/10.1287/mnsc.1030.0136.

[79] Katherine A. Wilson et al., "Errors in the Heat of Battle: Taking a Closer Look at Shared Cognition Breakdowns through Teamwork," *Human Factors* 49, no. 2 (2007): 250, https://doi.org/10.1518/001872007X312478.

[80] Rousseau et al., "Not So Different After All," 399.

[81] Lewicki and Bunker, "Developing and Maintaining Trust," 9.

[82] Schlenker, Helm, and Tedeschi, "Effects of Personality and Situational Variables"; Sheila Simsarian Webber, "Leadership and Trust Facilitating Cross-Functional Team Success," *Journal of Management Development* 21, no. 3 (2002): 201–14, https://doi.org/10.1108/02621710210420273.

hurdles to building trust, yet even established trust is often fragile and easily fractured.[83] However, trust is repairable with time and commitment. For example, commitment through group socialization, which coalesces different disciplines, can increase a team's knowledge, skill set, satisfaction, and overall loyalty. Conversely, poor socialization can cause apprehension and uncertainty, adding to an already dim view of integration.[84] Group members will then become "less forgiving and less cooperative," explains Steven McShane, inevitably undermining the development of trust.[85] Thus, the development of relationships, or lack thereof, can affect crisis response.

Time becomes a key variable in the definition of trust. Lars Huemer writes, "Trust and time . . . have emerged as central factors enabling cooperative advantage."[86] Partha Dasgupta agrees with Huemer, suggesting that "for trust to be developed between individuals they must have repeated encounters, and they must have some memory of previous experiences."[87] Covey also touches on the factor of time, offering that consistent behavior is vital in developing trust.[88] Lewicki, McAllister, and Bies maintain that trust and distrust "exist . . . as distinct bipolar constructs."[89] Furthermore, the time to develop trust is not at the moment of crisis. Wilson et al. claim that the time for team members to evaluate their mission is during periods of low stress.[90] Andersson, explaining the concepts of boundary awareness, agrees with Wilson et al. that one condition for learning in

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[83] Hocevar, Jansen, and Thomas, *Building Collaborative Capacity*, 15; Covey, *The Speed of Trust*, 314–29.

[84] John M. Levine, Richard L. Moreland, and Hoon-Seok Choi, "Group Socialization and Newcomer Innovation," in *Blackwell Handbook of Social Psychology: Group Processes*, ed. Michael A. Hogg and R. Scott Tindale (Malden, MA: Blackwell Publishers, 2001), 86–106.

[85] Steven Lattimore McShane and Mary Ann Young Von Glinow, *Organizational Behavior: Essentials*, 2nd ed. (New York: McGraw-Hill, 2009).

[86] Lars Huemer, "Creating Cooperative Advantage: The Roles of Identification, Trust, and Time," *Industrial Marketing Management* 43, no. 4 (May 2014): 564, https://doi.org/10.1016/j.indmarman.2014.02.011.

[87] Partha Dasgupta, "Trust as a Commodity," in *Trust: Making and Breaking Cooperative Relationships*, ed. Diego Gambetta (Cambridge, MA: Basil Blackwell, 1988), 49, https://www.nuffield.ox.ac.uk/users/gambetta/Trust_making%20and%20breaking%20cooperative%20relations.pdf.

[88] Covey, *The Speed of Trust*, 34.

[89] Lewicki, McAllister, and Bies, "Trust and Distrust," 448.

[90] Wilson et al., "Errors in the Heat of Battle."

emergency preparedness and response is trust.[91] Trust encourages role clarity, reduces defensive reactions, and promotes candidness in reporting mistakes.

C. RESEARCH DESIGN

Distrust forms one of the most fundamental barriers to integration. This thesis hypothesizes that mutual trust between SWAT and PSBSs is largely absent, especially in a collaborative response to such critical incidents as domestic terrorism. Role ambiguity, minimal relationships, and a shortage of time spent working together cause a lack of trust. This thesis explores the value of trust and its role in collaborative organizational efforts in crisis response teams. The project focuses on the concept of trust and its components, benefits, and limitations that affect collaboration during critical incident response involving SWAT and PSBS.

Multiple sources provided subject-matter insight. This research targeted the rich academic literature written on trust, with an eye toward its value in collaboration. This study reviewed open-source after-action reports of critical incidents that required a joint effort of SWAT and PSBS. Formal open-source after-action reports are far superior to media and other accounts because personnel directly involved in those incidents provide the analysis. Specific research on cross-functional groups was examined along with the standards and policies of SWAT and PSBS. The inter-organizational collaborative capacity assessment model, designed by Hocevar, Jansen, and Thomas, and the integrative team leadership and effectiveness model, designed by Zaccaro, Heinen, and Shuffler, were considered for this research design.

The training, frequent missions, and organizational structure of SWAT and PSBS were explored to determine their roles in developing or inhibiting trust. Trust was examined in terms of its formation, principal components, and limitations that affect collaborative ventures. Group socialization and development, especially in cross-functional teams, was analyzed for relevance to this thesis.

[91] Andersson, "In Case of Emergency," 92, 99.

The author of this thesis is a 21-year career law enforcement officer with the Gwinnett County Police Department. Since 2008, he has been a federally certified public safety bomb technician with experience integrating PSBT and SWAT in joint hazard response. This thesis does not divulge or discuss tactics that are pivotal in keeping bomb technicians and tactical operators safe. Those tactics are best kept guarded for a reason. Ultimately, this thesis provides insight for SWAT and PSBS leaders and policymakers who desire better collaboration, proposing an iterative joint-training process in conjunction with a framework for collaboration for those leaders to consider.

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II. DIFFERENCES

Tactical law enforcement units—SWAT, for example—handle dangerous armed suspects. PSBS handles bombs. Largely, the two disciplines do not overlap because SWAT and PSBS are highly specialized teams that entail unique training and operations. At the heart of this chapter are SWAT's and PSBS's origins, training, frequency of missions, and organizational differences, which can sow distrust if a relationship has not developed between the two disciplines before a crisis. SWAT and PSBS may experience challenges with collaboration and trust for several tangible reasons. For one, categorization promotes dependence among members of a group, causing reluctance to include others.[92] This chapter compares the training, missions, and organization of SWAT and PSBS, finding that their differences might create or exacerbate trust issues.

A. SWAT OVERVIEW

SWAT teams are specialized law enforcement units that are ready to rescue hostages, deal with barricaded gunmen, provide snipers for overwatch protection, and serve arrest and high-risk search warrants.[93] As a tactical police unit, SWAT was conceived of in the 1960s as a response to the growing civil disorder and political unrest prevalent in major urban centers.[94] As the NTOA states, "Such teams are focused on incident resolution, as opposed to other functions, such as investigation. Their purpose is to increase the likelihood of safely resolving critical incidents."[95] In other words, SWAT teams, through their training, tactics, and equipment, surpass the normal capabilities of law enforcement officers and investigators in hopes of more safely resolving critical incidents.

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[92] Isabel R. Pinto et al., "Membership Status and Subjective Group Dynamics: Who Triggers the Black Sheep Effect?," *Journal of Personality and Social Psychology* 99, no. 1 (July 2010): 109, http://dx.doi.org/10.1037/a0018187.

[93] National Tactical Officers Association, *Tactical Response and Operations Standards*.

[94] Peter B. Kraskaa and Derek J. Paulsenb, "Grounded Research into U.S. Paramilitary Policing: Forging the Iron Fist inside the Velvet Glove," *Policing and Society* 7, no. 4 (1997): 254, https://doi.org/10.1080/10439463.1997.9964777.

[95] National Tactical Officers Association, 11.

By the mid-1980s, largely due to the war on drugs, SWAT teams had been formed in a large percentage of American state and local law enforcement agencies.[96] Since the 1990s, national associations, such as the NTOA, and other state-level tactical officer associations have provided guidelines in an effort to standardize SWAT components and operations. Every three years, the NTOA publishes *Tactical Response and Operations Standards for Law Enforcement Agencies* with the intention of not only encouraging "an efficient core set of concepts, principles and policies to standardize and enhance the delivery of tactical law enforcement services" but also preparing SWAT teams to respond to terrorist events.[97] The desire for enhanced law enforcement capabilities meant that by 2013, some 80 percent of all cities and towns in the United States with more than 25,000 people had a tactical team such as SWAT, according to the *Wall Street Journal*.[98]

Compliance with the standards set by the NTOA is voluntary and not a prerequisite for membership.[99] Because these standards are non-binding, SWAT units vary significantly in personnel levels, organization, training, and equipment. Something as simple as the caliber of weapons or as fundamental as firearm skills, room clearance, and immediate action drills may differ from team to team, even in neighboring townships.[100]

B. PSBS OVERVIEW

Rendering safe IEDs is the primary mission of the 468 federally certified PSBSs nationwide, as of 2018.[101] PSBSs, under the direction of the U.S. Army and later the Federal Bureau of Investigation (FBI), were formed in 1971 when military explosive ordnance disposal (EOD) teams found themselves strained due to the Vietnam War and an increase in domestic terrorism–related bombings.[102] They are managed from city, county,

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[96] Kraskaa and Paulsenb, "Grounded Research into U.S. Paramilitary Policing," 256.

[97] National Tactical Officers Association, *Tactical Response and Operations Standards*, v, viii.

[98] Bruce Schneier, "The Army in Our Midst," *Wall Street Journal*, August 6, 2013.

[99] National Tactical Officers Association, *Tactical Response and Operations Standards*, 8.

[100] National Tactical Officers Association, 13.

[101] National Bomb Squad Commanders Advisory Board, *National Strategic Plan of U.S. Bomb Squads* (Huntsville, AL: National Bomb Squad Commanders Advisory Board, 2018), 9.

[102] David K. Jernigan, "Hazardous Devices School," *FBI Law Enforcement Bulletin*, August 2006, 15, ProQuest.

state, and federal law enforcement agencies and fire departments. As of 2018, 91 percent of PSBSs were assigned to law enforcement agencies, the rest to fire departments.[103]

Operating under a congressional mandate, the FBI Hazardous Devices Operation Center (HDOC) provides national standards for the individual certification of public safety bomb technicians and accreditation for the 466 PSBSs operating within public safety agencies in the United States.[104] Figure 2 shows the PSBSs and certified bomb technicians by state as of January 2018.[105]

Figure 2. Bomb Squads and Certified Techs by State[106]

[103] National Bomb Squad Commanders Advisory Board, *National Strategic Plan*, 5–6.

[104] National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians*, 1.

[105] National Bomb Squad Commanders Advisory Board, *National Strategic Plan*, 9.

[106] Source: National Bomb Squad Commanders Advisory Board, *National Strategic Plan*, 9.

As Figure 2 shows, most PSBSs are located in the urban areas of the country. Some states, such as California, have 47 PSBSs and 255 bomb technicians. Other states, such as Montana, have only two PSBSs and 16 bomb technicians. According to the National Bomb Squad Commanders Advisory Board (NBSCAB), the FBI sets the "Target Staffing Levels (TSL), for each bomb squad . . . based on geographic area, population levels, history of bombing incidents, and other factors."[107] The target staffing levels present challenges in that many PSBSs are not readily available for the local and more numerous SWAT teams.

The U.S. Bomb Squad program is led by NBSCAB, which comprises PSBS commanders from across the nation, and maintains relationships with local, state, and federal agencies that support PSBSs. NBSCAB has the authority to make decisions on guidelines and standards for the profession, encouraging effective alignment of national PSBS resources. NBSCAB also has a strong relationship with the International Association of Bomb Technicians and Investigators, a non-profit association for bomb technicians all over the world.[108]

C. TRAINING AND POLICY

SWAT training includes in-house agency training and a variety of state and federal training programs, according to David A. Klinger and Jeff Rojek.[109] Private vendors and members of the armed forces have also played a role in SWAT training.[110] In 2008, Klinger and Rojek observed

> a wide array of SWAT training sessions and operations; from firearms training on shooting ranges to scenario training at a variety of venues on the training side of the coin, and from search warrants to hostage incidents on the operations side. . . . Teams focused their training time on matters they believed to be closely related to the sorts of things they might encounter in

[107] National Bomb Squad Commanders Advisory Board, *National Strategic Plan*.

[108] National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians*, 2.

[109] David Klinger and Jeff Rojek, *Multi-Method Study of Police Special Weapons and Tactics Teams*, NCJ 223855 (Washington, DC: National Institute of Justice, 2008), 17.

[110] Klinger and Rojek, 46.

> the field. All of the training was designed to replicate as close as possible what the team might face during actual operations.[111]

Even though the NTOA provides certain guidelines, SWAT training is not universal, and the equipment from one SWAT team to another is not standardized. The frequency of training for SWAT is also agency-dependent, with some teams training 40 hours or more per month but other teams training much less.[112] Moreover, as Klinger and Rojek observe, SWAT focuses on events it more frequently encounters.[113]

The International Association of Chiefs of Police (IACP) and the NTOA published their *National Assessment of Critical Trends and Issues from 2009 to 2013* based on information from 254 law enforcement agencies with SWAT teams. Table 1 shows the breakdown of the SWAT teams' policies and procedures by source.

Table 1. Sources of SWAT Teams' Policies and Procedures[114]

Source of Policy and Procedure	Percent
Own agency	85.4
State/Regional tactical officers association	41.6
Municipal or county law enforcement agency	35.5
Private Vendor	7.3
State law enforcement agency	10.6
U.S. Military	7.1
Federal law enforcement agency	5.1
Foreign military	0
National Tactical Officers Association	67.4
International Association of Chiefs of Police	20.1
Other	4.7

[111] Klinger and Rojek, 11.

[112] Klinger and Rojek, 10.

[113] Klinger and Rojek, 11.

[114] Source: International Association of Chiefs of Police and National Tactical Officers Association, *National Special Weapons and Tactics (SWAT) Study: A National Assessment of Critical Trends and Issues from 2009 to 2013* (Alexandria, VA: International Association of Chiefs of Police, 2014), 11, https://ntoa.org/pdf/swatstudy.pdf.

As Table 1 indicates, the study found that SWAT policies and standard operating procedures dictating a team's actions and tactics are developed primarily within a SWAT team's agency. Tactical officer associations account for 41.6 percent to 67.4 percent of those policies.

Training, policies, and procedures for PSBS are vastly different from SWAT's. Every public safety bomb technician in the United States completes the FBI Hazardous Devices School (HDS) at Redstone Arsenal in Huntsville, Alabama. Before acceptance to HDS, all candidates must be certified by the Occupational Safety and Health Administration as hazardous material technicians, setting the stage for a standardized progression of training, starting with a good foundation in CBRNE training.

Hazardous Devices School ensures that all public safety bomb technicians and PSBSs operate from the same procedure, policy, and standard.[115] According to the FBI, HDS is home to a "sprawling 455-acre campus complete with classrooms, explosive ranges, and mock villages that include a train station, apartment complexes, a movie theater, and a strip mall."[116] HDS provides realistic training areas that mirror the American landscape with rural, suburban, and urban environments. Bomb technicians spend six weeks in basic hazardous devices school, learning about commercial, military, and improvised explosives, as well as basic electricity, fuses, threat assessment, and robotic operations. The focus of this training is to render a bomb safe. Furthermore, every three years, each bomb technician must return to HDS for recertification of those standards, with an emphasis on advanced render-safe techniques. Because the need to stay ahead of emerging threats is a real concern at HDS, the FBI has upgraded and expanded the facilities.[117]

Additionally, HDS provides specialized courses for bomb technicians. These include vehicle-borne IED (VBIED), person-borne IED (commonly known as suicide bombers), advanced IED electronics, post-blast investigations, weapons of mass

[115] Jernigan, "Hazardous Devices School," 14–17.

[116] "Inside the FBI's Hazardous Devices School," Federal Bureau of Investigation, January 9, 2018, https://www.fbi.gov/news/stories/hazardous-devices-school.

[117] "Inside the FBI's Hazardous Devices School," *Forensic Magazine*, January 10, 2018, ProQuest.

destruction response, and tactical bomb technician (TBT) courses. The TBT course instructs bomb technicians in how to operate with SWAT teams and provide IED and booby trap identification and mitigation for high-risk operations, such as hostage rescue.[118] The challenge with the TBT course is that each SWAT team, as previously discussed, operates with different tactics and procedures. Thus, the bomb technician is always the outsider.

The HDOC offers a national set of guidelines for all PSBS. *A Model for Bomb Squad Operating Procedures*, although not designed to be all-inclusive, serves as the "recommended source for developing an SOP governing the day-to-day operations of a professional bomb squad," according to the FBI.[119] The operating procedures include the selection of bomb technicians, basic and advanced training, and equipment needs. Thanks to this centralized approach, starting with the HDOC and HDS, the tactics, training, and procedures for PSBS are standardized. The equipment from one PSBS to another is very similar, if not identical. Moreover, bomb technicians from one team can work quickly with bomb technicians from another team. Ultimately, the standard training received at HDS allows bomb technicians to work directly with other PSBS in a seamless fashion.[120]

D. MISSIONS

The IACP and NTOA note the difficulty in collecting and analyzing SWAT reports because of the differences in reporting. However, their study determined the frequency of missions undertaken by SWAT from a sample of agencies that included both large and small populations with a sizable call volume.[121] Table 2, from the IACP and NTOA's national assessment, organizes SWAT activations by incident type from 2009 to 2013.

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[118] Erin Edwards, "FBI Holding Special Tactical Bomb Training in Myrtle Beach," NBC News Myrtle Beach, August 15, 2018, https://www.wmbfnews.com/story/37833533/fbi-holding-special-tactical-bomb-training-in-myrtle-beach.

[119] Federal Bureau of Investigation, preface to *A Model for Bomb Squad Standard Operating Procedures*, Special Technicians Bulletin 2010-1 (Washington, DC: Department of Justice, 2010).

[120] "Bomb Squads: Local Preparedness for Global Problems," *TechBeat*, Winter 2010.

[121] International Association of Chiefs of Police and National Tactical Officers Association, *National Special Weapons and Tactics*, v–vi.

Table 2. SWAT Activity, 2009–2013[122]

Activity	Mean of Numbers Reported by Respondents Who Responded (Actual and Estimate)					Percent Change
	2009	2010	2011	2012	2013	2009-2013
ACTIVATIONS by Incident Type by Year (Actual and Estimate)						
Warrant Service (Unknown Risk)	4.07	4.03	3.46	3.82	4.15	2
Warrant Service (High Risk)	17.04	16.35	15.44	14.86	14.13	-17.1
Suicidal Individuals	1.54	1.69	1.43	1.48	1.56	1.3
Barricaded Subjects	3.42	3.33	3.4	3.68	3.47	1.5
Civil Unrest/ Crowd Control	0.26	0.31	0.41	0.31	0.34	30.8
Hostage Situations	0.61	0.51	0.48	0.41	0.51	-16.4
Hostage Rescue	0.22	0.2	0.19	0.1	0.16	-27.3
Automobile Assault	0.67	0.59	0.62	0.75	0.77	14.9
Water-borne Assault	0	0	0	0	0	
Bus Assault	0.018	0.011	0.035	0.034	0.028	55.6
Train Assault	0	0	0	0	0	
Building Search	5.11	4.92	4.73	5.14	5.03	-1.6
Area Search	1.24	1.42	1.24	1.51	1.42	14.5
Woodland Search	0.67	0.68	0.72	0.81	0.79	17.9
Active Shooter	0.13	0.09	0.08	0.09	0.11	-15.4
Downed Officer	0.043	0.03	0.024	0.029	0.017	-60.5
Aircraft Assault	0	0	0	0	0	
Incidents that Occurred During Deployment by Year						
IED Encounters	0.28	0.38	0.32	0.4	0.33	17.9

As Table 2 demonstrates, the most common SWAT activity or activation during the years examined was for high-risk warrant services. No other activity, singular or combined, came close to the frequency of high-risk warrant service. Interestingly, the percentage of SWAT activities involving IEDs rose 17.9 percent during the years of this study. Notably, the frequency and type of missions that SWAT undertakes likely mirror SWAT's training concentrations given the limited training time and budgetary constraints.

Additionally, Table 3 from the same study shows that nationwide, SWAT has access to PSBS only 59.8 percent of the time.

[122] Source: International Association of Chiefs of Police and National Tactical Officers Association, *National Special Weapons and Tactics*, 19.

Table 3. Elements That SWAT Teams Can Access[123]

Elements an Agency's SWAT Team has Access to		
Support Elements	All Agencies	
	Number	Percent
Hostage/ Crisis Negotiator	758	87.7
Emergency Medical Support	758	87.7
Social Services	545	63.1
Animal Control	635	73.5
Precision Long Rifle Team (Sniper)	750	86.8
Bomb Technician	516	59.8
K-9	693	80.2
Armored Vehicle	672	77.8
Robot	582	67.4
Explosives	4.8	50.8

The limited access SWAT has to PSBS is telling considering the latter's integration and joint hazards response. These finding are important because a team's overall capability and available resources affect its response options.

The typical missions undertaken by PSBSs are directly related to the responsibilities listed in their national guidelines. These missions include responding to real or suspected IEDs. PSBSs also are responsible for the recovery and, in most cases, the disposal of explosives, as well as technical support to tactical units such as SWAT and Hazmat units. Another important job-related function is to maintain relationships with other state and local PSBSs, canine units that assist in detecting explosives, military EOD assets, and such professional associations as the International Association of Bomb Technicians and Investigators.[124]

[123] Source: International Association of Chiefs of Police and National Tactical Officers Association, *National Special Weapons and Tactics*, 16.

[124] National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians*, 4.

In 2018, the U.S. Bomb Data Center released a snapshot of all reported PSBS activity in the United States with its 2,764 interagency partners and 13,059 registered users.[125] In 2018, PSBSs saw a total of 17,968 explosive-related incidents, including

- 706 explosions
- 289 bombing
- 7,305 explosive recoveries
- 7,404 suspicious/ unattended packages
- 1,627 bomb threats
- 426 hoax devices[126]

Figures 3 and 4, from the 2018 Bomb Data Center's annual report, illustrate trends in suspicious/unattended package response calls from 2014 to 2018. Figure 3 delineates the categories of explosive recoveries in 2018.

Figure 3. Suspicious/Unattended Package Trends[127]

[125] U.S. Bomb Data Center, *2018 Explosives Incident Report* (Redstone Arsenal, AL: U.S. Bomb Data Center, 2018), 1, https://www.atf.gov/file/136971/download.

[126] U.S. Bomb Data Center, 1.

[127] Source: U.S. Bomb Data Center, *2018 Explosives Incident Report*, 12.

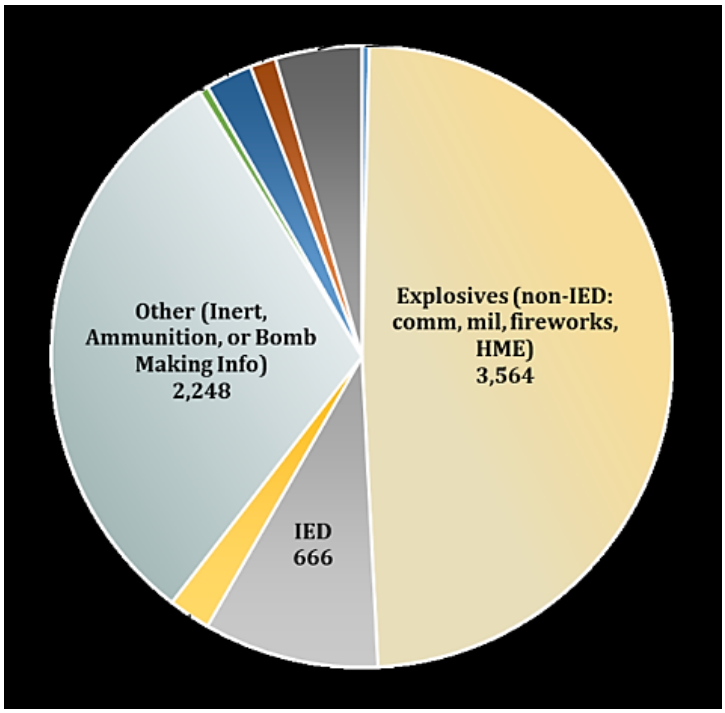

Figure 4. Explosive Recovery Types, 2018[128]

As Figure 3 and Figure 4 illustrate, response to suspicious/unattended packages and recovery of explosives form the bulk of PSBS missions. In 2018, PSBS responses to suspicious packages rose 38 percent, and responses to bomb threats rose 32 percent.[129] Like SWAT, PSBS tends to focus its time on training for its typical response missions.

The other activities PSBSs routinely perform already involve integration with fire department hazardous material (Hazmat) teams, including responses to clandestine laboratories (clan labs), homemade explosive or drug labs. PSBSs are a good fit for this activity given their hazmat background and access to advanced personal protective and CBRNE detection equipment.[130] Also, since the anthrax scare in 2001, PSBSs have also found a role assisting with the identification of unknown substances, giving rise to the term

[128] Source: U.S. Bomb Data Center, *2018 Explosives Incident Report*, 9.

[129] U.S. Bomb Data Center, *2018 Explosives Incident Report*, 1.

[130] "Bomb Tech Hazmat Training," April 3, 2019, CBS Atlanta, video, 2:35, https://www.cbs46.com/bomb-tech-hazmat-training/video_a673915d-876c-545d-a9bf-5700eddeed5d.html.

"white powder call."[131] An article in *Slate* reported that 50,000 "hoaxes or false alarms" involved first responders in the year following the anthrax letters, and more than 800 of these types of calls still occur nationwide every year.[132] PSBSs respond with Hazmat teams to help with the identification and mitigation of this type of incident.

E. ORGANIZATION

According to the NTOA, SWAT teams are either Tier 1 teams with 26 members, Tier 2 teams with 19 members, or tactical response teams with 15 members.[133] Table 4 describes the types of SWAT teams as designated by the NTOA.

Table 4. NTOA Types of SWAT Teams[134]

Type	Capabilities	Personnel
Tier 1: Combination of teams by MOU or single agency team	All mission capable; can serve as a mutual aid team to another Tier 1 or 2 team	26 members: • 1 team commander, • 3 team leaders, • 4 snipers, • 18 operators
Tier 2: Stand-alone team; combination of teams by MOU	All mission capable, except for deliberate hostage rescues that are planned; emergency hostage rescue only	19 members: • 1 team commander, • 2 team leaders, • 4 snipers, • 12 operators
Tactical response team	Single or combination of capabilities	15 members: • 1 team commander, • 2 team leaders, • 12 operators

[131] Yudhijit Bhattacharjee, "The Curse of the White Powder: How Fake Bioterrorism Attacks Became a Real Problem," *Slate*, January 30, 2012, https://slate.com/technology/2012/01/white-powder-hoaxes-a-trend-in-fake-terrorism.html; Darrell D. Higuchi, "Model Procedures for Responding to a Package with Suspicion of a Biological Threat," International Fire Chiefs Association, October 17, 2001, https://www.iafc.org/topics-and-tools/resources/resource/model-procedures-for-responding-to-a-package-with-suspicion-of-a-biological-threat.

[132] Bhattacharjee, "Curse of the White Powder."

[133] National Tactical Officers Association, *Tactical Response and Operations Standards*, 10.

[134] Source: National Tactical Officers Association, *Tactical Response and Operations Standards*, 11.

Again, no established organizational model exists nationwide. SWAT teams comprise four types of team members. They have part-time members who also have other duties outside the team, full-time members with other duties, full-time members with no additional duties, and teams made up of full-time and part-time members. SWAT teams may also be regional teams, with smaller agencies providing support for a fuller team.[135] SWAT officers are equipped with weapons, body armor, and other tools (e.g., cameras, listening devices, night vision equipment, and mechanical breaching tools) that can be hand-carried by team members. SWAT's equipment, sometimes considered paramilitary, is suited for fast and dynamic movement when speed and time to an objective are important.[136]

PSBSs are largely shaped by their requirements to cover both rural and densely populated urban areas.[137] Like SWAT, PSBSs can vary from agency to agency. Only 30 percent of all public safety bomb technicians perform PSBS duties as their full-time assignment. The other 70 percent consider their assignment to a PSBS as collateral duty. Unlike the guidelines for SWAT teams, the national PSBS guidelines specifically define a bomb squad. A bomb squad, or "bomb response team," comprises two certified bomb technicians with a complete set of the equipment described in the national guidelines.[138] As Table 5 shows, PSBSs are then rated by the Federal Emergency Management Agency (FEMA) as Type I, II, or III based on their available personnel and equipment.

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[135] International Association of Chiefs of Police and National Tactical Officers Association, *National Special Weapons and Tactics*, 9.

[136] Adam Dulin, "Special Weapons and Tactics Teams," *TELEMASP Bulletin* 12, no. 3 (June 2005): 8–9, ProQuest.

[137] National Bomb Squad Commanders Advisory Board, *National Strategic Plan*, 5.

[138] National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians*, 3.

Table 5. Types of Bomb Squads/Explosive Teams[139]

Resource	**Bomb Squad/ Explosive Team**			
Category	Law Enforcement/ Security		Kind	Team
Minimum Capabilities:		**Type I**	**Type II**	**Type III**
Component	**Metric**			
Personnel		Same as Type II	2 or more Bomb Response Teams	1 Bomb Response Team
Equipment	Blast Protective Clothing	Same as Type II	Same as Type III	Full Coverage Bomb Suit(s)
Equipment	X-Ray	Same as Type II	Same as Type III	Portable X-Ray Device Capability
Equipment	Render-Safe Procedures (RSP) Equipment	Same as Type II	Explosive tools to conduct specific and general disruption, Demolition Kit, Hand Tools	Tools to conduct general disruption, Demolition Kit, Hand Tools
Equipment	CBRN Protective Clothing	Same as Type II	PPE (modified level B and level C) for CBRNE	No PPE for Chem/ Bio
Equipment	Remote Operated Vehicle	Robotic Vehicle capable of handling VBIEDs	Robotic Vehicle capable of handling non-vehicle IEDs	No robotic capability
Equipment	Tools	Same as Type II	Explosives/ WMD Reference Library, Diagnostic Equipment, Rigging equipment	Explosives/ WMD Reference Library
Equipment	Monitoring/ Detection	CBRN monitoring (detect and identify)	CBRN monitors (detect)	None
Equipment	Explosive Transport	Same as Type II	Explosive Transport Vessel	No Explosive Transport Vessel
Equipment	Communications	Radio, cellular telephone and data transmission capability	Radio and cellular telephone capability	Radio communications capability
Vehicles		Same as Type II	Same as Type III	Bomb response vehicle(s)
Personnel	Training	Same as Type II	Same as Type III	Hazardous Devices School certification

[139] Source: Federal Emergency Management Agency, *Typed Resource Definitions: Law Enforcement and Security Resources*, FEMA 508-6 (Washington, DC: Federal Emergency Management Agency, 2005), 4–5, https://www.fema.gov/doc/emergency/nims/508-6_Law_Enfor_Secur_Resources.doc.

The smallest PSBS is a Type III resource with one bomb response team. Type II and Type I resources have two or more bomb response teams. Equipment and training capabilities also differentiate PSBS teams. Type I resource teams possess the training and equipment to operate in a CBRNE environment and render a VBIED safe with a robotic vehicle. According to NBSCAB, because there are only 466 nationally accredited PSBSs,

> they have responsibility, through mutual aid and task force agreements, of taking their training, experience, and equipment beyond the borders of their municipalities and jurisdictional lines to serve the entirety of the US, performing a specialized task that the remainder of the 19,000 law enforcement agencies and 30,000 fire departments cannot safely and effectively accomplish for themselves.[140]

PSBSs rely on a variety of equipment to do their job effectively and safely, as seen in Table 5. Such equipment includes bomb suits, robotics, x-ray equipment, and CBRNE protective clothing, as well as monitoring equipment, rope rigging, demolition kits, and dedicated transport vessels to transport and dispose of explosives. For PSBSs, this lengthy list of equipment, necessary in responding to a critical incident, can be incredibly bulky. In other words, the type of equipment that accompanies PSBS can hamper the dynamic tempo of SWAT when it is needed in a joint hazard response. Carrying cumbersome equipment means that PSBS might hinder SWAT's speed and flexibility during a mission, much as it did at Columbine High School.

F. CONCLUSION

PSBSs have a background in integrated joint hazard response and integrate with Hazmat units when dealing with unknown substances. They provide technical assistance in special operations, liaising with military EOD teams, explosive detection canine teams, and other local, state, and federal PSBSs. Historically, PSBSs have integrated with SWAT teams far less frequently, beginning with their initial training and even following their common missions and organizational structures. Research suggests such limited time spent working together can inhibit trust. As the Columbine incident in 1999 showed, trust cannot work at the moment of crisis if a relationship does not already exist.

[140] National Bomb Squad Commanders Advisory Board, *National Strategic Plan*, 5.

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III. TRUST

At Columbine High School, collaboration did not work at the moment of crisis because a relationship based on trust did not already exist. As Curnin et al. suggest, "Without trust, teams focus on task demands, not teamwork, reducing their effectiveness to meet the emerging needs during a disaster."[141] If trust relates to time, as suggested by Huemer, then the limited time SWAT and PSBS spend together will hinder the development of trust and inhibit the collaboration needed during a critical joint hazard event.[142] If the relationship is poor or non-existing, at the moment of crisis, each group must accept its vulnerabilities and depend on the other group, often with incomplete information about the different discipline's capabilities and intentions.[143] Skepticism and wariness, asserts Lewicki, can then prevail, promoting distrust and limiting collaborative potential.[144] The comparison of SWAT and PSBS in Chapter I showed that there is often insufficient time for trust to develop between the two disciplines—all the more so if they are unfamiliar with each other in the first place.

The lack of a relationship based on trust between SWAT and PSBS—caused by independent training, the infrequency of day-to-day missions, and unit organization—can result in what Warren Street calls the "norms of non-involvement," a failure or refusal to become involved. Therefore, if one is accustomed to not being involved, that inertia will reduce participation and commitment to developing a relationship and building trust.[145] If norms of non-involvement are at play, then issues can arise when trust is needed most, thus deepening the divide between the two units, and limiting the potential to discover and correct weaknesses, as Klinger and Rojek explain.[146]

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[141] Curnin et al., "Role Clarity, Swift Trust," 30.

[142] Huemer, "Creating Cooperative Advantage."

[143] Courtois and Tazdaït, "Learning to Trust Strangers," 367, 377.

[144] Lewicki, McAllister, and Bies, "Trust and Distrust," 445.

[145] Warren R. Street, "Brainstorming by Individuals, Coaching and Interacting Groups," *Journal of Applied Psychology* 59, no. 4 (1974): 433–36, https://doi.org/10.1037/h0037273.

[146] Klinger and Rojek, *Multi-Method Study*, 16.

Conversely, Dirks and Ferrin suggest the discovery of those weaknesses can help develop the very trust that is needed. Making those discoveries requires time and commitment, however.[147] Stephen Draper, too, underscores that for tactical operators and bomb technicians, working together "requires an exceptional amount of trust in the best of circumstances."[148] Dirks and Ferrin further argue that trust can be measured through tangible and appreciable means by focusing on specific characteristics that lead to increased levels of performance, competency, and capability. Mishra explains that relying on one's competence does affect trust.[149] Moreover, trust allows units to take risks through decisions, and in situations of ambiguity and uncertainty, trust supports the development of interdependence. A lack of trust, however, reduces the range of potential actionable solutions. Therefore, the reliance on familiarity alone prevents the investment needed for trust to work.[150]

This chapter examines the types of trust most often seen in crisis response. At Columbine, one type of trust was used between SWAT and PSBS. At Pulse nightclub, another type of trust was seen. Both types of trust had limitations that caused collaboration problems. A component of identification-based trust—yet another type—has the potential to enable fuller collaboration between SWAT and PSBS. Furthermore, this chapter unpacks the impediments to trust and promoters of trust, concluding with an examination of the specific role trust plays in crisis response.

A. TYPES OF TRUST IN CRISIS RESPONSE

Levels of organizational trust already exist in crisis response, with varying degrees of success. Researchers generally agree that there are three types of trust.[151] Although

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[147] Dirks and Ferrin, "The Role of Trust in Organizational Settings," 450.

[148] Draper, "EOD, Up!," 67.

[149] Aneil Mishra, "Organizational Responses to Crisis: The Centrality of Trust," in *Trust in Organizations: Frontiers of Theory and Research*, ed. Roderick K. Kramer and Tom R. Tyler (Thousand Oaks, CA: SAGE Publications, 1996), 280.

[150] Niklas Luhmann, "Familiarity, Confidence, Trust: Problems and Alternatives," in *Trust: Making and Breaking Cooperative Relationships*, ed. Diego Gambetta (Cambridge, MA: Basil Blackwell, 1988), 104, https://www.nuffield.ox.ac.uk/users/gambetta/Trust_making%20and%20breaking%20cooperative%20relations.pdf.

[151] Lewicki and Bunker, "Developing and Maintaining Trust," 119–21.

carrying different names, the three types fall into categories of calculus-based, knowledge-based, and identification-based trust. Each type of trust has a role in crisis response, and each has certain limitations. This section examines each type of trust for its applicability in collaboration between SWAT and PSBS.

1. Calculus-Based Trust

Columbine can be viewed as an exercise in and failure of calculus-based trust. The limitations of calculus-based trust were seen in the relationship and coordination of SWAT and PSBS at Columbine High School on April 20, 1999. This form of trust depends on the reputation of an individual or group alone. Calculus-based trust is also known as swift trust, an idea coined by Debra Weick, and Kramer, who compare it to a "one-night stand"—groups working together to accomplish a complex task in a finite time, without formal coordination and control.[152] Roxanne Zolin further explains that these tasks are critical and often occur without notice.[153] Within these parameters, Michael Fahy offers, "Swift trust appears to have applicability to emergency responders facing interagency incidents requiring collaboration."[154] The foundation of calculus-based (and swift) trust between individuals and groups is, thus, only assumed because no personal relationship exists. Furthermore, there is no time to build the confidence typically needed to develop and maintain trust.[155] Swift trust is therefore assumed by way of professional reputation alone, with Meyerson, Weick, and Kramer suggesting that the situation demands the parties involved act as if trust is present without it actually developing.[156]

Three elements influence swift trust, according to Hyllengren et al., including individual, relationship, and organizational factors. Individual factors suggest that a person with a high level of emotional stability is more apt to trust. That person decides whether

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[152] Debra Meyerson, Karl Weick, and Roderick Kramer, "Swift Trust and Temporary Groups," in *Trust in Organizations: Frontiers of Theory and Research*, ed. Roderick K. Kramer and Tom R. Tyler (Thousand Oaks, CA: SAGE Publications, 1996), 167.

[153] Zolin, "Swift Trust," 4.

[154] Michael J. Fahy, "Understanding Swift Trust to Improve Interagency Collaboration in New York City" (master's thesis, Naval Postgraduate School, 2012), 18, http://hdl.handle.net/10945/17362.

[155] Meyerson, Weick, and Kramer, "Swift Trust and Temporary Groups."

[156] Meyerson, Weick, and Kramer.

the task is acceptable and whether he wants to be a good team player. Relationship factors suggest that if a person has a good reputation, the contribution he provides will be more meaningful, primarily driven by an ability to be flexible and innovate. Organizational factors that contribute to swift trust deal with role clarity or role ambiguity, availability of resources to increase operational flexibility, and a system of decentralized decision making.[157] Thus, these three factors work together to help fill the gap of a relationship and approach some level of collaborative effort.

A deficiency of swift trust and, in turn, calculus-based trust is its inability to be persuaded. Swift trust is temporary in nature and breadth and often "tenuous and unstable. . . . It can be lost at the slightest appearance of incompetence or naiveté."[158] The clarity of role responsibility is also limited. Meyerson, Weick, and Kramer offer that parties involved in a complex task have to depend on common knowledge and known skills to collaborate, "yet individuals have little time to sort out who knows precisely what" in calculus-based trust.[159] Without that clarity, role ambiguity can challenge the assumption of trust. For example, a lack of knowledge concerning a supporting unit's training, capabilities, and operational tempo might cause such role ambiguity.[160]

At least two of the three elements of swift trust, as spelled out by Hyllengren et al., were lacking between SWAT and PSBS at Columbine. There was no relationship to build on to determine whether first responder units, such as SWAT and PSBS, had a good reputation or not, so competency and confidence were lacking. Moreover, it was unclear to tactical units whether the bomb technicians present could be flexible and innovate. The absent relationship between SWAT and PSBS at Columbine also inhibited the organizational qualities needed for calculus-based trust. Role clarity suffered because there was no knowledge transfer, demonstrated by the delay in incorporating bomb technicians in the SWAT units that first entered the school, even though IEDs were present inside.

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[157] Hyllengren et al., "Trust at First Sight," 356–57.

[158] Draper, "EOD, Up!," 66.

[159] Meyerson, Weick, and Kramer, "Swift Trust and Temporary Groups."

[160] Curnin et al., "Role Clarity, Swift Trust," 31–33.

2. Knowledge-Based Trust

At the Columbine High School shooting, the Incident Command System (ICS) coordinated the response, but the relationship and organizational elements needed for calculus-based (swift) trust did not exist between SWAT and PSBS. In contrast, 20 years later, at the Pulse nightclub massacre, ICS was again used, but knowledge-based trust instead of calculus-based trust was at play. As with Columbine, Pulse can be viewed as an exercise in and failure of knowledge-based trust.

What happened at Columbine was not lost on SWAT and PSBS professionals nationwide, as some progress has been made. Indeed, a reliance on calculus-based trust gave way to knowledge-based trust. Instead of assuming the competency of an individual or group and trusting it solely on that assumption, knowledge-based trust relies on the specific information one has about another.[161] Known competency builds on perceived capabilities. Predictive behavior then forms the foundation of knowledge-based trust.

As it became more widely used, the ICS model in the United States helped knowledge-based trust develop among first responders. Dan Kaszeta, an expert in the Hazmat field, suggests ICS is a useful tool to promote unit integration and interagency cooperation for joint crisis response.[162] ICS is a standardized model that allows personnel from different units and agencies to organize quickly to meet the demands of a critical incident. The model is widely applicable and can be used for planned events, natural disasters, and acts of terrorism. ICS encourages communication flow throughout the organization, and it is one way to integrate different units and disciplines, as common mission goals are then easier to measure and obtain.[163] Thus, ICS has created a structure from which knowledge-based trust can develop.

Discovering response weaknesses while developing solutions during ICS training can facilitate the development of trust between disciplines, much as Dirks and Ferrin as

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[161] Lewicki and Bunker, "Developing and Maintaining Trust," 121.

[162] Dan Kaszeta, *CBRN and Hazmat Incidents at Major Public Events Planning and Response* (Hoboken, NJ: John Wiley & Sons, 2013), xiv.

[163] Kaszeta, 56–69.

well as Klinger and Rojek opine. Fundamentally, though, ICS in the United States is seen only as an organizational structure, with a weak focus on developing relationships. FEMA makes this point when it defines ICS as an organizational structure:

> a standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.[164]

ICS may be a good place to start developing trust, but reliance on ICS once again assumes trust exists between individuals and groups based on organizational structure alone. Simply ability to assign SWAT and PSBS to the same ICS structure, for instance, in a strike team or task force, and expect them to work together, is limited because certain tactical procedures must be pre-established and sanctioned by participating authorities. Such coordination supposes prior thought and planning have taken place to address clarity of roles and develop a common knowledge (predictive behavior) of response options. When planners and responders do not frequently work together and are forced to integrate, problems can arise out of role ambiguity and knowledge gaps.[165]

Janssen et al. offer that under "urgent, dynamic conditions of disaster, [ICS, and knowledge-based trust] almost always fail".[166] Jensen and Waugh, in their study of the U.S. ICS experience, found it was critical for participants using ICS to have "pre-incident working relationships with one another based on trust and frequent contact . . . leading up to a response."[167] Thus, knowledge-based trust—on which ICS relies—has its limits in critical incident response because a strong foundation of trust still does not exist.

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[164] Federal Emergency Management Agency, *ICS-300: Intermediate ICS for Expanding Incidents Student Manual* (Washington, DC: FEMA, 2012), 1.11.

[165] Kaszeta, *CBRN and Hazmat Incidents*, 96–98.

[166] Marijn Janssen et al., "Advances in Multi-Agency Disaster Management: Key Elements in Disaster Research," *Information Systems Frontiers* 12, no. 1 (March 2010): 2, http://dx.doi.org/10.1007/s10796-009-9176-x.

[167] Jessica Jensen and William L. Waugh, "The United States' Experience with the Incident Command System: What We Think We Know and What We Need to Know More About," *Journal of Contingencies & Crisis Management* 22, no. 1 (March 2014): 10–11, https://doi.org/10.1111/1468-5973.12034.

By all accounts, SWAT and PSBS coordinated more effectively in the Pulse nightclub response because they had knowledge (predictive behavior) of each other's capabilities. Each discipline, even from multi-agencies, was familiar with each other by skill and reputation. Organizational elements and an awareness of capabilities existed, but the reliance on knowledge-based trust was still not enough as certain obstacles caused problems. For example, command and control suffered. As described in the after-action report from the Pulse nightclub incident, "Specialized law enforcement units should regularly train together to ensure familiarity with each unit's policies, procedures, and tactics."[168] An additional observation notes that following the explosive breach, SWAT and PSBS elements became disorganized and uncoordinated. The report recommended that SWAT and PSBS focus joint training on familiarizing each team with "one another's command and control, and tactical protocols" to reach an appropriate level of communication, planning, and execution.[169]

Perceived capabilities and predictive behaviors, the basis of knowledge-based trust, fell short in the uncertainty of the Pulse attack. Infrequent training opportunities and limited personal encounters beforehand suggest that knowledge-based trust is not enough for a crisis response of the magnitude of Columbine or Pulse. A firm relationship and, thus, robust trust did not exist between SWAT and PSBS, even when both disciplines were from the same agency.

3. Identification-Based Trust

For SWAT and PSBS to operate effectively with each other in a crisis response—for example, an active shooter or domestic terrorism incident—a relationship based on trust must be developed before a crisis demands it. Moynihan illustrates that relationships based on mutual trust helped facilitate coordination in the aftermath of both the Oklahoma City Bombing and the 9/11 attack on the Pentagon.[170] In both cases, key players knew each

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[168] Straub et al., *Rescue, Response, and Resilience*, 10, 30, 74.

[169] Straub et al., 126.

[170] Donald Moynihan, "The Network Governance of Crisis Response: Case Studies of Incident Command Systems," *Journal of Public Administration Research and Theory* 19, no. 4 (2009): 904, https://doi.org/10.1093/jopart/mun033.

other personally, having established working relationships before the incident. Identification-based trust helps to develop that relationship, as parties begin to appreciate and understand each other's intentions.[171] Thus, mutual understanding and trust form the basis of identification-based trust. Groups begin to develop a salient common identification that increases the opportunities for cooperation, and a collective identity creates joint goals and shared values. Indeed, identification-based trust resembles Covey's third wave of trust, with the underlying tenet being the creation of "structures, systems, and symbols," which help align organizational principles.[172] Information and role clarity are openly shared, mistakes are tolerated and seen as a way of learning, and the culture is one of innovation. In addition, members are candid with each other, and there is a high level of accountability, both personally and organizationally. In identification-based trust, Covey's four qualities of trust start to connect—integrity, intent, capabilities, and results align, affecting a group's shared identity and improving collaboration.[173]

Again, identification-based trust's component of shared values and identity is synonymous with having interpersonal relationships between parties. Moynihan, in his study on ICS and network governance, found that interpersonal trust was an indispensable complement to ICS, which has often been described as "relationship driven."[174] Moynihan suggests that in the chaos of a critical incident, when an organization is strained, relationships based on mutual trust become "the primary means by which things [get] done . . . [and are] frequently the primary force behind successful operation."[175]

Much like calculus- and knowledge-based trust, identification-based trust has limitations in emergency response. Rousseau et al. suggest the alignment of information, accountability, and common values "derives from repeated encounters over time."[176] Webb complements this argument, explaining that groups and individuals may be defined as

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[171] Lewicki and Bunker, "Developing and Maintaining Trust," 122–23.

[172] Covey, *The Speed of Trust*, 244–46.

[173] Covey, 252, 265.

[174] Moynihan, "Network Governance of Crisis Response," 908.

[175] Moynihan, 908.

[176] Rousseau et al., "Not So Different After All," 399.

trustworthy simply because "we have had good personal experience with them in the past."[177] Lewicki, Tomlinson, and Gillespie add that from repeated encounters, "trust develops from within the relationship itself, rather than from external validations."[178] Huemer states that a combination of common identification, trust (respect), and a time focus (patience) enable the cooperative advantage of identification-based trust.[179] Thus, identification-based trust requires repeated encounters, like those suggested in the Pulse massacre's after-action review, for it to become viable to critical incident response.

Another caution about identification-based trust is that any perceived violation can negatively transform to enmity. Because a group's identity is involved at this level of trust, any violation has the strength to disrupt common interests and values. Lewicki and Bunker suggest a violation at this level can be asymmetrical, as "it only requires one person to experience it as a moral violation."[180] Although identification-based trust can be more robust than calculus- and knowledge-based trust in crisis response, it too can be fragile on a personal level.

4. The Fluidity of Trust and Working Relationships

Because identification-based trust demands alignment of culture and values to promote collaboration, numerous and sometimes conflicting motives can shape the development of a trusting environment. Said another way, reasons for both trust and distrust may coexist.[181] Mayer, Davis, and Schoorman provide a framework for understanding the fluid relationship between trust and distrust. In their work, trust is defined as the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action."[182] Distrust is then

[177] Webb, "Trust and Crisis," 292.

[178] Lewicki, Tomlinson, and Gillespie, "Models of Interpersonal Trust Development," 1013.

[179] Huemer, "Creating Cooperative Advantage," 569.

[180] Lewicki and Bunker, "Developing and Maintaining Trust," 124.

[181] Lewicki, McAllister, and Bies, "Trust and Distrust," 438.

[182] Mayer, Davis, and Schoorman, "Integrative Model of Organizational Trust," 712.

defined as expecting others not to act in the best interests of another party, believing that "capable and responsible behavior will not be forthcoming."[183]

Instead of adhering to the traditional view of trust—that trust is either present or absent, in opposition—Lewicki, McAllister, and Bies suggest trust and distrust are linked.[184] Trust, much like any relationship, is multifaceted, and elements of trust grow and change through a person's life experiences with others. Thus, any balance of trust, by nature, is likely temporary. Trust, opines Lewicki, McAllister, and Bies, "matures with interaction frequency, duration, and the diversity of challenges that relationship partners encounter and face together."[185] A change in any of those values affects trust's strength, but as the values combine, trust is enhanced. In turn, the consistency of trust overall can vary. In this sense, both trust and distrust serve to reduce a situation's complexity. An individual or group is either asked to help because trust already exists or not asked because trust does not exist; both involve expectations of behavior. Figure 5 depicts the spectrum of trust and distrust.

[183] Lewicki, McAllister, and Bies, "Trust and Distrust," 439.

[184] Lewicki, McAllister, and Bies, 442–43.

[185] Lewicki, McAllister, and Bies, 443.

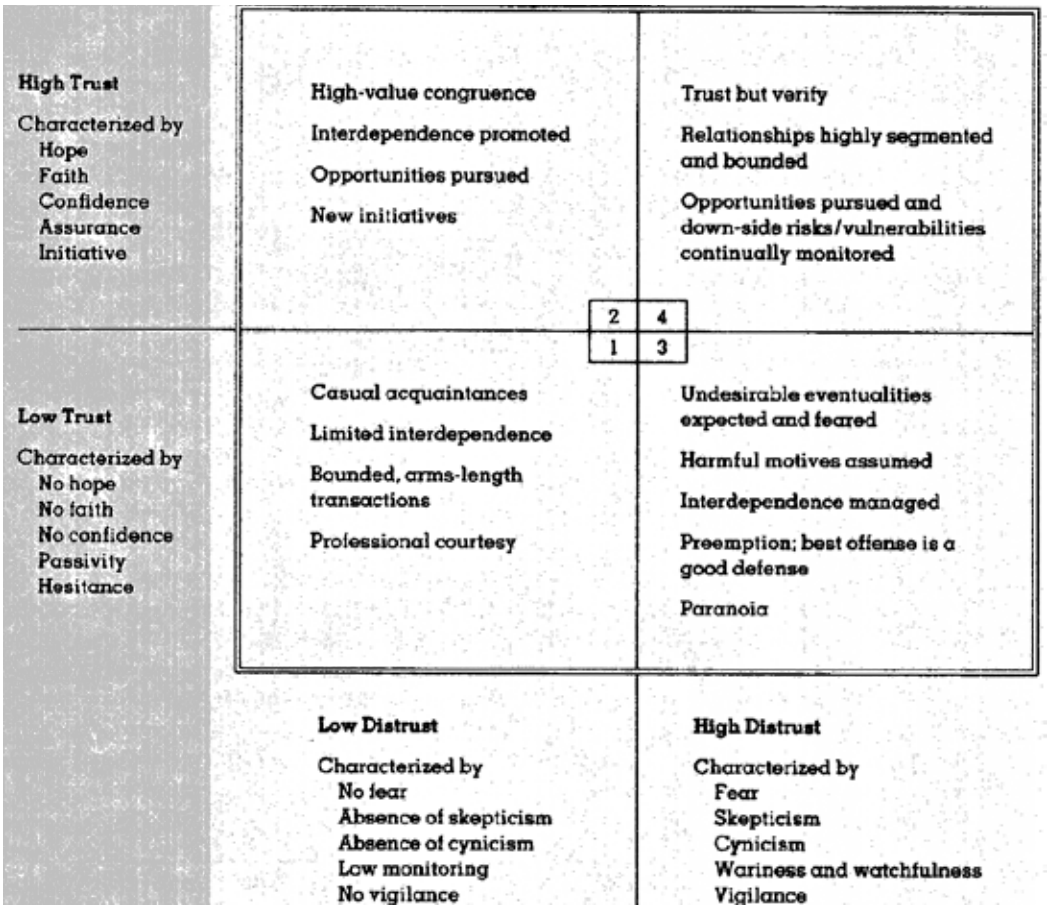

Figure 5. Integrating Trust and Distrust: Alternative Social Realities[186]

The distinction is evident, considering the differences between low trust and high distrust. Similarly, the contrast between high trust and low distrust is telling. Lewicki, McAllister, and Bies also identify several waypoints along the continuum of trust, from casual acquaintances and mere professional courtesy to highly segmented relationships.[187] Based on the conditions and situation, trust can move quickly across the trust and distrust spectrum. The fluidity of trust can either reduce the complexity and uncertainty of a critical event or exacerbate it.

[186] Source: Lewicki, McAllister, and Bies, "Trust and Distrust," 445.

[187] Lewicki, McAllister, and Bies, "Trust and Distrust."

Klimoski and Karol explain that trust can be a "hallmark of a healthy organization."[188] When spontaneity is needed, such as in critical incident response, higher levels of trust foster creative problem-solving and effectiveness. On the other hand, low levels of trust depress creative problem-solving, collaboration, and group performance. Subsequently, one thing is clear. If cooperation is needed, as Gambetta suggests, it requires higher levels not lower levels of trust. In this case, identification-based trust offers clear advantages over calculus- or knowledge-based trust alone.

Calculus-based trust relies on assumptions, and knowledge-based trust relies on predictions. Covey adds, "Different than the traditional approaches of *coordination* and *cooperation*, real *collaboration* creates the key opportunity model of today's world" (original emphasis).[189] Coordination can suffice for low-trust relationships, as with calculus- and knowledge-based trust. The closer one approaches collaboration, the greater the need for identification-based trust to achieve the benefits of a stronger partnership and better execution.[190] Figure 5 underscores that point. The quadrants of high trust and low distrust give rise to greater interdependence, confidence, and innovation among people working together—a true working relationship. Conversely, low trust means having no confidence, and high leads to segmented and bounded relationships—the opposite qualities needed for identification-based trust and critical incident response to work.

B. BARRIERS TO TRUST

Trust might be elusive, as some say, but its impediments are decidedly less so. Competition, role ambiguity, personalities, group identity, and culture can all play a negative role in the development of trust and collaborative response to critical incidents.

1. Competition

Although SWAT an PSBS are not natural competitors, competition is manifest in a multitude of forms during a critical incident response, enough so to inhibit trust. At the

[188] Klimoski and Karol, "The Impact of Trust," 630.

[189] Covey, *The Speed of Trust*, 265.

[190] Covey, 265–66.

leadership level, competition can become a factor when one team or discipline prioritizes its needs or goals at the expense of others. Power calls this type of competition "inter-team competition."[191] Competition can also occur at the "intra-team level when team members [pursue] personal goals at the expense of collective goals."[192]

Although some forms of competition can be helpful, other forms impede the development of trust. For example, if it emboldens team members to perform better, competition can be useful. On the other hand, competition can reflect one person's or team's desire to outperform the other. Thus, Power shows competition can be the "antithesis to cooperation" if it is not honed.[193] For example, competition can entice dominant egos to surface. Power and Alison have found that competition increases when differing agencies or disciplines bring their own expertise to the fight.[194] They note how role ambiguity primes individuals or groups for harmful competition, related to the uncertainty of goals. Such uncertainty may lead to conflict and distrust, especially when working under extreme pressure.[195] Thus, a better understanding of roles can limit unhealthy competition and enable trust.

Healthy competition must be developed, however.[196] Critical emergencies are time-sensitive, and incident commanders depend on cooperation. Therefore, leaders understand that time pressures in a crisis cannot allow conflict and disagreements. At the leadership level, competition can become a factor when one team or discipline prioritizes its needs or goals at the expense of others—the segmented, bounded response Lewicki, McAllister, and Bies spoke of in their discussion of trust and distrust.[197] Competition works best when it empowers a team to compete in pursuit of interdependent goals that are based on role

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[191] Power, "Extreme Teams," 482.

[192] Power.

[193] Power.

[194] Nicola Power and Laurence Alison, "Redundant Deliberation about Negative Consequences: Decision Inertia in Emergency Responders," *Psychology, Public Policy, and Law* 23, no. 2 (May 2017): 250, http://dx.doi.org/10.1037/law0000114.

[195] Power and Alison, "Redundant Deliberation about Negative Consequences."

[196] Power, "Extreme Teams," 482.

[197] Lewicki, McAllister, and Bies, "Trust and Distrust," 445.

clarity and effective knowledge transfer. Similarly, Gambetta opines that the role of competition in trust "may depend upon cooperation to a much larger extent than is generally acknowledged."[198] Mutually beneficial competition, especially in Western society, is one of the most basic forms of human cooperation.

2. Personality

Another challenge to developing trust is managing the personality differences that trigger conflict, stress, and distrust. Research suggests that SWAT operators and bomb technicians have similar yet distinct personalities. SWAT operators, according to Young, Hennington, and Eggleston, have significant personality differences from other police officers.[199] They have a high level of conscientiousness; they are organized, deliberate, reliable, and self-determined. However, they rate low in being imaginative, creative, and open to change.[200] SWAT operators have a strong desire for teamwork and tend to be extroverted, exhibiting a field-dependent nature that relies on structure and direction.[201] SWAT's nature, as explained by Young, Hennington, and Eggleston, should enable an opportunity for developing trust and collaboration with others.[202]

On the other hand, bomb technicians, according to Cooper, have two distinct characteristics: flexibility and a tendency toward the unconventional.[203] Glicksohn and Bozna agree with Cooper's assessment, stating that bomb technicians also sustain "a detached mode of operation and social isolation."[204] They have little need for physical self-

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[198] Gambetta, "Can We Trust Trust?," 215.

[199] Andrew T. Young, Chris Hennington, and Dane Eggleston, "US SWAT Operator Experience, Personality, Cognitive-Emotion Regulation and Decision-Making Style," *Policing* 41, no. 2 (2018): 257, https://doi.org/10.1108/PIJPSM-10-2016-0156.

[200] Young, Hennington, and Eggleston, 252.

[201] Joseph Glicksohn and Menahem Bozna, "Developing a Personality Profile of the Bomb-Disposal Expert: The Role of Sensation Seeking and Field Dependence and Independence," *Personality and Individual Differences* 28, no. 1 (January 2000): 86, https://doi.org/10.1016/S0191-8869(99)00083-5.

[202] Young, Hennington, and Eggleston, "US SWAT Operator Experience," 259.

[203] Cary L. Cooper, "Personality Characteristics of Successful Bomb Disposal Experts," *Journal of Occupational Medicine* 24, no. 9 (September 1982): 655, https://doi.org/10.1097/00043764-198209000-00009.

[204] Glicksohn and Bozna, "Personality Profile of the Bomb-Disposal Expert," 86.

confidence or teamwork skills. They tend to be more introverted and exhibit a field-independent nature, relying more on autonomy than do SWAT members.[205] Research by Bundy and Sims correlates with Glicksohn and Bozna's research, suggesting bomb technicians may be more comfortable with being responsible for incidents "where analysis rather than abstract thinking is required."[206] Unlike SWAT, the introverted nature of bomb technicians, as explained by Glicksohn and Bozna, can hinder the development of trust and collaboration.[207]

According to McShane, studies have shown a "strong association between personality and a variety of workplace behaviors and outcomes."[208] Every person engaged in the cooperative effort brings a different personality style that needs consideration.[209] The same challenges exacerbated by personality differences may instead be used for everyone's benefit if they are acknowledged and, if need be, confronted.[210] Understanding the different personalities involved makes it easier to appreciate and hone people's collective understanding of the task at hand.

Finally, Schlenker, Helm, and Tedeschi found that in a conflict involving communication, personality had an additive effect on the value of reliance and credibility.[211] Such attributes as personality can influence one's ability to perceive another's ability to be cooperative, trusting, or suspicious.[212] The comparison of personality profiles shows that SWAT personnel tend to be more extroverted yet less open to change and in need of more structure. Bomb technicians, on the other hand, tend to be introverted yet more flexible and less interested in teamwork. The distinctions between the

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[205] Glicksohn and Bozna, 90.

[206] Edwin Bundy and Roderick Sims, "Commonalities in an Uncommon Profession: Bomb Disposal," in *Proceedings of the 2007 Australasian Society for Computers in Learning in Tertiary Education* (Queensland: ASCILITE, 2007), 11, https://www.ascilite.org/conferences/singapore07/procs/bundy.pdf.

[207] Glicksohn and Bozna, "Personality Profile of the Bomb-Disposal Expert," 86.

[208] McShane and Von Glinow, *Organizational Behavior*, 29–30.

[209] Steve Schumacher, "Personality Differences," *Rock Products*, April 2009, 28, ProQuest.

[210] Covey, *The Speed of Trust*, 191–97.

[211] Schlenker, Helm, and Tedeschi, "Effects of Personality and Situational Variables," 419, 425–26.

[212] Schlenker, Helm, and Tedeschi, 426.

two personalities can cause strife and a reluctance to trust one another, but the disciplines do share one characteristic. Each personality profile helps SWAT operators and bomb technicians survive and perform well under stress in their separate environments.[213]

3. Social Identity and Group Culture

Such specialized teams as SWAT and PSBS strongly identify with members of their own group—similar to a family, sports team, or any other working relationship. McShane explains that even though one's heredity influences personality, an individual's socialization and interaction with others also shape it.[214] Henri Tajfel explains that a person's identity can be strongly influenced by categorization, that is, being a member of a distinct group. He argues, "Our salient self-images may be based solely or primarily on our group memberships."[215] Social identity, according to Brannan, is how a person perceives and interacts in the world and how one sees oneself in relation to others. A person's identity encourages the development of a narrative that begins to assume values and emotions about oneself and others.[216] Social interaction follows, and "when individuals come together and engage with each other . . . the group becomes [another] source of their socially constructed identity."[217] Thus, the group identification and narratives that emerge need to be maintained.

Berger notes of group dynamics that group identity requires an in-group narrative to explain the beliefs, traits, and practices of the group. Thus, the group's story becomes "what the identity means, where it comes from, and where it is going."[218] The emergence of these qualities in a group setting makes the group more distinct from others.[219] An out-group has its own beliefs, traits, and practices, and it produces its own narrative as well.

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[213] Young, Hennington, and Eggleston, "US SWAT Operator Experience," 426.

[214] McShane and Von Glinow, *Organizational Behavior*, 29–30.

[215] Henri Tajfel, ed., *Social Identity and Intergroup Relations* (Cambridge: Cambridge University Press, 2010), 18–21.

[216] David W. Brannan, Anders Strindberg, and Kristin M. Darken, *A Practitioner's Way Forward: Terrorism Analysis* (Salinas, CA: Agile Press, 2014), 52–53.

[217] Brannan, Strindberg, and Darken, 51.

[218] J. M. Berger, *Extremism* (Cambridge, MA: MIT Press, 2018), 54.

[219] Berger, 56.

These narratives do not always align. As Berger explains, the information an in-group has concerning an out-group "usually includes a mix of truth, interpretation, and fiction."[220] Even if trivial, categorization of people into in-groups and out-groups results in favoritism among groups and impedes trust.[221]

Culture plays a decisive role in how collaboration works between different individuals or groups. Webber explains that cultural differences counter the development of trust, and low levels of trust are associated with heterogeneous groups.[222] Even though merging the abilities and skills of specialized groups might increase performance, Webber says it is the cultural differences "stemming from the functional diversity . . . that result in lower trust within a team."[223] Sitkin and Roth agree, offering that distrust develops "when an individual or group is perceived as not sharing key cultural values."[224] Specialized teams that have a high level of cohesion and influential culture make it challenging to develop trust in collaborative efforts. Furthermore, Power adds that cultural identification can affect one's willingness to cooperate with others as "ingroup identification has been found to predict collective efficacy and trust in teams."[225] Thus, the development of a cultural identity and group narrative can exacerbate an unwillingness to trust.

Culture is the "glue that binds an organization together," states Stinchcomb and Ordaz, further suggesting that more consideration needs to be afforded cultures than just structural alignment in a work setting.[226] An underlying culture helps develop a sense of shared identity.[227] It provides guidelines for behavior, helps provide stability, and

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[220] Berger, 57.

[221] Nyla R. Branscombe et al., "In-Group or Out-Group Extremity: Importance of the Threatened Social Identity," *Personality and Social Psychology Bulletin* 19, no. 4 (1993): 381, https://doi.org/10.1177/0146167293194003.

[222] Webber, "Leadership and Trust," 204.

[223] Webber.

[224] Sitkin and Roth, "Explaining the Limited Effectiveness," 371.

[225] Power, "Extreme Teams," 485.

[226] Jeanne Stinchcomb and Francisco Ordaz, "The Integration of Two 'Brotherhoods' into One Organizational Culture: A Psycho-Social Perspective on Merging Police and Fire Services," *Public Organization Review* 7, no. 2 (2007): 144, 149, https://doi.org/10.1007/s11115-006-0026-8.

[227] Stinchcomb and Ordaz, 151.

establishes operational clarity. A shared sense of culture provides "an anchor . . . that binds individuals together in collective unity."[228] Conversely, when a union with another culture threatens a strong culture, that anchor can lose its grip, resulting in stress and uncertainty. In the SWAT and PSBS discussion, this dynamic translates into social identity and group narratives that often hinder cooperation between both disciplines, decreasing levels of trust, as suggested by Webber.

4. Time Constraints

The analysis of SWAT and PSBS shows the limited time available for both disciplines to work together. If the two disciplines spend limited time working together, then trust issues related to role ambiguity and confidence can surface from a siloed mindset. Different cultural issues, personalities, and unhealthy competition can then flourish, limiting the ability to promote cooperation. As Lars Huemer suggests, "trust and time" are key in promoting "cooperative advantage" because time "depends on cultural boundaries that influence perspectives on the past, present, and future."[229] In Huemer's model, a strong union of identification, trust, and time grows in any emerging cooperative relationship, with an eye toward expectations.[230] Huemer uses the term "patience" to describe time's value, arguing that learning about another, not only about their skills and abilities, is time-consuming.[231] Huemer's theory correlates with identification-based trust's focus on aligning collective identity while creating joint goals and shared values.

Partha Dasgupta agrees with Huemer, suggesting that "for trust to be developed between individuals they must have repeated encounters, and they must have some memory of previous experiences."[232] Dasgupta adds that trust is invariably linked to reputation, and that link takes time to acquire. Both Lewicki, Tomlinson, and Gillespie and Rousseau et al. offer more on time's value in trust, explaining that the more encounters occur, the

[228] Stinchcomb and Ordaz, 157.

[229] Huemer, "Creating Cooperative Advantage," 564, 566.

[230] Huemer, 569.

[231] Huemer.

[232] Dasgupta, "Trust as a Commodity," 49.

greater the likelihood trust will develop from within the relationship instead of from external factors such as familiarity.[233]

In short, positive past experiences allow one to become comfortable with another in times of need. The opposite, unfortunately, is also true. Time is a finite resource, much like a commodity, according to Dasgupta, and is the gateway to better collaboration.[234] If SWAT and PSBS must improve collaboration, more time spent together beforehand can help develop the trust needed during a critical incident.

C. PROMOTERS OF TRUST

Covey asserts, "Trust means confidence. The opposite of trust—distrust—is suspicion."[235] Covey explains that a few factors drive suspicion, including capabilities and track record.[236] Covey's claim complements Dirks and Ferrin point that trust is tangible and can be quantified and measured.[237] Therefore, trust, according to Wilson et al., can easily break down "when team members lack a shared understanding of the task and surrounding environment."[238] Furthermore, Wilson et al. suggest that Dirks and Ferrin's concept of shared understanding means shared cognitions—the collective cognitive activity from individual group members—affect the overall group's goals and activities.

Wilson et al. studied commonly shared cognitive breakdowns through the lens of teamwork. These authors parse shared cognition into three categories: communication, coordination, and cooperation.[239] These categories contain the visible, tangible, and measurable markers of trust suggested by Gambetta, Covey, and Dirks and Ferrin.[240]

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[233] Lewicki, Tomlinson, and Gillespie, "Models of Interpersonal Trust Development," 1013; Rousseau et al., "Not So Different After All," 399.

[234] Dasgupta, "Trust as a Commodity," 49.

[235] Covey, *The Speed of Trust*, 5.

[236] Covey, 5–6.

[237] Dirks and Ferrin, "The Role of Trust in Organizational Settings," 450.

[238] Wilson et al., "Errors in the Heat of Battle," 247.

[239] Wilson et al., 246.

[240] Wilson et al.

1. Communication

SWAT and PSBS commonly undertake high-risk scenarios that require a high level of communication between unit members. One cannot overstate the role of communication in joint hazard response to emergencies because it represents one of the biggest challenges to a collaborative response.[241] Such factors as information exchange, phraseology, and closed-loop communication each play a part in the attribute of communication, according to Wilson et al. If not used appropriately, information exchange, phraseology, and closed-loop communication factors can lead to an overall communication failure that decreases the shared cognition a team needs to collaborate effectively.[242] Information exchange pertains to what information is shared and is active when free-flowing and unencumbered. Phraseology refers to how the information is interpreted, and closed-loop communication affects the interpretation of the messages shared. In other words, these factors determine whether both the sender and receiver clearly understand the message.[243]

Effective communication can shape trust and distrust because any establishment of trust implies the ability to communicate freely and openly. Communication works best when a wide conduit, or bandwidth, exists between parties. Trust—either broad or narrow—is this conduit of communication.[244] The relationship between communication and trust is a direct one: when trust is high, the bandwidth of communication is broad, but when trust is low or more limited, bandwidth can be exceedingly narrow. For example, when trust is superficial or non-existent, participants are less likely to provide input and offer viable alternatives, thus limiting the collaborative effort.

Trust allows one the ability to influence a situation. Effective communication reduces the barriers to trust and improves the shared cognition of those involved. Smart and Barnum explain, "Failure to communicate causes conflict, disrupts relationships, and

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[241] Kim Smart and Carol Barnum, "Communication in Cross-Functional Teams: An Introduction to This Special Issue," *Technical Communication* 47, no. 1 (2000): 19–21.

[242] Wilson et al., "Errors in the Heat of Battle," 247.

[243] Wilson et al., 249.

[244] Rousseau et al., "Not So Different After All," 398–400.

diminishes output"—the opposite promoting trust.[245] It comes as no surprise, then, that if prior communications are truthful, future communications will likely be perceived as truthful, according to Schlenker, Helm, and Tedeschi.[246] Thus, a series of positive encounters and a relationship beforehand can be impactful during a crisis. The alternative is also true.

2. Coordination

The shared cognition of coordination highlighted by Wilson et al. includes role clarity and knowledge transfer.[247] If SWAT and PSBS must develop trust to work more effectively, each discipline must understand the other's roles and tasks. Trust can be cultivated through better role clarity.[248] As Curnin explains, role clarity can affect trust because first responders often react to each other vis-à-vis their roles rather than personalities, initially.[249] Team members must understand how to perform a specific task and who is responsible for that task.[250]

Wilson et al. suggest that trust develops more quickly with clarification of a specialist's knowledge and his or her role in a collaborative team. Consequently, role clarity is vital in terms of integrating groups that have never worked together.[251] The focus, suggests Power, is to improve team work competencies by developing "a shared and accurate understanding of roles and responsibilities across the team network."[252] Role clarity improves the leverage of cooperative advantage and coordination during an emergency response.[253] A firmer understanding of roles will also reduce uncertainty and

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[245] Smart and Barnum, "Communication in Cross-Functional Teams," 20.

[246] Schlenker, Helm, and Tedeschi, "Effects of Personality and Situational Variables," 420.

[247] Wilson et al., "Errors in the Heat of Battle," 249–51.

[248] Curnin et al., "Role Clarity, Swift Trust," 33.

[249] Curnin et al., 31.

[250] Curnin et al.

[251] Curnin et al., "A Theoretical Framework for Negotiating," 304.

[252] Power, "Extreme Teams," 484.

[253] Huemer, "Creating Cooperative Advantage," 565.

bolster confidence in the abilities of others.[254] To ensure that a job can be done, the groups involved must have people who understand what the other group has to offer and how it can affect the situation. Conversely, role ambiguity is caused by a lack of knowledge concerning a supporting unit's training, capabilities, and operational tempo.[255] Role ambiguity frustrates the development of trust.

Knowledge transfer—another essential facet in the shared cognition of coordination—plays a significant role in a unit's success.[256] Levin and Cross opine that groups, teams, and organizations that encourage the sharing of knowledge and collective experience are likely "more innovative, efficient, and effective."[257] In contrast, gaps in "shared knowledge may lead to miscommunication and uncooperative behavior because of a failure to recognize and integrate contingencies of a task."[258]

When individuals or groups trust that the other parties are competent, they accept the information received because they perceive its value and know it will be used appropriately.[259] Townley and Garfield explain, "Knowledge is a collective good."[260] The authors elaborate that knowledge "production, transmission, storage, and retrieval require that we can trust our sources, our collaborators, and the social institutions that mediate these activities."[261] Thus, trust must be implicit in the creation and distribution of knowledge.[262]

Levine and Cross conducted a study focusing on knowledge and its relative strength, or "tie-strength."[263] Tie-strength is a concept that characterizes the interactive

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[254] Power and Alison, "Redundant Deliberation about Negative Consequences," 253.

[255] Curnin et al., "Role Clarity, Swift Trust," 31–33.

[256] Wilson et al., "Errors in the Heat of Battle," 249.

[257] Levin and Cross, "Weak Ties You Can Trust," 1477.

[258] Wilson et al., "Errors in the Heat of Battle," 250.

[259] Wilson et al., 253.

[260] Townley and Garfield, "Public Trust," 99.

[261] Townley and Garfield.

[262] Townley and Garfield.

[263] Levin and Cross, "Weak Ties You Can Trust," 1477–90.

relationship between different groups or parties, ranging from weak to strong ties based on closeness or regularity of interactions.[264] The study supported trust as a moderating link between tie-strength and knowledge.[265] Even when only weak ties existed between groups, trust alone was a substantive element manifesting competence. Furthermore, a reliance on others' competency is vital for tacit knowledge exchange.[266]

Effective knowledge transfer and trust encourage each other because they help align a group's skills and abilities. They also promote role clarity when an individual finds himself outside his traditional role assignment.[267] Groups like SWAT and PSBS can then wholly integrate because, posit Wilson et al., they are better able to "anticipate and predict the needs and actions of team members."[268] Thus, effective knowledge transfer can work well with knowledge- and identification-based trust because it communicates the strengths and weaknesses of the other group.

3. Cooperation

Shared cognition factors, such as a person's attitudes and motivations, can influence a person's ability to trust. Cooperation can be measured by observable behaviors, for example, an individual or group having an orientation toward teamwork, collective efficacy, and team cohesion.[269] Team orientation is more than a person's choice of putting the needs of a team before himself. Instead, team orientation is perceived as how to perform a given task and the task's expected outcome. Task inputs from others become vital as an interdependent relationship builds. Individuals with a high level of team orientation can better coordinate and communicate with increased synergy. Wilson et al. suggest that because first responders, like SWAT and PSBS, are likely to "have different yet vital information . . . [they] may offer a unique perspective on how to approach a situation that

[264] Levin and Cross, 1478.

[265] Levin and Cross, 1486.

[266] Levin and Cross.

[267] Levin and Cross.

[268] Wilson et al., "Errors in the Heat of Battle," 250.

[269] Wilson et al., 249–54.

must be shared and integrated to meet team objectives."[270] The alignment of resources, through role clarity and knowledge transfer, can build the shared cognition needed to foster trust and develop better collaboration.

Collective efficacy is the belief that a group—SWAT or PSBS—has in its collective the ability to handle a task.[271] SWAT and PSBS base their collective efficacy in the trust they have in their fellow team members, thus increasing their shared cognition. The belief of interdependence on one another is recognized to complete complex tasks. Teams with high efficacy promote a one-team approach, thereby discouraging individual actions that could adversely affect the team. Team cohesion, the propensity of a group to stick together and remain unified, is also a component of the shared cognition of cooperation.[272] A team demonstrates higher levels of cohesion when its members trust one another implicitly, thus resulting in higher levels of performance through improved communication, role clarity, and knowledge transfer.

The analysis of trust's impediments and promoters shows that trust has specific tangible components—shared cognition of communication, coordination, and cooperation—as demonstrated by Wilson et al. Role clarity, knowledge transfer, team orientation, collective efficacy, and team cohesion are the measurable, tangible qualities of trust. If trust is not honed, role ambiguity, competition, personality differences, and group identity create hesitation and distrust in crisis response. These factors are challenging yet vital to overcome in any relationship, but especially one as critical as a collaborative response to a crisis.

D. THE ROLE OF TRUST IN CRISIS RESPONSE

Luhmann submits a difference between familiarity and trust that plays a role in crisis response. He suggests that the value of trust "cannot be transferred to complex societies based on the division of labor" alone.[273] However, other factors can emerge

[270] Wilson et al.

[271] Wilson et al.

[272] Wilson et al.

[273] Luhmann, "Familiarity, Confidence, Trust," 94.

through individual social institutions, including social networks and work relationships that build on trust.

On the one hand, in a non-crisis situation, familiarity alone can be beneficial, as seen in calculus- and knowledge-based trust. It allows one the benefit of quick re-entry from the unfamiliar back into the familiar. Any lack of competency or confidence, as suggested by Luhmann, might simply mean a sense of dissatisfaction.[274] In a non-crisis event, the relationship between competence and trust is not a zero-sum game. In other words, more confidence does not mean that less trust is needed, or vice versa.

In a crisis, on the other hand, a subtle distinction separates familiarity and trust. Familiarity may be unavoidable with first responders but is insufficient to undertake risk in a situation.[275] In demanding ventures such as an active shooter or terrorist attack, the "possible damage may be greater than the advantage you seek" if one relies on familiarity alone.[276] Internal and external conditions may mean that mere familiarity is not enough for trust to emerge, much like Lewicki and Bunker suggested in their explanation of calculus- and knowledge-based trust.[277] Indeed, the results of simple assumptions and familiarity were on display at both the Columbine High School and Pulse nightclub events.

Trust permeates critical incident response and the ability, or lack thereof, to collaborate. Webb states, "Crisis is a uniquely flamed crucible for the creation and destruction of trust."[278] The centrality of trust, according to Webb, is perhaps even more importantly linked to crisis response than to other circumstances.[279] Webb suggests that very few conditions provide an opportunity to affect trust more directly. Thus, a crisis becomes an amplifier and magnifier of trust. The greater the stakes, the more dramatic the outcomes of success—the salience of trust increases in a crisis when one has to depend on others for help. Therefore, trust plays a vital role in deciding what and who fills in the

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[274] Luhmann, 96–103.

[275] Luhmann, 95.

[276] Luhmann, 98.

[277] Lewicki and Bunker, "Developing and Maintaining Trust," 119–24.

[278] Webb, "Trust and Crisis," 293.

[279] Webb, 289.

needed resources to mitigate the crisis.[280] Trust in critical incident response becomes a dependent relationship.

1. Taxonomy of Uncertainty

In a crisis response, the collaboration between unfamiliar disciplines (such as SWAT and PSBS), each with its areas of expertise, roles, and objectives, happens under high-risk, high-stress conditions.[281] Unfortunately, collaboration adds a layer of complexity to an already ambiguous, dangerous situation. Mounting confusion about roles, responsibilities, intentions, and overall capabilities can hamper a collective response built on shared purpose and clarity of a unified mission.[282] Power and Alison explain that any major critical incident stresses the "physical, psychological and interpersonal skills" of first responders.[283] A level of uncertainty, inherent to any crisis, then exacerbates the problem. Figure 6 depicts the taxonomy of uncertainty during emergency incident response as described by Power and Alison.

[280] Webb, 292.

[281] Curnin et al., "A Theoretical Framework for Negotiating."

[282] Power and Alison, "Redundant Deliberation about Negative Consequences," 250.

[283] Power and Alison, 243.

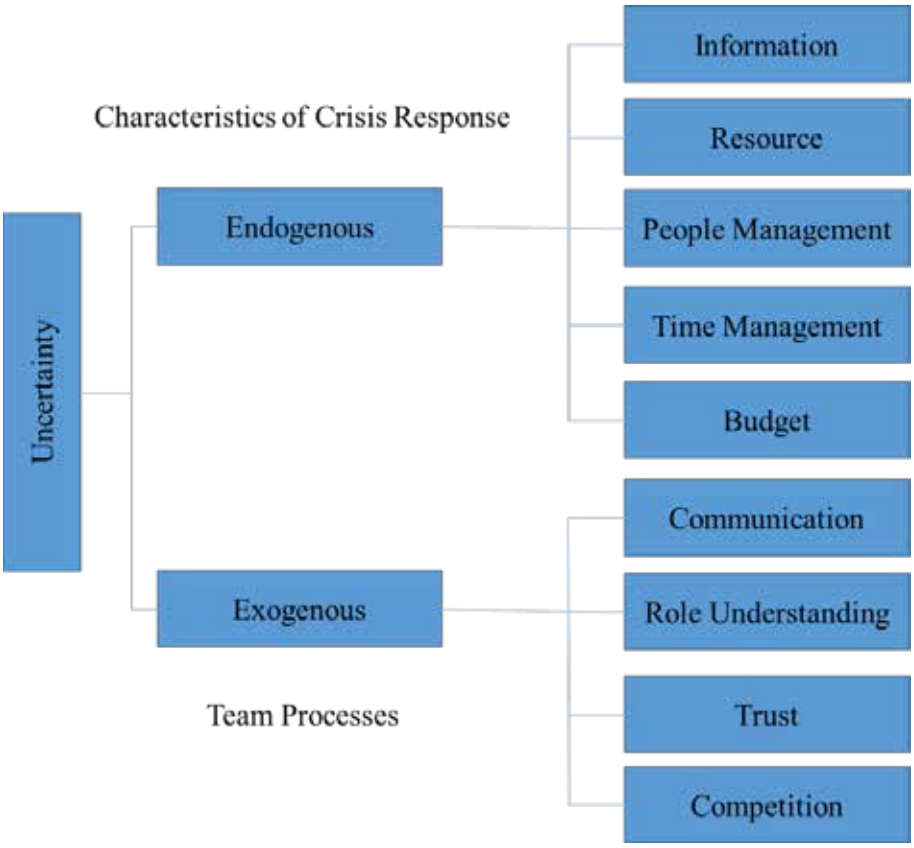

Figure 6. Taxonomy of Endogenous and Exogenous Uncertainty during Emergency Incident Command[284]

As Figure 6 shows, the individual components of the taxonomy all contribute to uncertainty during a critical incident response.[285] The endogenous branch of uncertainty relates to the characteristics of crisis response that are uncontrollable, such as information, resources, and time management. The exogenous branch of uncertainty governs controlled team processes, including role understanding (role clarity), communication (knowledge transfer), competition, and trust. Each of these factors is a team process that either promotes or inhibits success in uncertain situations. That trust appears next to communication, role understanding, and competition should be no surprise as those characteristics inhibit or promote trust. In sum, Power and Alison show that distrust or trust uncertainty can result

[284] Source: Power and Alison, "Redundant Deliberation about Negative Consequences," 250.

[285] Power and Alison, "Redundant Deliberation about Negative Consequences," 248.

in "decision inertia," a reluctance to incorporate new information, manifesting in the tendency to repeat previous choices regardless of the consequences.[286]

2. Trust in Inter-organizational Collaboration

Hocevar, Jansen, and Thomas evaluated inter-organizational collaboration relating to local, state, and federal agencies involved in crisis response.[287] Their aim was to understand the "driving" and "restraining" forces of collaborative efforts, with the intention of developing a conceptual model to improve the capacity to collaborate during a crisis.[288]

Several barriers to collaboration, as detailed in Hocevar, Jansen, and Thomas's study, relate to the development of trust (see Table 6).

Table 6. Most Frequently Cited Factors in Collaboration[289]

Most Frequently Cited Factors	
Success Factors	**Barriers**
"Felt Need" to Collaborate (10)	Lack of trust (13)
Common goal (9)	Inhibiting attitudes (12)
Motivation (7)	Lack of familiarity (10)
Communication (7)	Poor leadership (7)
Absence of competitive rivalries (7)	Competition (7)
Social capital (5)	Motivation (5)
Trust (4)	Lack of information sharing (5)
Familiarity (3)	Impeding rules or policies (4)
Interoperability (3)	Inhibiting behaviors (3)
Leadership motivation (3)	Resource scarcity (3)
Coordination of resources (3)	Lack of flexibility (3)
Appreciation of other's perspective (3)	Lack of competency (3)
Authority to act/ decide (3)	Lack of accountability (3)

As shown in Table 6, the most cited barrier to better collaboration is the lack of trust. The barriers of inhibiting attitudes, lack of familiarity, lack of information sharing, and

[286] Power and Alison, 244.

[287] Hocevar, Jansen, and Thomas, *Building Collaborative Capacity*.

[288] Hocevar, Jansen, and Thomas, 6, 16.

[289] Source: Hocevar, Jansen, and Thomas, *Building Collaborative Capacity*, 15.

inhibiting behaviors strongly support the tangible and appreciable means cited by Dirks and Ferrin and Wilson et al.[290] Together, the inhibitors related to trust account for 55 percent of the total barriers listed in the authors' study. Other documented barriers to collaborative efforts, as noted by Hocevar, Jansen, and Thomas, include "disparate organizational cultures, . . . mistrust and skepticism, and lack of knowledge of others' capabilities."[291] These factors also directly correlate with trust's implicit role in crisis response. Nevertheless, trust is noted only four times as a factor of successful collaboration, a meager number indeed.[292] Hocevar, Jansen, and Thomas, however, make it clear that inter-organizational collaboration overwhelmingly lacks trust, citing it as the number-one barrier to effective collaboration between inter-organizational teams such as SWAT and PSBS.

E. CONCLUSION

If trust is the gold standard of better collaboration, how do SWAT and PSBS achieve better collaboration given the diffuse nature of American first responder agencies? One PSBS does not correspond with one SWAT team. Developing relationships to overcome the impediments to trust and promote trust is an excellent place to start.

For SWAT and PSBS, overcoming Street's norms of non-involvement and discovering each other's weaknesses and strengths, as advocated by Dirks and Ferrin, can go a long way toward better developing the trust required for effective collaboration in crisis response.[293] Moynihan, in his analysis of network characteristics in ICS, suggests "strong trust and positive relationships [facilitate] problem-solving, role allocation, facilitating coordination, and incorporating emergent actors. . . . Weaker relationships [have] led to solo actions."[294] Moynihan further states that those relationships are difficult,

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[290] Dirks and Ferrin, "The Role of Trust in Organizational Settings," 450; Wilson et al., "Errors in the Heat of Battle," 245–53.

[291] Hocevar, Jansen, and Thomas, *Building Collaborative Capacity*, i.

[292] Hocevar, Jansen, and Thomas, 15.

[293] Street, "Brainstorming by Individuals," 436; Dirks and Ferrin, "The Role of Trust in Organizational Settings," 450–55.

[294] Moynihan, "Network Governance of Crisis Response," 904.

if not impossible, to build during a crisis.[295] Trust is a scarce resource, according to Gambetta, and it does not translate well during the heat of battle when trust has not already been developed.[296] As seen in the analysis of identification-based trust, developing relationships and networking *before* an incident is the right time to foster trust, much as Huemer suggests. Identification-based trust also has the ability to be more robust, as Lewicki and Bunker reveal in their research and Moynihan demonstrates in his analysis of critical incident response at the Oklahoma City bombing in 1995 and the Pentagon on 9/11.

Research shows not only that trust matters in a crisis, but it matters in a number of specific ways.[297] Trust enables cooperation, innovation, and problem solving; improves role clarity and knowledge transfer; reduces conflict; and results in faster decision making and meaningful actions. Trust can be earned through repeated encounters that are meaningful to the individuals, groups, and disciplines involved. Trust, through positive pre-crisis working relationships, then becomes less fragile and more durable during a crisis. Moreover, as Gambetta imparts, trust might be the catalyst that "uncovers dormant preferences for [collaboration]."[298]

[295] Moynihan, 907.

[296] Gambetta, "Can We Trust Trust?," 224.

[297] Moynihan, "Network Governance of Crisis Response," 909–10.

[298] Gambetta, "Can We Trust Trust?," 235.

IV. COLLABORATION

According to Andersson, in order to achieve certain objectives, organizations increasingly negotiate and depend on others to overcome the complexity of today's demands.[299] SWAT and PSBS are no different, especially when responding to a joint or complex hazard, such as an active shooter incident. When trust serves as the foundation of an integrative effort, members clearly understand each other's roles and believe in others' competencies. The focus turns to collaboration, as opposed to the narrow perspective of Curnin et al. on tasks, as illustrated at Columbine High School on that fateful day.[300] James and Wooten submit that in a collaborative response, members are more willing to support each other when their relationship is "grounded in expertise, information, and experience" relevant to the team's mission.[301]

With an understanding of trust's tangible components from the last chapter, this chapter examines building trust between SWAT and PSBS through tangible means, by encouraging role clarity, knowledge transfer, and effective communication. Building relationships and increasing collaboration are ways to achieve and enhance trust between SWAT and PSBS when it matters most. Such challenges as complacency, practical application, and diversity exist. Moreover, because having SWAT and PSBS together in one agency is more the exception than the rule, this chapter focuses on collaboration through socialization, cross-functional teams, and boundary-spanning. As suggested by research, each of these approaches has been proven effective in collaborative efforts among different groups. This chapter addresses solutions and concludes by offering specific joint-level training between SWAT and PSBS to facilitate the development of trust before a crisis demands it. Building a relationship will enhance the collaborative effort through confidence building, problem solving, and better role clarity, thus increasing the overall capabilities of both SWAT and PSBS.

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[299] Andersson, "In Case of Emergency," 27.

[300] Curnin et al., "Role Clarity, Swift Trust," 31.

[301] Erika H. James and Lynn P. Wooten, *Leading under Pressure: From Surviving to Thriving Before, During, and After a Crisis* (New York: Taylor & Francis, 2010), 113.

A. BARRIERS

Building a collaborative effort, much like building trust, has certain barriers to overcome. The barriers discussed here include the inertia of the status quo; the struggle to turn theory into practice; and diversity through variety, separation, and disparity of groups. Each of the barriers bears on the discussion of building a collaborative effort between SWAT and PSBS.

1. Fighting the Status Quo

As James Rieley suggests in his study about overcoming the barriers to effective collaboration, "good intentions are not enough."[302] Indeed, the police chief from Arvada, Colorado, suggests the lesson learned after Columbine about collaboration's importance was fleeting. Even though there were opportunities to interact and maintain relationships, little by little, collaboration efforts were again abandoned. Donahue and Tuohy have found that "the term *lessons learned* is often a misnomer" (emphasis added).[303] Lessons tend to be perishable, so they are not truly learned, and many gaps are never addressed.

Emergency service organizations have also been accused of being resistant to change, particularly amid the complexity of crisis response.[304] Indeed, Donahue and Tuohy point out that the need for training is one such common lesson repeatedly identified as problematic.[305] Regarding change in the face of uncertainty, Edmondson and Roloff have found that "when uncertainty clouds our tentative thoughts and views . . . we take the path of reduced interpersonal resistance," so communication and the maintenance of relationships suffer.[306] Indeed, Webber suggests that the climate that enables collaboration

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[302] James B. Rieley, "Overcoming the Barriers to Effective Collaboration," *Global Business & Organizational Excellence* 33, no. 3 (2014): 44, https://doi.org/10.1002/joe.21542.

[303] Donahue and Tuohy, "Lessons We Don't Learn," 3.

[304] Andersson, "In Case of Emergency," 46.

[305] Donahue and Tuohy, "Lessons We Don't Learn," 5.

[306] Amy C. Edmondson and Kathryn S. Roloff, "Overcoming Barriers to Collaboration: Psychological Safety and Learning in Divers Teams," in *Team Effectiveness in Complex Organizations: Cross-Disciplinary Perspectives and Approaches*, ed. Eduardo Salas, Gerald F. Goodwin, and C. Shawn Burke (New York: Taylor & Francis, 2009), 184.

does not emerge naturally but must be cultivated and maintained.[307] Finally, the more diverse groups are, the harder it will be for them to coalesce, so certain conditions must exist for collaboration to be successful.

Complacency is the chief enemy of this meeting of the minds—or any other necessary change. William suggests that complacency is not an attitude but a result of bad habits: "Change your habits, and you change your response to every unknown or known threat."[308] Young Pecko agrees, opining that complacency is manifest when challenges and barriers to collaboration act as the inertial forces of the status quo.[309]

2. Turning Theory into Practice

Collaboration may be a popular buzzword in many professions, but attending to the last mile of a task is difficult because one has to turn theory into practice. Moreland and Levine understand this difficulty, noting that a bridge between academics and practitioners can be rare.[310] Academics tend to rely on theories based on research done in a controlled setting while practitioners put their faith in experience and intuition from operating in complex, uncontrolled settings far removed from research labs. When research and real-world events suggest change, practitioners often struggle with implementation. As Rieley shows, organizational leaders often know "what to do" but not "how to do it."[311]

In the context of SWAT and PSBS, role ambiguity and inadequate knowledge transfer directly affect the collaborative barrier of turning theory into practice. Stakeholders, whether agency executives or SWAT and PSBS commanders, might not have access (or timely access) to specific resources. In other cases, a working relationship

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[307] Webber, "Leadership and Trust," 212.

[308] George Williams, "Ambush Prevention: Develop Better Habits," *Tactical Response* 11, no. 6 (2013): 62.

[309] Paula L. Young Pecko, "Complacency: A Threat to Homeland Security?" (master's thesis, Naval Postgraduate School, 2014), 73–74, http://hdl.handle.net/10945/42760.

[310] Richard L. Moreland and John M. Levine, "Building Bridges to Improve Theory and Research on Small Groups," in *Team Effectiveness in Complex Organizations: Cross-Disciplinary Perspectives and Approaches*, ed. Eduardo Salas, Gerald F. Goodwin, and C. Shawn Burke (New York: Taylor & Francis, 2009), 29–32.

[311] Rieley, "Overcoming the Barriers to Effective Collaboration," 44.

might not exist, or the relationship might be weak or dysfunctional. In the latter case, Street's norms of non-involvement can flourish.[312] Over time, bad habits can develop and cause the complacency that Young Pecko addresses.

Collaboration, like trust, does not exist in a vacuum; it has to be cultivated and maintained. It builds from a repeated method: setting goals, showing enthusiasm, managing conflict, and obtaining the goal. As individuals and groups see their work contribute to the team's overall success, it becomes possible for practitioners to appreciate the value of collaboration more fully.[313] When collaboration increases, so does the potential for innovation, thus improving the collective capability. In the context of SWAT and PSBS collaboration, diversity is one such challenge.

3. Overcoming Diversity

The real opportunity for PSBS to interact with SWAT teams across a region or state is hampered by diversity, as Edmondson and Roloff explain, because collaboration is difficult "across disciplinary, status, geographical, or other boundaries."[314] The authors suggest diversity by itself can affect collaborative efforts through separation, variety, and disparity.[315] Separation is manifested in two ways. The first is through group identities and bias. Team members, given a choice, prefer homogenous as opposed to heterogeneous groups.[316] Homogenous teams have been found to produce a more trusting environment with better overall communication because they value similarity in attitudes and beliefs. However, cooperative ventures require broader communication than typical of such groups' patterns. The overall desire to conform limits innovation and independent thinking, creating a groupthink culture, a tacit acceptance with no individual responsibility for critical thinking. Separation is also manifested in distance between groups. Different

[312] Street, "Brainstorming by Individuals," 433.

[313] Rieley, "Overcoming the Barriers to Effective Collaboration," 44.

[314] Edmondson and Roloff, "Overcoming Barriers to Collaboration," 185.

[315] Edmondson and Roloff, 194–99.

[316] Edmondson and Roloff, 195.

groups, such as SWAT and PSBS, often work in different locations, so they develop practices and norms independently.

Variety, too, presents itself in distinct ways, from differences in standard operating procedures to disparate group norms, which are common in any diverse group interaction. For example, learning styles are one such relevant example with SWAT and PSBS. As noted in Chapter III, bomb technicians tend to have different learning styles and intelligence strengths from tactical operators. Variety also presents differences in skills and expertise, as seen in the dissimilarities between SWAT and PSBS illustrated in Chapter II. Although combining different disciplines and specializations benefits critical incident response, Edmondson and Roloff note that "specialized team members can become spokespersons for their discipline, resulting in reduced flexibility and increased conflict."[317] Thus, personal agendas and egos can sideline teamwork. On the other hand, a healthy amount of conflict among specialized teams can also enhance team innovation and learning through the open sharing of information.[318]

Disparity shows up in power differentials within a team or in the differences in professional status. Disparity might present itself as a formal instrument of rank or power or informally through ego. Thus, as suggested by Edmondson and Roloff, disparity "may be the most challenging source of diversity for ensuring collaboration."[319] Useful discourse is met with indirectness and abstraction when the ability to speak up and feel valued is threatened by disparity, constricting the direct flow of dialogue. Again, innovation suffers when one is reluctant to give input in a situation or task. Furthermore, negative stereotypes and misconceptions about a group's ability can significantly hinder team performance. In contrast, teams that actively work to utilize the unique skills and assets of group members show a willingness to accept differences and enjoy a more open style of communication.

Table 7, from Edmondson and Roloff, details examples of diversity, which relate well to the SWAT and PSBS collaboration discussion—as both professions are typically

[317] Edmondson and Roloff, 197.

[318] Edmondson and Roloff.

[319] Edmondson and Roloff, 197.

separated by more than expertise. Each profession may come from different agencies, or SWAT and PSBS may be from the same agency but work under different organizational structures. Again, the opportunity to interact may be limited.

Table 7. Examples of Team Diversity[320]

Examples of Team Diversity				
Type of Disparity	**Demographic**	**Expertise**	**Location**	**Status**
	Variety or Disparity	Variety	Separation	Disparity
Composition of team	Different cultures and identities exist	Different education and training cause divergent skill sets and expertise	Team members are dispersed geographically	Different status levels among expertise
Team Challenges	In-group/out-group identity	Expertise is valued over team identity	Aligning team goals with local needs	Deference to authority is the social norm
Collaboration enabled by	Different perspectives are shared and valued	Knowledge and expertise are shared, cultivating a collective group identity	Regular opportunities for interaction, focus on collective goals	Inclusive leadership, open communication

As illustrated in Table 7, the different categories of diversity are not mutually exclusive. Collaborative efforts are likely to contain combinations of these categories, which increases the challenges to overcome. SWAT and PSBS, as examined in this thesis, have different group identities and tacit knowledge. Each discipline might not work in the same agency or the same geographical area, and each group can develop different social norms and report to different agency leadership. These differences apply directly to SWAT and PSBS's missions in the United States, affecting both the development of trust and degree to which collaboration works.

Ingrained differences in outlook and culture can inhibit collaboration. Collaboration may suffer if such diversity causes "fault lines"—in other words, differences

[320] Source: Edmondson and Roloff, "Overcoming Barriers to Collaboration," 199.

are not understood and addressed.[321] Overall, there must be a willingness to accept the differences in skills and abilities each discipline provides rather than purely control them. Some skilled teams are confident in their abilities to master their known environment without assistance. For others, a competitive nature exacerbates a reluctance to change. The benefit of building collaboration between SWAT and PSBS is that both disciplines exist in the first responder profession, and they already share an underlying culture of crisis response and management. Given the disciplines' shared purpose, the bottom of Table 7 provides enablers of collaboration vis-à-vis the four categories of diversity—from valuing perspectives, to transferring knowledge, to interacting regularly with the other group, to communicating openly. In sum, making time to build a relationship while expanding the group's salient identity and shared cognition seems to be the essential enabler.

B. IMPROVING THE COLLABORATIVE EFFORT

Groups can leverage collaboration through distinct methods. This section discusses these methods individually, but they flow more naturally as an iterative process. Socialization can lead to an understanding of overlapping boundary-spanning tasks, and better understanding and appreciation of boundary-spanning tasks can help distinct groups develop into cross-functional teams. This process describes how SWAT and PSBS might leverage collaboration.

1. Socialization

Socialization is a fitting first step in moving past the hurdles of collaboration between SWAT and PSBS. On the one hand, socialization equates with training potential in the first responder profession, and this thesis presents specific opportunities to help socialize SWAT and PSBS through joint training. If implemented properly, the joint training discussed later addresses the issues of role clarity and knowledge transfer that can enable collaboration. Wilson et al. elucidate that more face time with each other will help build mutual trust, and it also starts the socialization process.[322]

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[321] Edmondson and Roloff, "Overcoming Barriers to Collaboration," 199.

[322] Wilson et al., "Errors in the Heat of Battle," 253.

On the other hand, the social harmony of the in-group can be affected by the admittance of an out-group. Such mixing may hinder a new member or group's contribution by alienating newcomers, says Levine, Moreland, and Choi, causing apprehension and uncertainty and contributing to an already dim view of collaboration.[323] Thus, some thought must be given before considering collaboration.

Morehead and Levine provide a socialization model for group development that can be helpful, considering the SWAT and PSBS context.[324] Their model explains the affective, cognitive, and behavioral changes individuals promote throughout a group relationship. They have found relationships change over time as individuals move from one phase of membership to another. The length of time and quality of experience one has within the group affect these phases. Three factors influence the process of socialization.[325] The first is the evaluation process, the assessment of how much one brings to the group to achieve its stated goals. The process involves comparing expectations to the actual performance of the individual or group being socialized. The second process of socialization focuses on commitment, the natural outcome of the evaluation process. It examines whether the group feels the newcomer's intent is genuine and whether the newcomer meets expectations. The evaluation and commitment phases are not static—they are ongoing and may change over time. The third process of socialization is role transition, the changing of one's expectations and behaviors. In other words, the newcomer experiences a passage, leading to further evaluation of commitment and additional role transitions. Ultimately, the newcomer becomes an eligible member of the in-group.

After the evaluation, commitment, and role transition process concludes, socialization can truly begin. As shown in Figure 7, socialization is reciprocal.[326]

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[323] Levine, Moreland, and Choi, "Group Socialization and Newcomer Innovation," 90.

[324] Richard L. Moreland and John M. Levine, "Socialization in Small Groups: Temporal Changes in Individual-Group Relationships," *Advances in Experimental Social Psychology* 15 (1982): 137–92, https://doi.org/10.1016/S0065-2601(08)60297-X.

[325] Levine, Moreland, and Choi, "Group Socialization and Newcomer Innovation," 87–89.

[326] Richard L. Moreland and John M. Levine, "Socialization and Trust in Work Groups," *Group Processes & Intergroup Relations* 5, no. 3 (2002): 186–88, https://doi.org/10.1177/1368430202005003001.

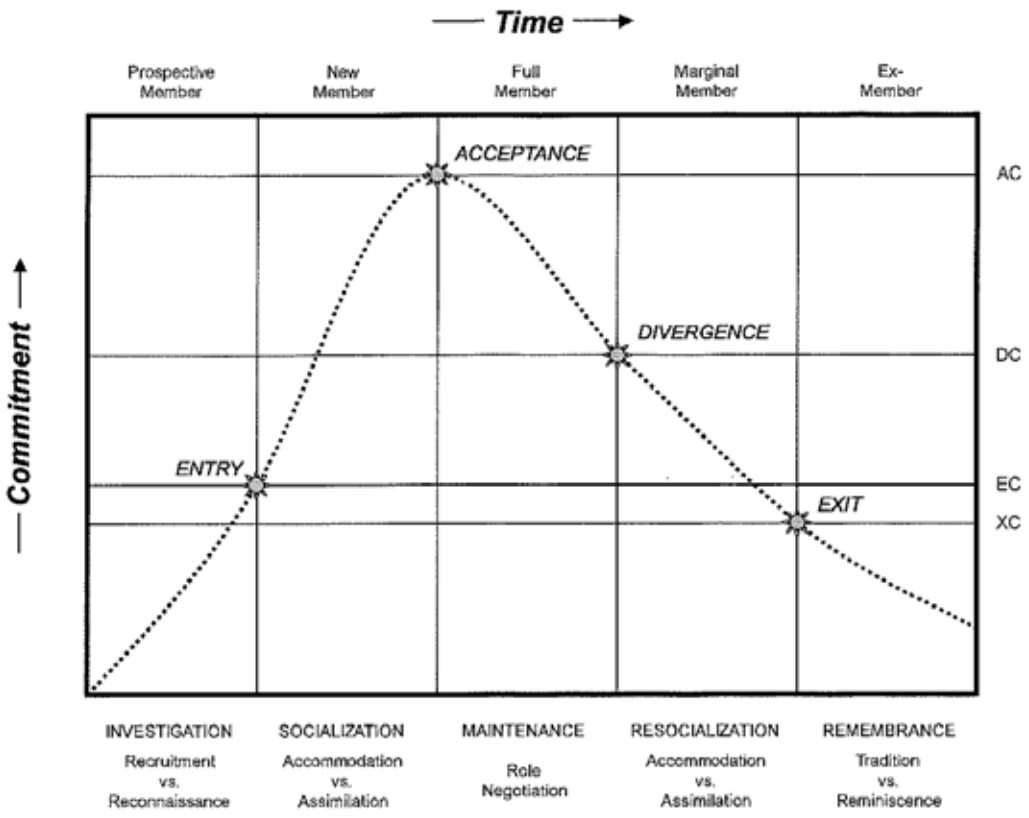

Figure 7. Phases of Socialization to Membership[327]

Figure 7, from Moreland and Levine's phases of membership, shows how socialization can help foster group membership, from pre-socialization (investigation) to post-socialization (remembrance).[328] Commitment to socialization and a member's transitions through the socialization phases directly relate to time, as time is needed to overcome challenges with harmonizing. More time spent on socialization directly relates to a more robust development of commitment until divergent attributes affect the relationship.[329] Figure 7 also shows that as the group maximizes a newcomer's contribution and goal attainment, the newcomer, in turn, strives to change the group through accommodation.

[327] Source: Moreland and Levine, "Socialization and Trust in Work Groups," 188.

[328] Moreland and Levine, "Socialization and Trust in Work Groups."

[329] Moreland and Levine, 196–97.

The socialization phase is a struggle between accommodation and assimilation in relation to role negotiation. The newcomer attempts to leverage the group's contributions toward one's own needs, so she might be an agent of change.[330] The socialization process enters a maintenance phase as the group continues to accommodate the newcomer and the newcomer assimilates to the group. That phase can repeat itself in a cycle, illustrated by a re-socialization phase if there is a breakup and then a re-engagement of the team. Evidence suggests that groups passing through socialization's distinct phases have an easier time if motivation and an understanding of each other's valuable skills and abilities are shared and appreciated jointly.[331]

Pinto et al. delineate three types of group members: new members, full members, and marginal members.[332] SWAT and PSBS might find themselves in any of these categories during Moreland and Levine's phases of membership.[333] While new members of a collaborative SWAT/PSBS team might be in the socialization or role transition phase, existing members who have completed socialization are likely in the maintenance phase. Marginal members might have failed to live up to the group's expectations or not spent enough time with the group to socialize thoroughly.

Ultimately, if socialization is successful, the group begins to develop shared group identity.[334] While the opportunity to increase the capacity of knowledge transfer and role clarity might be the reward for successful socialization, divergence, frustration, or member defection might be the outcome if socialization is not successful.[335] In the latter case, older group members might question the newcomers' competency and come to believe the new members are trying to change the group dynamic. In turn, the newcomers might question their role within the group and their ability to be accepted.

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[330] Levine, Moreland, and Choi, "Group Socialization and Newcomer Innovation," 91.

[331] Levine, Moreland, and Choi, 95–96.

[332] Pinto et al., "Membership Status and Subjective Group Dynamics," 108–9.

[333] Moreland and Levine, "Socialization and Trust in Work Groups," 186–89.

[334] Levine, Moreland, and Choi, "Group Socialization and Newcomer Innovation," 89.

[335] Levine, Moreland, and Choi, 91–95.

Regardless of success, socialization has essential ramifications for group development. Newcomers can cause innovation or disrupt the well-established group culture. Full membership, as explained by Levine, Moreland, and Choi, "can only be attained if the commitment levels of the group and the individual rise to their respective acceptance criteria."[336] Thus, membership in a group happens when all members experience assimilation and accommodation. Pinto et al. concur, explaining that as "membership becomes salient, a positive social identity becomes the ultimate goal of the group."[337] With its push and pull of accommodation and assimilation, socialization has the additive benefits for SWAT and PSBS of developing trust and better collaboration. New knowledge, role clarity, and a greater appreciation for each discipline can be shared and integrated for a fuller collaborative venture. Time and forethought to engage the additive value of both assimilation and accommodation are needed for socialization to be successful.

2. Boundary-Spanning Cross-Functional Teams

Proper socialization can help SWAT and PSBS move to the next step. The disproportionate number of SWAT and PSBS units nationwide ultimately means that SWAT and PSBS units will not always operate in a distinct and defined team. Thus, the concept of a cross-functional team (CFT) can apply to better-integrating SWAT and PSBS. CFTs, made up of small groups from diverse specialized areas of an organization or profession, are considered boundary spanners.[338] Unlike distinct groups, CFTs, according to Webber, are not static.[339] They exist to solve specific situations, and their work together may only be on a limited basis. One benefit of CFTs is that "they provide a manageable way to bring together diverse resources for a specific project."[340]

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[336] Levine, Moreland, and Choi, 90.

[337] Pinto et al., "Membership Status and Subjective Group Dynamics," 116.

[338] Webber, "Leadership and Trust," 201; Janssen et al., "Advances in Multi-Agency Disaster Management," 4.

[339] Webber, "Leadership and Trust," 201.

[340] Webber.

Initially, explain Moreland and Levine, "the levels of trust in these groups may be low if group members come from different parts of an organization" or from a different agency altogether.[341] Successful CFTs engage in effective communication, cooperation, and coordination that emerge from a climate of trust. Being a member of a CFT allows for the development of ownership, increasing a member's engagement in getting the job done.[342] The concept of boundary work and boundary awareness is relatively new in joint hazard response, but boundary awareness can improve the attributes of a successful CFT. Boundary work refers to the practical tasks performed by certain people or specialized units that infrequently interact with other specialized units and work independently of others. Boundary spanning, the bridge between two or more independent teams, can help move that knowledge around a team through socialization and promote the collective understanding of those tasks that interrelate in a broader mission or job.

As shown in Figure 8, SWAT and PSBS are more likely to operate independently of each other in their frequent and common missions, such as warrant service for SWAT and responding to suspicious packages for PSBS. However, certain times demand an interdependent rather than independent response to overcome a crisis.

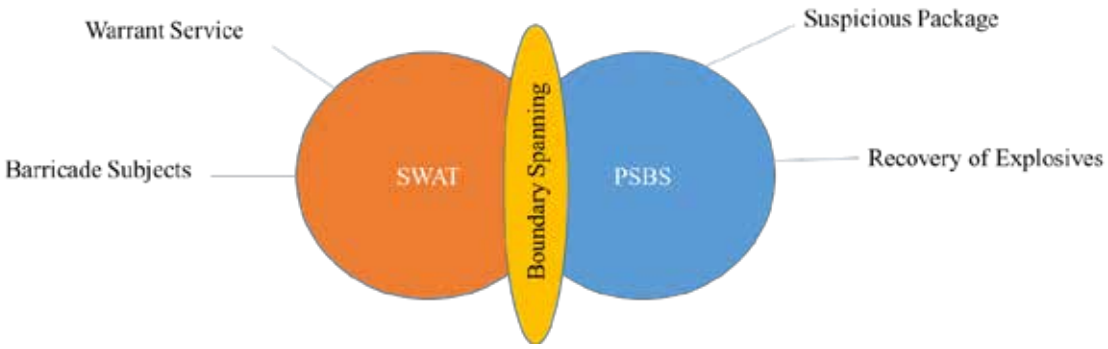

Figure 8. Boundary Spanning

[341] Moreland and Levine, "Socialization and Trust in Work Groups," 197.

[342] Sarah Cook, *Building a High-Performance Team: Proven Techniques for Effective Team Working* (Cambridgeshire, UK: IT Governance Publishing, 2009), 18, ProQuest.

As the Columbine experience showed, the operations of SWAT and PSBS needed to overlap, but they did not. An examination of boundary-spanning tasks is helpful in such analysis. Boundary spanning is a tool, described by social scientists, to link one organization's internal resources to another organization's external resources.[343] Tushman conducted a study to examine innovation in research and development after World War II. He found that collaboration and innovation suffered because of the diffusion and diversity of communication, knowledge management, and role ambiguity across boundary lines. Siloed cultures tend to be inefficient, and the clarity of roles, knowledge transfer, and communication are prone to distortion and distrust. Awareness of boundaries among parties could be similar or contradictory, so negotiating those differences within CFTs is essential for a collaborative process.[344] Andersson suggests a lack of boundary work and awareness results in a "silo mentality," yet a better understanding of boundary lines "is important in enhancing organizational resilience."[345] If SWAT and PSBS had a clearer understanding of boundary-spanning tasks, their response approach at Columbine might not have been siloed.

The differences between groups and CFTs involve more than structure alone. Cook asserts,

> In a [siloed] group, each member is responsible only for their own individual contributions. He or she can work in relative isolation without too much concern about the other members of the group. . . . Within a [siloed] group, there are no shared goals. Each person is responsible for their own outcomes. The potential attitude is "I did my bit, it's up to them how they do theirs."[346]

CFTs are different because their members have to be cognizant of their work and how it affects other members of the cross-functional group. Interdependence, through shared cognition and collective responsibility, overtakes the more independent approach seen in

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[343] Michael L. Tushman, "Special Boundary Roles in the Innovation Process," *Administrative Science Quarterly* 22, no. 4 (1977): 587–605, https://doi.org/10.2307/2392402.

[344] Andersson, "In Case of Emergency," 92.

[345] Andersson, 98.

[346] Cook, *Building a High-Performance Team*, 12–13.

groups alone. Given the diversity among SWAT and PSBS, a focus on establishing a SWAT/PSBS CFT has an attractive quality.

C. CONCLUSION

Focusing on socialization, mastering boundary spanning, and creating CFTs can overcome the challenges to collaboration, such as complacency, practical application, and diversity. As suggested by the research examined, each of these approaches improves the collaborative effort among diverse groups. The starting point, socialization, has challenges to be sure, but though a better understanding of boundary-spanning tasks, a collaborative cross-functional SWAT and PSBS model can emerge.

V. CONCLUSION AND RECOMMENDATIONS

Better collaboration between SWAT and PSBS has challenges, to be sure. Each discipline is highly specialized, necessitating training and operations that are frequently unique to each. Tactical law enforcement units, such as SWAT, handle dangerous armed suspects. PSBS handles bombs and other hazardous devices, each high-risk activities. Generally, SWAT and PSBS have limited time to work together and cultivate a relationship, leading to collaborative challenges during critical joint incident response. If the two disciplines are unfamiliar with each other, these fundamental differences further impede the teams' ability to work together. The diffuse nature of SWAT and PSBS nationwide exacerbates the challenges of developing trust and collaboration. As seen in the literature, overcoming Street's norms of non-involvement and increasing the frequency of encounters are needed to cultivate trust and develop some level of collaboration.

Trust and collaboration are inextricably linked. The type and level of trust present will affect the overall level of collaboration. The failures of SWAT and PSBS collaboration at Columbine highlighted gaps that contributed to new forms of joint training and response and entry protocols, but arguably not enough to sustain over time. Today, there is at least a tacit understanding that SWAT and PSBS need to integrate with boundary-spanning tasks. Because of that tacit understanding, collaboration between SWAT and PSBS will fall either between swift trust and knowledge-based trust, or knowledge-based trust and identification-based trust. Full actualization of identification-based trust is challenging to obtain because of the limited time and resources available. However, it is not an impossible goal to achieve. Collaboration cultivated by trust can enhance levels of service, reduce interagency friction, build organizational collaboration, and prevent or reduce the collaborative problems typically seen in the aftermath of a critical incident response.

This final chapter provides recommendations to formulate better integration between SWAT and PSBS. First, the specific joint training examples detailed here will cultivate trust and build better collaboration by developing a relationship based on competence and confidence. Second, leadership, leadership buy-in, and two models of collaborative leadership are examined.

A. BRIDGING THE GAP

Disasters, fortunately, occur infrequently. Their limited occurrence makes it further challenging for emergency responders to test and improve response strategies because regular day-to-day work is devoted to organizationally specific and independent tasks and concerns.[347] Mike Wood offers that SWAT and PSBS have a long history of working independently. Even though they respond to similar emergencies, they still tend to operate as non-integrated teams. In other words, SWAT and PSBS still operate in siloed cultures. That model, suggests Wood, may have been more accepted in the past, but the "current threat environment demands a closer relationship."[348] Indeed, SWAT and PSBS might still operate in silos and adhere to the norms of non-involvement. However, they will not operate or collaborate as efficiently or effectively to overcome a joint hazard incident that involves guns and bombs. The disciplines have seen the consequences of poor collaboration.

Frequent joint training is valuable, not only for preparing and testing plans and equipment but also for maintaining effective crisis management through a robust and resilient approach.[349] Michael Fahy advocates a one-team strategy, requiring integrated training to familiarize members with their expanded capabilities.[350] Sean Newman agrees, suggesting that the threat environment, including terrorism and all-hazard emergencies, calls for a re-thinking of the normal compartmentalized response. When explosives are combined with firearms, SWAT and PSBS must do more than coordinate; they must better collaborate to prepare for and overcome the challenges they both face.[351]

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[347] Andersson, "In Case of Emergency," 51.

[348] Mike Wood, "Improving the Bomb Squad and SWAT Partnership," Police1, September 17, 2019, https://www.police1.com/swat/articles/improving-the-bomb-squad-and-swat-partnership-qPcjn12bw 5HVW238/.

[349] Andersson, "In Case of Emergency," 28, 49.

[350] Fahy, "Understanding Swift Trust," 64.

[351] Sean S. Newman, "Braving the Swarm: Lowering Anticipated Group Bias in Integrated Fire/Police Units Facing Paramilitary Terrorism" (master's thesis, Naval Postgraduate School, 2011), 1, http://hdl. handle.net/10945/5803.

After-action reviews are one mechanism to document response and identify gaps.[352] A commonly seen recommendation, such as one from the Pulse nightclub massacre, suggests holding frequent, or at least routine, joint training.[353] Fundamentally, joint training has to strike the right balance to properly showcase the skills and abilities of each discipline or CFT. Training has to be rooted in reality, and the context of past critical incidents can be a guide. An eye to what is required of CFTs must remain in focus.

Unfortunately, frequent joint training is hampered by the diversity of first responders, such as SWAT and PSBS, and a lack of common operational doctrine.[354] Thus, it becomes challenging to identify problems that would otherwise suggest a need for training. When gaps are identified, training might still be neglected because processes are not considered and rehearsed to iron out the details. SWAT and PSBS, in this case, would not understand and trust the process. They would revert to familiar methods: the bad habits of complacency and personal resistance.

Fear of failing in training is another obstacle to overcome. Training coordinators must provide clear, delimited objectives. Too many goals can cloud the training and leave it unfocused. Instead, Power offers that training should concentrate "on the development of competencies related to teamwork and decision making."[355] A focus on competencies, rather than only technical skills, is useful for the development of role clarity, knowledge transfer, and mutual trust.[356]

How do SWAT and PSBS move past the obstacles to joint training? By developing a trans-active memory system (TMS), as suggested by Marques-Quinteiro et al., between the two disciplines.[357] TMS can develop among team members through shared experiences in joint training and a working relationship. Members of a collaborative group then begin

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[352] Donahue and Tuohy, "Lessons We Don't Learn," 3.

[353] Straub et al., *Rescue, Response, and Resilience*.

[354] Donahue and Tuohy, "Lessons We Don't Learn," 13–16.

[355] Power, "Extreme Teams," 484.

[356] Power, 484–85.

[357] P. Marques-Quinteiro et al., "And Now What Do We Do? The Role of Transactive Memory Systems and Task Coordination in Action Teams," *Group Dynamics: Theory, Research, and Practice* 17, no. 3 (2013): 194–206, https://doi.org/10.1037/a0033304.

to develop shared cognition and implicitly understand tasks that Wilson et al. and Dirks and Ferrin offer.[358] Group members become responsible and accountable to each other. By encouraging role clarity and knowledge transfer, the risk and reluctance involved in newcomer socialization diminish. Marques-Quinteiro et al. suggest that collaboration happens only when participants have developed TMS.[359] Indeed, empirical research shows teams, such as SWAT and PSBS, that develop TMS can "coordinate implicitly [and] will be better able to adapt performance to non-routine environments."[360]

Both the NTOA and NBSCAB discuss the desire for SWAT and PSBS to integrate.[361] The NTOA recommends that PSBS integrate at various levels of the SWAT mission framework. For Tier 1 SWAT teams, the NTOA recommends an explosive breaching capability, PSBS integration for barricaded subject operations (including robotics), and PSBS integration for high-risk warrant service that involves explosive device and booby trap recognition and mitigation. Furthermore, there is a desire for SWAT and PSBS to better collaborate in the overall national homeland security framework. Homeland Security Presidential Directive 19 states, "Terrorists have repeatedly shown their willingness and ability to use explosives as weapons worldwide, and there is ample intelligence to support the conclusion that they will continue to use such devices to inflict harm."[362]

The use of explosives in terrorist and non-terrorist incidents alike requires the coordination of PSBSs and tactical teams on a deeper level than currently prevails. Both SWAT and PSBS must prepare. Landers explains that bomb technicians may need to operate with what they can comfortably carry, usually on their person or in a small backpack. Bomb technicians, according to Landers, must also move, shoot, and keep up

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[358] Wilson et al., "Errors in the Heat of Battle," 243–56; Dirks and Ferrin, "The Role of Trust in Organizational Settings," 450–67.

[359] Marques-Quinteiro et al., "And Now What Do We Do?," 195.

[360] Marques-Quinteiro et al.

[361] National Tactical Officers Association, *Tactical Response and Operations Standards*, 17–23; National Bomb Squad Commanders Advisory Board, *National Guidelines for Bomb Technicians*.

[362] Executive Office of the President, *Combating Terrorist Use of Explosives in the United States*, Homeland Security Presidential Directive 19 (Washington, DC: White House, February 12, 2007), https://www.hsdl.org/?abstract&did=471864.

with the tactical team they are tasked to support.[363] Draper suggests that tactical teams, such as SWAT, should appreciate the real threat that IEDs and booby traps present.[364] IEDs and booby traps will slow down and impede a tactical team's movement, and these hazards require specialized training, equipment, and time to overcome, defeat, or avoid them. The tactical team must know how to integrate a bomb technician's capabilities. It is equally crucial that the bomb technician can operate without being a hindrance to the tactical team.[365] The following five examples of integrated training opportunities and experiences can help promote socialization, build trust, and develop a SWAT/PSBS cross-functional team before a crisis occurs. Robotic support, explosive breaching, booby traps, explosive awareness, suicide bomber training, and special event planning are examples of specific boundary-spanning and CFT training for SWAT and PSBS.

1. Robotic Support

An excellent way to start integrated training between SWAT and PSBS involves using EOD robotic platforms in barricaded subject calls, a typical SWAT response. Instead of putting human lives in danger by entering an unknown environment, a useful tool is a robot that can move throughout a structure and record and transmit real-time video that reveals the layout of rooms and the location of barricaded and armed subjects. The benefit of a PSBS robot is that it has more capabilities than SWAT robots, whose platforms are typically smaller and have limited capabilities, a short run time, and few cameras. PSBS robots have multiple cameras for a better overall view, and they can manipulate the environment by opening doors and moving objects with extendable grippers. They also have remote breaching capabilities, which is a force multiplier for officer safety. There are drawbacks, however, to using a larger robotic platform as PSBS robots can be slow, but

[363] Larry Landers, "Bomb Disposal Support in Tactical Operations," *Detonator*, June 2008, 3, https://www.iabti.org/uploads/detonator/6.2008-7_Bomb_Disposal_Support_in_Tactical_Operations-_Larry_Landers.pdf.

[364] Draper, "EOD, Up!," 73.

[365] Landers, "Bomb Disposal Support in Tactical Operations," 2.

they can be overcome by integrated SWAT/PSBS training, thus increasing everyone's familiarity with the enhanced capabilities a PSBS robot offers.[366]

Robotic platforms provided a crucial role in response to the Pulse nightclub incident in Orlando, Florida. The smaller SWAT tactical robots provided inadequate situational awareness inside the nightclub because of the number of obstacles (deceased victims). Moreover, they could not locate the hostages and suspect, a crucial need. When the Orange County Sheriff Department's Bomb Squad deployed two PSBS robots into Pulse nightclub, the robots navigated obstacles, looked for hostages and the suspect, and manipulated items while searching for IEDs and other hazards.[367] Finally, the use of PSBS robots at Pulse nightclub encouraged SWAT and PSBS to collaborate in the response.

2. Explosive Breaching

A second way to integrate SWAT and PSBS is to use bomb technicians as explosive breachers in a SWAT element. With the proper application of explosives, SWAT teams can force entry into a stronghold position. Breaching and gaining entry is a critical element in high-stakes SWAT operations, such as hostage rescue. Other breaching options, including ballistic, thermal, and mechanical techniques, also exist. However, explosive breaching is the fastest of these options. Explosive breaching must be performed precisely. If it is not done right, the technique can be very dangerous.[368]

Through their training and experience, bomb technicians already know how to handle explosives safely, and they know how to calculate explosive weights and overpressure values. These are vital details that keep everyone safe.[369] Blast (air) overpressure alone accounts for the majority of explosive injuries in an enclosed space,

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[366] Carl Lundberg and Henrik I. Christensen, "Assessment of Man-Portable Robots for Law Enforcement Agencies," in *Proceedings of the 2007 Workshop on Performance Metrics for Intelligent Systems* (Gaithersburg, MD: National Institute of Standards and Technology, 2007), https://doi.org/10.1145/1660877.1660887.

[367] Straub et al., *Rescue, Response, and Resilience*, 61–63.

[368] Glenn French, "Breaching: Which Option Is Best for Your Team?," Police1, September 2, 2018, https://www.police1.com/police-products/tactical/tactical-entry-tools/articles/breaching-which-option-is-best-for-your-team-93B5EuCp5IHv95c1/.

[369] Paul Brandley, "Explosive Entry," *Tactical Response* 4, no. 8 (April 2006): 73–77.

where most explosive breaching occurs.[370] The credentials of a bomb technician, given their increased training and experience with explosives, can add value to this dangerous and sometimes needed skill set.

3. Booby Trap/Explosive Material Awareness

A third example of integrated training involves booby trap awareness and mitigation. PSBS has specialized training and equipment to help locate, identify, and render these hazards safe.[371] Awareness-level training can take many forms, but a good starting point is for PSBS to familiarize SWAT with the Bomb-Making Materials Awareness Program.[372] With a better grasp of the real danger of homemade explosives, PSBS could provide SWAT with booby trap awareness. Booby traps have been used in various scenarios, from terrorism, to the war on drugs, to hostage rescue missions.

Booby traps are often found in clandestine lab settings, so officers discovering marijuana grow facilities or clandestine laboratory operations must be aware of the booby trap threat. The booby trap might only be designed to warn the criminal or just impede authorities, buying time for the criminal to destroy evidence, escape, or prepare to fight. Conversely, the booby trap might be designed to injure or kill.[373] A domestic example is the aftermath of the Aurora, Colorado, movie theater mass shooting. The attacker's apartment held 30 IEDs, and it was booby-trapped to harm police officers who attempted entry.[374]

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[370] Howard R. Champion, John B. Holcomb, and Lee Ann Young, "Injuries from Explosions: Physics, Biophysics, Pathology, and Required Research Focus," *Journal of Trauma: Injury, Infection, and Critical Care* 66, no. 5 (May 2009): 1468–77, https://doi.org/10.1097/ta.0b013e3181a27e7f.

[371] Kaszeta, *CBRN and Hazmat Incidents*, 375.

[372] "Bomb-Making Materials Awareness Program (BMAP)," Cybersecurity & Infrastructure Security Agency, November 8, 2019, https://www.cisa.gov/bmap.

[373] Tony Jones, "Booby Traps 101," *Law & Order* 49, no. 3 (2001): 82–86.

[374] John Eligon and Marc Santora, "Police at Home of Colorado Suspect Disarm Major Threats," *New York Times*, July 21, 2012, https://www.nytimes.com/2012/07/22/us/colorado-movie-theater-shooting-james-holmes.html.

IEDs and booby traps have also been used worldwide in hostage rescue missions, similar to the school takeover in Beslan, Russia.[375] Hostage rescue is the most challenging work facing domestic SWAT teams. Thus, PSBS would need to work with its assigned tactical team to avoid becoming a hindrance during an assault.

4. Suicide Bomber Training

Bruce Hoffman explains that suicide attacks are extremely popular with terrorists "due to their unique tactical advantage. . . . Suicide tactics are effective and lethal."[376] They have a high success rate because suicide bombers are, in effect, smart weapons able to change direction and circumvent security measures.[377] Suicide bombings are generally easier to execute than other attack modes because they are inexpensive and less complicated to plan as no escape is needed. Suicide bombers appear quite natural in their surroundings; thus, they are powerful psychological weapons, feeding a terrorist group's need to generate fear and insecurity.[378]

The use of suicide bombings rose significantly after 9/11, notes Hoffman, with some terrorist groups "making it trendy," promoting the tactic's diffusion among networked terrorist groups.[379] Indeed, Horowitz suggests suicide bombings are thought to be a "normalized" tactic in the terrorist toolkit, today seen as a legitimate means of attacking civilians.[380] Although the American experience with suicide bomber attacks in the homeland is limited compared to other countries, the United States is not immune. In 1997, a suicide bomb attack against the New York City subway system was disrupted. A

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[375] "Russia: Independent Beslan Investigation Sparks Controversy," Radio Free Europe/Radio Liberty, August 29, 2006, https://www.rferl.org/a/1070905.html.

[376] Bruce Hoffman, *Inside Terrorism*, 3rd ed. (New York: Columbia University Press, 2017), 140.

[377] Dwayne C. Day, "A Uniform Approach to National Suicide Bomber Incident Response and Recovery" (master's thesis, Naval Postgraduate School, 2008), 1–2, http://hdl.handle.net/10945/4254.

[378] Hoffman, *Inside Terrorism*, 140–41; Day, "A Uniform Approach," 7.

[379] Michael C. Horowitz, "The Rise and Spread of Suicide Bombing," *Annual Review of Political Science* 18 (2015): 81, https://doi.org/10.1146/annurev-polisci-062813-051049.

[380] Horowitz, 72, 81.

second attack against the same subway system was also foiled in 2009.[381] These are just two examples.

Hoffman understands the need to prepare for the eventuality of domestic suicide bombings, stating "training is required . . . for law enforcement officers to identify a potential suicide bomber, confront a suspect, and to respond and secure the area around the attack site in the event of an explosion."[382] If the suicide bomber has exploded or been subdued before detonation, tactical units and bomb technicians will need to be summoned to help secure the scene and render any hazards safe. Response protocols for suicide bombers (and their consequences) are different from traditional police tactics. Such special considerations include the possible presence of a suicide bomber handler, a secondary device, the need not to move the deceased until he has been cleared of explosive hazards, use-of-force issues, and proper scene management. A suicide bomber attack would naturally bring together tactical and PSBS assets, so cross-functional training of this type is a logical progression for SWAT and PSBS. Response protocols are best determined in advance during hands-on training and joint exercises.[383]

5. Special Event Planning

Significant events, much like the Super Bowl, require a sizeable joint hazard presence. The Department of Justice prepared a document for planning and managing security for major special events, extolling the collaboration and coordination of CFTs working together in a joint hazard response.[384] Invariably, different professions end up operating together. The concept of a strike team can integrate SWAT, PSBS, canine teams, tactical medics, and CBRNE specialists in a mobile joint hazard framework.[385] The strike

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[381] Hoffman, *Inside Terrorism*, 173–75.

[382] Hoffman, 179.

[383] Lisa L. Spahr, Joshua Ederheimer, and David Bilson, *Patrol Level Response to a Suicide Bomb Threat: Guidelines for Consideration* (Washington, DC: Police Executive Research Forum, 2007), 13–17; Day, "A Uniform Approach."

[384] Edward Connors, *Planning and Managing Security for Major Special Events: Guidelines for Law Enforcement* (Washington, DC: Office of Community Oriented Police Services, 2007), https://www.hsdl.org/?abstract&did=482649.

[385] Jeffrey Westcott, "Super Bowl XXXIX: The Successful Response of the FBI and Its Partners," *FBI Law Enforcement Bulletin*, January 2006.

team concept provides a great opportunity to iron out integration issues and ample time to talk shop with other disciplines, develop a common language, discuss response options, and provide a better understanding of each other's capabilities.[386] When Kaszeta integrated CFTs during national special events, he "realized a lot of people cared about doing the right thing, but no one person or department had the whole answer on how to prepare."[387] In this way, the unique needs of special events demand joint teams handle the challenges.

The five examples of joint training, outlined above, are the major boundary-spanning activities between SWAT and PSBS. Figure 9 depicts a complete model of collaboration between SWAT and PSBS around boundary-spanning activities.

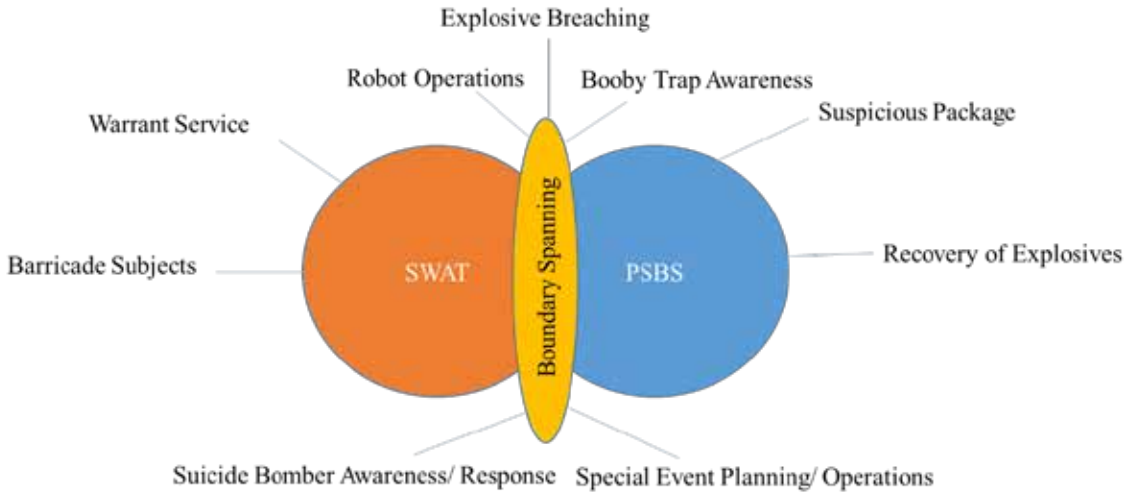

Figure 9. Boundary-Spanning Activities for SWAT and PSBS

Certain qualities help build effective collaboration. There must be a clearly defined and shared purpose, mutual trust and respect, and role clarity. High levels of communication are needed between team members.[388] Suppose SWAT and PSBS can participate in more frequent joint training while concentrating on the boundary-spanning activities in Figure 9. In that case, trust can begin to develop, and collaboration has a chance

[386] Kaszeta, *CBRN and Hazmat Incidents*, xiv–xv.

[387] Kaszeta, xiv.

[388] Cook, *Building a High-Performance Team*, 12–18.

to become more the norm than it is today. Joint training has value, not only for preparing and testing plans and equipment but also for maintaining resilient relationships vital in crisis management.[389] As Andersson notes, a focus on training and interactions in boundary-spanning tasks can help CFTs do two things: learn to collaborate and learn through collaboration. The former develops boundary work, and the latter builds on boundary awareness. Andersson explains that together, both "serve as a foundation for understanding how shared responsibilities can be handled."[390]

These boundary-spanning tasks will help develop trust and collaboration between SWAT and PSBS before a crisis demands it. Confidence building, problem solving, and better role clarity and knowledge transfer will surely benefit. The prize is an increased overall response capability for both SWAT and PSBS in the threat environment the United States currently faces.

B. LEADERSHIP

For collaboration to work, leadership is required. In examining the factors that affect leaders during a crisis, Michael Saltz has found that "leaders should establish trusting relationships with key partners in advance of a crisis event."[391] Additionally, mutual trust should occur not only at the top of a command structure but also at the lower levels.[392] This section briefly discusses two models—Zaccaro, Heinen, and Shuffler's model of integrative team leadership and effectiveness and Hocevar, Jansen, and Thomas's inter-organizational collaborative capacity (ICC) model. This section also discusses conflict, which is inevitable in a collaborative effort, because leaders should have an understanding of the pitfalls of collaboration to prevent a toxic team environment.

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[389] Andersson, "In Case of Emergency," 28, 49, 106.

[390] Andersson, 106.

[391] Michael E. Saltz, "Crisis Leadership and Complex Crises: A Search for Competencies" (master's thesis, Naval Postgraduate School, 2017), xv, http://hdl.handle.net/10945/56798.

[392] Janssen et al., "Advances in Multi-Agency Disaster Management."

1. Leader-Centric vs. Team-Centric Leadership

Ultimately, the leadership of a SWAT/PSBS cross-functional team will determine whether the group has a leader-centric or team-centric outlook. The leader-centric role underscores the leader as responsible for shaping the team process and effectiveness. In this vertical approach, team members are "treated as mostly passive recipients of the leader's influence. . . . Their primary role is to grant legitimacy to the leader's exercise of power and influence."[393] Individual leadership skills are thus targeted for growth.

Another perspective is more team-centric in its outlook, involving shared leadership.[394] The collective has the responsibility of directing and managing a team's efforts. In other words, team processes and effectiveness are shared among the team members. Leadership and influence rotate to different individuals, given the skills and expertise needed in a particular situation.[395] Thus, a systems approach emerges, focusing on the team's leadership skills.

In reality, both the leader-centric and team-centric approaches can be integrated. On the one hand, the chain of command is vital, especially in critical incident response. A team's success or failure ultimately rests on the shoulders of its leadership. Even with a team-centric approach, the leader still has the responsibility of leading and managing the team and its actions.[396] On the other hand, the leader can promote an attitude of team self-management. The leader's function would be to staff "the team with members who have sufficient levels and diversity of requisite task, teamwork, and leadership skills."[397] The leader provides specific expectations for team interaction, and leadership is served by allowing the team to develop from within while nurturing a culture of critical thinking.[398]

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[393] Stephen J. Zaccaro, Beth Heinen, and Marissa Shuffler, "Team Leadership and Team Effectiveness," in *Team Effectiveness in Complex Organizations: Cross-Disciplinary Perspectives and Approaches*, ed. Eduardo Salas, Gerald F. Goodwin, and C. Shawn Burke (New York: Taylor & Francis, 2009), 85.

[394] Zaccaro, Heinen, and Shuffler, 86–87.

[395] Zaccaro, Heinen, and Shuffler, 85.

[396] Zaccaro, Heinen, and Shuffler, 87.

[397] Zaccaro, Heinen, and Shuffler, 87.

[398] James and Wooten, *Leading under Pressure*, 106.

Disciplines that can provide value to a team's mission should be consulted and their skills and abilities added to the team's collective. Leaders then coach their teams to achieve the overall team's mission by managing the boundary spanners, promoting interdependent relationships, and managing team processes.

2. Dynamic of Team Interaction

Zaccaro, Heinen, and Shuffler present a model of integrative team leadership and effectiveness with two assumptions. First, capable team leadership manages team outcomes by promoting a team's interdependence and cohesion while helping to reduce process loss. Second, a leader's influence is mediated by a group's interaction through team development, process, and emergent skills. Figure 10 illustrates the relationship between team leadership and team interaction.

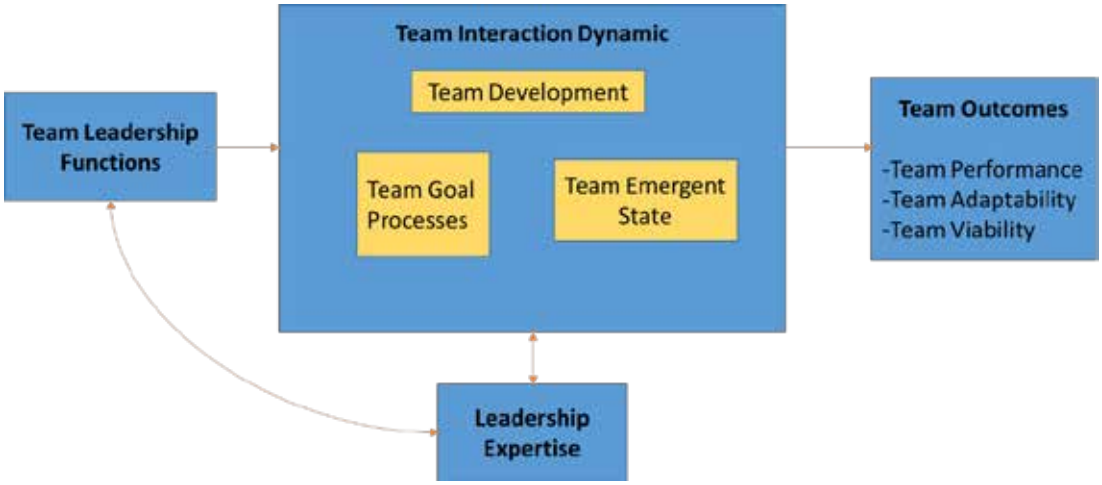

Figure 10. An Integrative Model of Team Leadership and Effectiveness[399]

As shown in Figure 10, leadership is the catalyst for team performance, adaptability, and viability. To integrate teams into a collaborative enterprise, the leader

[399] Source: Zaccaro, Heinen, and Shuffler, "Team Leadership and Team Effectiveness," 94.

should account for their bias and minimize the pressure of conformity.[400] Maintaining open dialogue and accepting different views and opinions is helpful. Moreover, because leadership has to be accessible, it ought to encourage and empower team member involvement, allowing for constructive feedback while promoting innovation. If a leader fails to encourage open dialogue and involvement, he only promotes conformity through bias and ego.[401] Strong personalities and egos are best left checked at the door or openly acknowledged and, if possible, used as a strength in examining issues.

3. Inter-organizational Collaborative Capacity

Another research model used to develop teamwork and collaboration is the ICC model, developed by Hocevar, Jansen, and Thomas.[402] A key assumption of the ICC model is that building collaboration requires specific attention to leadership. The ICC model was developed to help public-sector agencies, from municipal to federal, achieve collective results and support one another in a crisis. Figure 11 defines the ICC model's five domains.

[400] James E. Ricciuti, "Groupthink: A Significant Threat to the Homeland Security of the United States" (master's thesis, Naval Postgraduate School, 2014), 95–104, http://hdl.handle.net/10945/44650.

[401] James and Wooten, *Leading under Pressure*, 113–14.

[402] Susan Hocevar, Erik Jansen, and Gail Fann Thomas, *Inter-organizational Collaborative Capacity (ICC) Assessment* (Monterey, CA: Naval Postgraduate School, 2012), 3–5, http://hdl.handle.net/10945/38477.

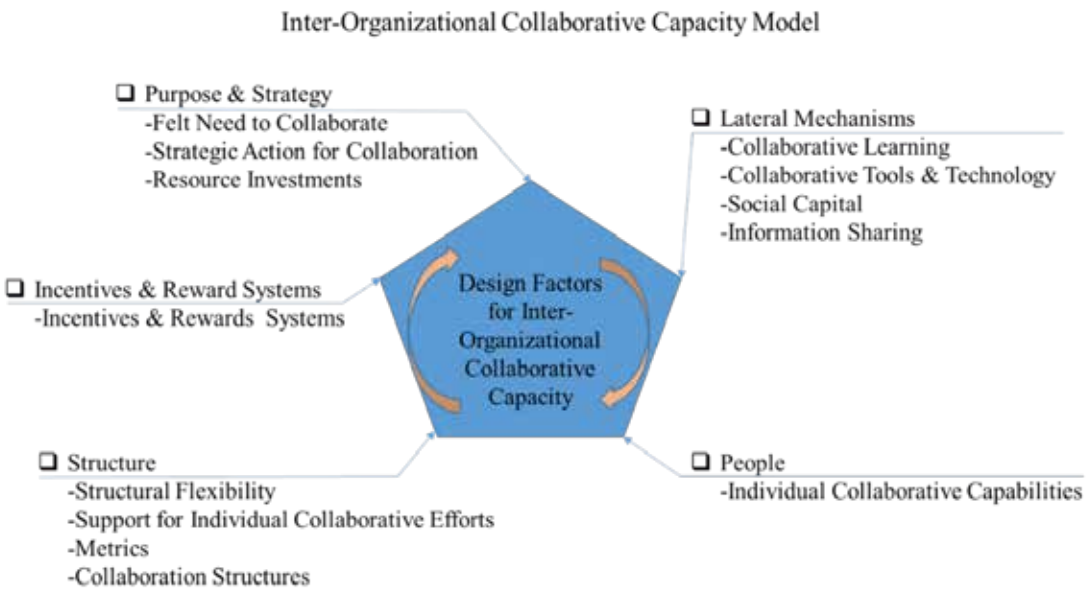

Figure 11. Inter-organizational Collaborative Capacity Model[403]

Leaders initially determine the need to collaborate (felt need), and define a purpose and strategy for effective collaboration. Resources, personnel, equipment, and time are factors to weigh in this process. Established roles (role clarity), including boundary-spanning roles, must be developed within the structure domain. Known roles become involved in the domain of lateral mechanisms, whereby social capital becomes the social and professional glue that binds different disciplines and becomes the basis for knowledge transfer and trust building. The domain of people, the cornerstone of the ICC model, includes the attitudes, behavior, and capabilities that ultimately affect an organization's ability and, more importantly, desire to collaborate.

A commonality of both the integrated model of team leadership and team effectiveness and the ICC model is a focus on shared cognition, as discussed earlier in this thesis. In that sense, leaders can help the process by aligning artifacts.[404] Artifacts, in one context, are usually defined as the visible representation of an organization such as logos and branding. However, they can also include the shared stories and values of the

[403] Source: Hocevar, Jansen, and Thomas, *Inter-organizational Collaborative Capacity*, 3.

[404] McShane and Von Glinow, *Organizational Behavior*, 281–83.

organization's culture, used either to keep an existing culture or to create a new one. Leaders play a role in developing a shared identity and creating the "memorable events that symbolize the cultural values they want to develop or maintain."[405]

Leadership in a crisis is about "building a foundation of trust among stakeholders. . . . Leaders then use that foundation of trust to prepare an organization for difficult times."[406] Disagreements will happen, and conflict will occur, but a willingness to work toward the collaborative greater good, not just for an individual group, is paramount. Fundamentally, the success or failure of building a team rests with the leader who both supports and challenges team members by providing a climate of cooperation and a healthy respect for the ability to voice differences and appreciate conflict.[407] Saying one thing yet doing another destroys a leader's credibility, which in turn can damage a team's credibility.

4. Managing Conflict

While collaborative efforts, such as CFTs, offer tangible benefits to deal with complex problems, they are not without challenges.[408] Although collaboration is successful in establishing "a positive, trusting group climate, based on interpersonal liking and shared norms and values," coordinating activities and contending with competing demands, ideas, voices, and opinions of team members may prove challenging.[409] Different types of conflict affect collaborative effort. Conflict can be both positive and negative—it can be a catalyst for innovation or it can lower performance and increase turnover. Sooner or later, conflict will negatively affect collaboration, and understanding how to manage it is vital for an organization's health.

Studies vary on how to respond to a conflict.[410] On the one hand, avoiding conflict may be a suitable method because ignoring the issue allows the conflict to lose prominence.

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[405] McShane and Von Glinow, 282.

[406] James and Wooten, *Leading under Pressure*, 6.

[407] Cook, *Building a High-Performance Team*, 13–15.

[408] De Dreu and Van Vianen, "Managing Relationship Conflict," 309.

[409] De Dreu and Van Vianen, 310.

[410] De Dreu and Van Vianen, 310, 323–24.

On the other hand, collaboration (trying to work it out through mutual agreement) and contending (imposing or asserting a solution) can either solve the conflict or escalate its prominence. Little data exist to show whether either measure is ultimately successful in practice. De Dreu and Van Vianen conducted a study that attempted to answer that question. They found two types of team conflict exist: relationship conflict and task-related conflict. Task-related conflict requires a collaborating response. Instead of being avoided, task-related conflict should be confronted. Conversely, relationship conflict should be avoided. Fundamentally, developing and maintaining mutual trust is thought to be a preventive measure of overall conflict as trust limits the opportunity of task-related disagreements from turning into relationship-based conflict. De Dreu and Van Vianen's findings have relevance as they provide leadership with recommendations for managing conflicts when they emerge.

Although relationship conflict might be hard to dissect, task-based conflict is better understood. McShane warns, "The main problem with teams is that they have additional costs called process losses."[411] Process loss is the cost of time and effort in developing the framework for collaboration rather than completing the required tasks.[412] Said another way, developing collaborative processes and cognition expends time and energy and distracts the team from doing the work it was formed to do in the first place. Process loss is typically made manifest during the initial collaborative development when new members join or through turnover, which disrupts the group's collective memory.[413] Every team that brings in new members or expertise will go through this process, but it is up to the leader to minimize its disruption to the overall mission.

Another complaint with collaboration is social or cognitive loafing. When more people join a combined effort, other members apply less effort. Social or cognitive loafing tends to occur in larger teams when individual performance is harder to evaluate and qualify. It also occurs when teams are diverse by location, echoing Edmondson and

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[411] McShane and Von Glinow, *Organizational Behavior*, 148.

[412] McShane and Von Glinow, 147–49.

[413] Robert C. Ziller, "Toward a Theory of Open and Closed Groups," *Psychological Bulletin* 64, no. 3 (September 1965): 167, https://doi.org/10.1037/h0022390.

Roloff's point. Loafing can be minimized by making team members' contributions more noticeable. Also, loafing is reduced when the task at hand is critical or essential. Team members who strongly value the team, and its mission, also help minimize social and cognitive loafing.

Groupthink is also a well-known researched effect of the homogenous nature of teams. It is defined as a tendency to ignore alternative courses of action by discounting different perspectives.[414] Members who offer different perspectives are ostracized, punished, or removed. Janis provided the formative work on groupthink in 1972, researching its effect on U.S. foreign policy disasters, such as the Bay of Pigs incident, and foreign policy successes, such as the Marshall Plan. Janis showed that groupthink occurs when group membership and conformity are prized over group outcomes. Other studies have found that groupthink does not degrade team performance but has a positive team effect, such as increased cohesion.[415]

Cohesion is valued, especially in the profession of emergency responders. They generally come from similar backgrounds with like values and beliefs, so the promotion of discipline could be a positive effect of groupthink. In a study by Ahlfinger and Esser, groupthink is presented as an inhibitor of effective teamwork.[416] Their results suggest that if group leaders push their agendas, teams might exhibit intense symptoms of groupthink. In other words, leaders who use their authority to make teams in their image reduce critical thinking and suppress dialogue. Questions and inquiries are then perceived as a challenge.

Groupthink, as recommended by Janis as well as Ricciuti, can be prevented by seeking out participation from outside subject-matter experts.[417] Any collaborative effort should include a culture of open dialogue with the ability to discuss objections and

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[414] Irving Lester Janis, *Victims of Groupthink: A Psychological Study of Foreign-Policy Decisions and Fiascoes* (Boston: Houghton Mifflin, 1972).

[415] Jin Nam Choi and Myung Un Kim, "The Organizational Application of Groupthink and Its Limitations in Organizations," *Journal of Applied Psychology* 84, no. 2 (1999): 297–306, https://doi.org/10.1037/0021-9010.84.2.297.

[416] Noni Richardson and James Esser, "Testing the Groupthink Model: Effects of Promotional Leadership and Conformity Predisposition," *Social Behavior and Personality* 29, no. 1 (2001): 31–41, https://doi.org/10.2224/sbp.2001.29.1.31.

[417] Janis, *Victims of Groupthink*, 248–50; Ricciuti, "Groupthink," 103.

alternative actions. The leader should be impartial and be aware of his or her bias, focusing on the scope of the problem and resource availability. Leadership should assign independent planning and evaluation groups to work on a single problem. Independent planning and evaluation groups should, from time to time, collaborate to iron out differences. Outside experts should be included to provide alternative ways to examine issues rather than answers for specific skill-related tasks. The role of a devil's advocate within each group should be assigned to provide challenging arguments. Even after a team consensus is made, it can provide the ability to raise any lingering doubts before making a definitive choice.[418]

In sum, leadership has to be open and supportive to influence the outcome of an integrated joint hazard response. With an idea of the barriers and pitfalls of collaboration, what is needed for SWAT and PSBS collaboration is buy-in from leadership at the local and state level, first and foremost. It will be local and state first responders who arrive on scene of a critical incident response first. Having leaders with a SWAT and PSBS background is paramount to success. Most SWAT missions will not require PSBS expertise, but the possibility exists that SWAT will encounter a CBRNE threat or obstacle that stops or slows a critical operation. No single job function, posits Keith Johnson, is sufficient to respond to complex critical incidents appropriately.[419]

C. WHEN COLLABORATION WORKED

Crisis management has two main approaches: a robust approach and a resilient approach. A robust approach is built on "unwanted outcomes and malfunctions from a hindsight perspective, and focuses on avoiding these in future responses."[420] A resilient approach enables the development of social systems and social capital, such as trust, to "proactively adapt to and recover from both expected and unexpected disturbances."[421] The

[418] Janis, *Victims of Groupthink*, 174–219.

[419] Keith H. Johnson, "Changing the Paradigm: Implementation of Combined Law Enforcement, Fire, and Emergency Medical Service (EMS) Cross-Disciplinary Response to Hostile Events" (master's thesis, Naval Postgraduate School, 2014), 44, http://hdl.handle.net/10945/44587.

[420] Andersson, "In Case of Emergency," 49.

[421] Andersson, 49.

proactive, resilient approach emphasizes a focus on abilities rather than inabilities. Better collaboration between SWAT and PSBS before a crisis demand is an example of such a resilient approach. The following example of SWAT and PSBS collaboration was successful because the ingredients to cultivate trust and enable collaboration were present. The author of this paper witnessed these factors firsthand as an active participant. The incident also served as the genesis for this thesis.

On April 29, 2014, before 6:00 a.m., police officers from the Cobb County Police Department near Atlanta, Georgia, responded to a FedEx package sorting facility in Kennesaw for a shooting. Once officers arrived on the scene, they learned the incident had evolved into an active shooter call.

The 500,000 square foot FedEx sorting facility was a significant distribution site for FedEx in north Atlanta. Large 18-wheel tractor-trailers delivered bulk parcels, packages, and letters sent from around the world throughout the day. Miles upon miles of conveyor belts traversed the facility, racing the packages from the arriving larger trucks to smaller trucks destined to make the final deliveries. Hundreds of employees were on hand around the clock to help unload, sort, and reload the packages.

The shooter, 19-year-old Geddy Kramer, was one of the employees. As reported by *Atlanta Journal-Constitution* reporter Alan Judd, he "favored video games set in dystopian worlds. He listened to music with angry lyrics. He dabbled with drugs. He desperately wanted to have sex. He watched porn on his iPhone. He saw a therapist for depression. He grieved, mostly in silence, over his parents' divorce."[422]

Even though Geddy Kramer had only been four years old when the Columbine High School massacre happened, he idolized the attackers.[423] Like Klebold and Harris, Kramer wanted to attack his high school. "I am the f—ing outcast of the world," he wrote.[424] "I'm sick of it. I'm sick of being the weird one. I'm sick of being the one everyone

[422] Alan Judd, "An American Teenager," *Atlanta Journal-Constitution*, accessed October 24, 2020, https://investigations.ajc.com/fedex-shooter/.

[423] Judd.

[424] Judd.

looks at and laughs. I hate this place. I hate this world."[425] While in school, Kramer wrote, "These . . . idiots have no idea what I'm writing. . . . I wish I could kill all of them, but there's just not enough time and so much to do. And, like Dylan Klebold, I think I'll have some followers."[426]

The school shooting did not take place, but Kramer's attempt to emulate Dylan Klebold and Eric Harris came soon enough.[427] After high school, he got a job at the FedEx distribution center in Kennesaw. After a dispute with his supervisor, Kramer's troubling thoughts returned. Kramer purchased a shotgun and, according to Judd,

> prepared a final checklist for an attack. He broke it down into three categories: weapons (the shotgun, four Molotov cocktails, a knife and at least and 50 shotgun shells); equipment (including a bandolier for the shells and a pouch for carrying the Molotov cocktails); and miscellaneous (one item—suicide shell).[428]

Police officers quickly arrived on the scene. They were met with a security guard who had been shot at the entrance guard shack, other gunshot victims, and numerous incendiary IEDs.[429] Vehicles, including the shooter's, soon were deemed suspicious, adding further points of concern to investigate. Because of the facility's size and the hazards present, a mutual aid call was transmitted.

Although the outcome was not as tragic as Columbine, the environment was eerily similar: an active shooter, IEDs throughout, multiple victims to rescue, and numerous outside jurisdictions and disciplines answering the call to assist. Luckily, the lesson of cross-functional collaboration from Columbine was not forgotten; the value of trust and collaboration highlighted in this thesis affected the outcome. A good part of the responding SWAT teams and PSBS from the local agencies, including the City of Atlanta and

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[425] Judd.

[426] Judd.

[427] Judd.

[428] Judd.

[429] J. D. Adcock, *Cobb County Police Department Incident Synopsis and Debrief: Multi-Jurisdictional Response to Active Shooter Incident, FedEx Aggravated Assault, April 29, 2014* (Marietta, GA: Cobb County Police Department, 2019).

Gwinnett County Police, had spent time and effort developing a relationship built on trust through dedicated collaborative joint hazard training.

For years, the Metro-Atlanta PSBSs have been dedicated to a multi-year iterative training evolution that has focused on joint collaboration among different jurisdictional teams and disciplines. The problems of diversity by way of variety, separation, and disparity, as illustrated by Edmondson and Roloff, diminished by developing a shared cognitive model and collective identity through role clarity and knowledge transfer. Specialized units, such as SWAT and PSBS, have held periodic visits with each other to participate in joint training and team building. Through a multi-year training evolution, local PSBS and SWAT units became more socialized, and the barriers to trust, such as group competition and group identity and cultural variances, began to diminish. The exogenous team process of Power and Alison's taxonomy of uncertainty was addressed as communication and role understanding improved. The gap of trust shrunk.

The promoters of trust, as outlined in this thesis—communication, coordination, and cooperation—were prioritized to develop competencies and confidence in each other's abilities. As role clarity improved, SWAT and PSBS began to realize they could assist each other more. The assertion of "I did my bit; it is up to them know"—a common in-group/out-group trope—has become "How do *we* solve this?" A lack of trust, the greatest barrier to collaboration, as observed in Hocevar, Jansen, and Thomas's study, was thus overcome.

The trust developed and maintained by the Metro-Atlanta PSBS community before the crisis had a positive effect at the FedEx incident through relationship building and joint training. The trust surpassed calculus- and knowledge-based trust and transformed into identification-based trust. Lewicki and Bunker's point that mutual understanding and trust form the basis of identification-based trust was on exhibit. A salient common identification increased the opportunity for collaboration. Covey's four qualities of trust—integrity, intent, capabilities, and results—connected.

Trust played another role. It transferred from the PSBS community to the on-scene commanders making decisions through the Incident Command System. Trust, thus, proved Moynihan correct; it was indeed an indispensable complement to ICS. Regular joint skill

training helped to build relationships, which led to the development of identification-based trust. PSBS and SWAT teams, even from other jurisdictions, overcame the ambiguity of credibility and risk that tends to hamper effective collaboration. When Atlanta and Gwinnett PSBSs arrived at the scene, they were not left idle and siloed. Both PSBSs were quickly integrated into the response, thus producing a better collaborative effort to meet the environment's demands. PSBS, bomb detection dog teams, and SWAT elements were joined, producing CFTs to completely clear the facility and identify and mitigate hazards while searching for victims yet unaccounted.

The after-action report noted the one-team approach: "The cooperation and teamwork among various agencies to complete the critical tasks at hand was simply amazing."[430] That statement, made by the incident commander at the FedEx shooting, is unusually strong praise for a typical after-action report. Furthermore, that observation corresponds with research by Milica Stojmenovic and Gitte Lindgaard, whose 2013 social network analysis of emergency responders highlights the following salient point.[431] Management of such critical incidents as domestic terrorist events and active shooters is reinforced by mutual trust developed by cultivating and maintaining relationships and pressure testing any collaborative effort through frequent boundary-spanning joint training.[432]

Stojmenovic and Lindgaard's findings correlate with Moynihan's study on network governance of crisis response. Through a case study analysis, Moynihan determined "a durable basis for trust during crises is positive precrisis working relationships . . . [and] creating and ensuring the continuity of interorganizational liaisons who act as boundary spanners."[433] Both Stojmenovic and Lindgaard's and Moynihan's points were on display during the FedEx incident in Cobb County, Georgia. The incident commander's actions

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[430] Adcock, 9.

[431] Milica Stojmenovic and Gitte Lindgaard, "Benefits and Limitations of the Social Network Analysis When Explaining Instances of Ineffective Communication in Two Chemical, Biological, Radiological, Nuclear, and Explosives Simulations" (paper presented at the 2013 International Conference on Cloud and Green Computing, Karlsruhe, Germany, 2013), 327–34, https://doi.org/10.1109/CGC.2013.58.

[432] Stojmenovic and Lindgaard, 328, 333.

[433] Moynihan, "Network Governance of Crisis Response," 910.

and statements also highlight how leadership buy-in is crucial for any collaborative enterprise. Ultimately, identification-based trust and a willingness of leadership to collaborate were made manifest at the FedEx active shooter incident.

Integrating SWAT and PSBS boundary-spanning training and operations does not mean that SWAT teams learn how to disarm explosive devices or make booby traps safe, nor does it mean that PSBSs have become experts in close-quarter combat. It is important that SWAT and PSBS overcome the norms of non-involvement and spend time training with each other to cultivate trust and a TMS through an understanding of capabilities and roles before a crisis occurs. Integrating PSBS with specific tasks into SWAT enhances everyone's skillset. This shared knowledge promotes trust, builds confidence and credibility, expands relationships, and improves the team's overall capability through better collaboration.

In his book *One Mission*, Chris Fussell showcases the concept of integration in a joint hazard response framework by way of one simple equation: "Credibility = Proven Competence + Integrity + Relationship." Similarly, collaboration is the tapestry of a conversation, begun by making a connection, establishing trust, and starting a relationship. As Fussell expresses, the emphasis must be on "relationships over mission, trust over individual accomplishments. . . . This [is] the approach that [will] bring . . . tangible progress."[434]

[434] Chris Fussell, *One Mission* (New York: Penguin Publishing, 2017), loc. 1135 of 5927, Kindle.

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