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THESIS

BUILDING TEAM BELAY

by

Catherine P. Bernstein

September 2014

Thesis Advisor: Anders Strindberg
Second Reader: Lars Hedström

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13. ABSTRACT (maximum 200 words)

Disaster responders are exposed to continuous periods of intense stress, and as a consequence, some suffer mental or emotional adverse effects. In recognition of critical stress as a valid concern, many emergency service providers have attempted, organizationally, to provide their responders with access to traditional critical stress interventions. But when a catastrophic event occurs and mutual aid is invoked, disaster workers and volunteers will respond from diverse jurisdictions, frequently without immediate access to the psychosocial assistance provided by their home agencies.

It is incumbent upon incident commanders to be accountable for the psychosocial well-being of the disaster responders, just as it is their duty to ensure the physical safety of the responders under their command. However, our uniform organizational structure for disaster response, the National Incident Management System (NIMS), does not speak directly to the mental/emotional well-being of disaster responders. This thesis proposes interpreting NIMS and its supporting training modules so as to require a component to address disaster responder psychosocial resources. It further suggests that by leveraging precepts of social identity theory and concepts of swift trust, emergency operational team leaders may prime multi-jurisdictional responders to informal exchanges, fostering peer social support, and enhancing responder resiliency to critical stress.

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BUILDING TEAM BELAY

Catherine P. Bernstein
Senior Counsel, California Governor's Office of Emergency Services
B.S., California State University Northridge, 1983
J.D., Southwestern University School of Law, 1986

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requirements for the degree of

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September 2014**

Author: Catherine P. Bernstein

Approved by: Anders Strindberg
Thesis Advisor

Lars Hedström, Swedish National Defense College
Second Reader

Mohammed Hafez
Chair, Department of National Security

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ABSTRACT

Disaster responders are exposed to continuous periods of intense stress, and as a consequence, some suffer mental or emotional adverse effects. In recognition of critical stress as a valid concern, many emergency service providers have attempted, organizationally, to provide their responders with access to traditional critical stress interventions. But when a catastrophic event occurs and mutual aid is invoked, disaster workers and volunteers will respond from diverse jurisdictions, frequently without immediate access to the psychosocial assistance provided by their home agencies.

It is incumbent upon incident commanders to be accountable for the psychosocial well-being of the disaster responders, just as it is their duty to ensure the physical safety of the responders under their command. However, our uniform organizational structure for disaster response, the National Incident Management System (NIMS), does not speak directly to the mental/emotional well-being of disaster responders. This thesis proposes interpreting NIMS and its supporting training modules so as to require a component to address disaster responder psychosocial resources. It further suggests that by leveraging precepts of social identity theory and concepts of swift trust, emergency operational team leaders may prime multi-jurisdictional responders to informal exchanges, fostering peer social support, and enhancing responder resiliency to critical stress.

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LIST OF ACRONYMS AND ABBREVIATIONS

CDC	Center for Disease Control and Prevention
CISD	critical incident stress debriefing
CISM	critical incident stress management
CNG	California National Guard
DHS	Department of Homeland Security
DHSS	Department of Health and Social Services
DOD	Department of Defense
EMI	Emergency Management Institute
ERHMS	Emergency Responder Health Monitoring and Surveillance
ESF	emergency services function
FDNY	New York City Fire Department
FEMA	Federal Emergency Management Agency
NY-TF1	New York City Urban Search and Rescue Task Force 1
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NRT	United States National Response Team
NYPD	New York Police Department
PTSD	post traumatic stress disorder
SIT	social identity theory
USAR	urban search and rescue

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EXECUTIVE SUMMARY

The vulnerability of disaster responders to critical stress has been well documented. Disaster responders are exposed to continuous periods of intense stress, and as a consequence, some suffer from its mentally or emotionally disruptive influence. In the United States, many emergency service providers have recognized disaster mental health as a valid concern and have attempted to address critical stress organizationally.

However, when a catastrophic event occurs and mutual aid is invoked, disaster workers and volunteers will respond from diverse jurisdictions, frequently without immediate access to an employee assistance program or pastoral care. Moreover, due to the structure of mutual aid, emergency workers deployed as part of a multi-jurisdictional disaster response may find themselves working on operational teams with strangers. Many of these responders are away from home, away from their own social support system (family and friends), and without the informal peer-to-peer support of their own emergency response team members.

It is incumbent upon emergency managers to be accountable for the psychosocial care of the disaster responders, just as it is their duty to ensure the physical safety of the responders under their command. However, our uniform organizational structure for disaster response, the National Incident Management System (NIMS), does not specifically attend to the mental/emotional well-being of disaster responders.

This paper proposes interpreting NIMS and the training modules that support it to require a component to address disaster responder psychosocial care. Such an interpretation would be designed to secure the provision of critical stress interventions to emergency responders. This paper further suggests that by leveraging the precepts of social identity theory and swift trust, emergency managers, and perhaps other leaders in the homeland security enterprise, may be able to foster group identification amid temporary disaster response teams, prompting social support, a vital component to critical stress resilience.

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I gratefully acknowledge my mother and father for the values they instilled in me that prompted me to embark on this adventure and gave me the appreciation to relish it.

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I wish to thank Col. Avery Kay, USAF (Ret), for his unflinching belief in me.

This work is lovingly dedicated to Mum, the wind beneath my wings.

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I. INTRODUCTION

"It is not possible to ensure national security unless we secure the health of the workforce, and that includes mental health."

–Alexander Garza, assistant secretary for health affairs and chief medical officer, Department of Homeland Security, September 2011

A. THE PROBLEM SPACE: DISASTER RESPONDER ACCESS TO PSYCHOSOCIAL RESOURCES

As a corollary to their calling, disaster responders are exposed to continuous periods of intense stress.[1] As a consequence, some disaster responders experience adverse physical and/or psychological effects. It is well documented that first responders and disaster workers are "at special risk for Post Traumatic Stress Disorder and other negative emotional consequences of disaster."[2] The experience of these negative stress responses will be collectively referred to herein as "critical stress."[3] This paper focuses on the vulnerability of disaster responders to the injurious mental or emotional manifestations of critical stress and the possibility of enhancing responder resilience thereto by augmenting psychosocial resources.

Many emergency service providers have recognized disaster mental health as a valid concern and have attempted to address critical stress organizationally. Traditionally, the military, many fire departments, and many law enforcement organizations have provided chaplains to support their personnel. Emergency services providers also

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[1] As used herein, "disaster responders" encompasses those workers and volunteers deployed to provide public safety services during the response phase of an emergency, including, but not limited to: urban search and rescue, medical services providers, firefighters, law enforcement, and military service personnel.

[2] Margaret Gibbs, and Kim Montagnino, "Disasters, A Psychological Perspective," accessed November 24, 2012, http://www.training.fema.gov/emiweb/edu/docs/EMT/GibbsPsychology.doc, 10.

[3] For purposes of this paper, the term "critical stress," comprehends stress responses that manifest by the subject experiencing negative physical and/or psychopathological symptomology. For example, the appellation "critical stress," as used herein, encompasses post traumatic stress disorder (PTSD) or any one the criteria that comprise a PTSD diagnosis, such as: "...re-experiencing the traumatic event, usually in flashbacks or nightmares; . . .avoidance of situations and stimuli that could reawaken the trauma, for example, numbing one's feelings or withdrawing from others; and . . . increased level of arousal, for instance, sleep difficulties, irritability, and concentration problems." Gibbs and Montagnino, *Disasters: A Psychological Perspective,* 8.

maintain workers' compensation health coverage for their employees, including resources for psychiatric assistance and employee assistance programs.[4]

However, when a catastrophic event occurs and mutual aid is invoked, disaster workers and volunteers will respond from diverse jurisdictions, frequently without immediate access to an employee assistance program or pastoral care. Moreover, due to the structure of mutual aid, emergency workers deployed as part of a multi-jurisdictional disaster response may find themselves working on operational teams with strangers. Many of these responders are away from home, away from their own social support system (family and friends), and without the informal peer-to-peer support of their own emergency response team members.

It is incumbent upon emergency managers to be accountable for the mental/ emotional well-being of the disaster responders, just as it is their duty to ensure the physical safety of the responders under their command. However, our uniform organizational structure for disaster response, the National Incident Management System (NIMS), does not speak directly to the mental/emotional well-being of disaster responders. This thesis proposes interpreting NIMS and its supporting training modules to require a component to address disaster responder psychosocial resources. It further explores resilience to critical stress and the interplay between resilience, social support, and social identity. It also probes the concept of swift trust in the context of temporary groups.

The studies of social identity theory and swift trust examine the influences of social interaction upon group members' motivational behavior and operational performance, respectively.[5] Social identity theory elucidates individuals' inherent need to "belong" and the psychological remunerations actuating one to conform to group mores.[6]

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[4] Institute of Medicine, *Building a Resilient Workforce: Opportunities for the Department of Homeland Security: Workshop Summary* (Washington, DC: The National Academies Press, 2012).

[5] Henri Tajfel, *Social Identity and Intergroup Relations* (Cambridge: Cambridge University Press, 1982); Peder Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," *Team Performance Management* 17, no. 7/8 (2011): 354–368.

[6] S. Alexander Haslam, Anne O'Brien, Jolanda Jetten, Karine Vormedal, and Sally Penna, "Taking the Strain: Social Identity, Social Support, and the Experience of Stress," *British Journal of Social Psychology* 44, no. 3 (2005, September): 355–70, doi: 10.1348/014466605X37468.

Swift trust explores intra-group dynamics that contribute towards maximizing performance from temporary teams. This paper considers the hypothesis whether by leveraging notions of social identity theory and swift trust, emergency operational team leaders can "accelerate" group identity, priming temporary team members to social support.

As a society, we owe a debt of gratitude to our service personnel, first responders, and civilian disaster workers. Heroes, they daily put their lives on the line for others. Poignantly, in return for their dedication and selflessness, too many of these men and women are harmed as a consequence of their service. Morally, for their sakes and the humanity whom they protect, the emergency management community should inquire into any means that may mitigate the damaging effects of the stress disaster responders endure as a result of their service. Moreover, for those who are persuaded by budgetary considerations, in light of the potential workers' compensation liability, protecting the emotional/mental health of disaster responders is both fiscally responsible and prudent.[7]

B. LITERATURE REVIEW

The following reflects a literary exploration canvassing: 1) responder mental health needs; 2) the national policy pertaining thereto; 3) linking social support and resiliency; and 4) the potential for priming social support amid temporary disaster response teams using precepts of social identity theory and swift trust.

1. The Vulnerability of Service Personnel, First Responders and Disaster Workers to Critical Stress

There is an abundance of work validating the vulnerability of service personnel and first responders to critical stress. Much of the work has been written by individuals who have served as responders: fire fighters, emergency medical providers, law

[7] Institute of Medicine, *Building a Resilient Workforce*, 130.

enforcement officers, members of armed forces, and disaster services workers.[8] Academicians and mental health professionals have also contributed significantly to the body of work that is available regarding first responder critical stress.[9] The after effects of catastrophic incidents upon those responding to disasters have also been examined by numerous public service entities, such as the U.S. Department of Health and Human Services, Agency and the City of New York.[10]

Less authoritative is the body of work created by those involved in the provision of critical stress services. Although these publications corroborate the critical stress experienced by responders, vendors and commercial providers author them. Because of this, articles of this genre can come across as vehicles for advertisement, which detracts from their sway.

Taken as a whole, the materials reviewed authenticate the vulnerability of disaster responders to critical stress, the injury that can be occasioned by such stress, and the necessity of mitigating such harmful effects. In recognition that disaster responders are exposed to continuous periods of intense stress, and as a consequence, some suffer

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8 Michael Byrne, "Alabama: When the Going Gets Tough, Even the Tough Seek Help," June 17, 2011, Federal Emergency Management Agency, https://www.fema.gov/blog/2011-06-17/alabama-when-going-gets-tough-even-tough-seek-help; Steven Chumley, "The Best Approach to Crisis Intervention" (master's thesis, Naval Postgraduate School, 2012); "Peer Support at Ground Zero: Interview with Engineer Ann Peggs," International Association of Women in Fire and Emergency Services, 2002, http://www.i-women.org/archive_articles.php?article=9.

9 David Alexander, C. Psychol, and Susan Klein. "First Responders after Disasters: A Review of Stress Reactions, At-Risk, Vulnerability, and Resilience Factors," *Prehospital and Disaster Medicine*, 24, no. 2 (2009): 87–94, http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=ECE40881C924F9594208A5453A2EAA17?doi=10.1.1.176.1579&rep=rep1&type=pdf; Charles R. Marmar et al., "Predictors of Posttraumatic Stress in Police and Other First Responders." Annals of the New York Academy of Sciences 1071, no. 1 (July 1, 2006): 1–18; Kathy D. McKoy, "The Impact of Stress on First Responders: A Phenomenological Study," (Ph.D. dissertation, Capella University, 2010); New Jersey Center for Public Health Preparedness at the University of Medicine & Dentistry New Jersey, "First Responders Self Care, Wellness, Health, Resilience and Recovery Dealing with Stress," September 1, 2005, www.njcphp.org/legacy/drup/index.php?q=node/115; Lainie Rutkow, Lance Gable, and Jonathan M. Links, "Protecting the Mental Health of First Responders: Legal and Ethical Considerations," *Journal of Law, Medicine & Ethics* 39 (2011): 56–59; Scott Tracy, "How Cumulative Stress Affected the Lived Experience of Emergency Medical Service Workers after a Horrific Natural Disaster: Implications for Professional Counselors," Ph.D. dissertation, Duquesne University, 2007).

10 U.S. Department of Health and Human Services [USDHHS], *A Guide to Managing Stress in Crisis Response Professions* (DHSS Pub. No. SMA 4113) (Washington, DC: U.S. Department of Health and Human Services, 2005); Hilary Zelko, *On the Front Line: The Work of First Responders in a Post 9/11 World* (Ithaca, NY: Smithers Institute School of Industrial & Labor Relations, Cornell University, 2004); New York City, "9/11 Health: Rescue and Recovery Workers—What We Know," 2012, http://www.nyc.gov/html//doh/wtc/html/rescue/know.shtml.

mental or emotional adverse effects, many emergency service providers are attempting to address critical stress at an organizational level. However, there is debate within the emergency response community as to the appropriate method(s) for responding to critical stress. This debate is reflected throughout the field's topical literature.[11] This thesis will not endeavor to weigh in on the dispute. No attempt is made herein to assess best practices amongst conventional interventions. Rather, what is taken from an overview of the various schools of thought is that they universally acknowledge the significance of providing responders access to critical stress interventions and psychosocial resources. Appreciating that psychosocial resources are vital to disaster responders is a first step towards positing their augmentation.

2. Current Principles and Policy: National Institute for Occupational Safety and Health, U.S. National Response Team, RAND Recommendations, and the National Incident Management System

The Emergency Responder Health Monitoring and Surveillance (ERHMS) system emanates from efforts of the National Institute for Occupational Safety and Health (NIOSH) working collectively with the U.S. National Response Team (NRT) and a number of federal agencies, state health departments, labor unions, and volunteer emergency responder groups. The ERHMS system is comprised in two publications, the *ERHMS Technical Assistance Document* and the *ERHMS A Guide for Key Decision Makers*, which provide a schematic for emergency managers to track disaster responder health and safety.[12]

The purpose of the EHRMS *Technical Assistance Document* is "to provide a recommended health monitoring and surveillance framework, . . . which includes specific recommendations and tools for all phases of a response, including the pre-deployment,

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[11] One school advocates critical incident stress management while another school avers that the benefits of critical incident stress debriefing are questionable at best= and possibly harmful to the participants. Still other experts are proponents of "psychological first aid." Recent literature also discourses upon employing chaplains and peer-to-peer support as critical incident stress intervention resources.

[12] U.S. National Response Team, *Emergency Responder Health Monitoring and Surveillance: A Guide for Key Decision Makers* (Washington, DC: U.S. National Response Team, 2012).

U.S. National Response Team, *Emergency Responder Health Monitoring and Surveillance, Technical Assistance Document* (Washington, DC: U.S. National Response Team, 2012).

deployment, and post-deployment phases."[13] The design of medical monitoring and surveillance is to gather crucial information to focus risk prevention and mitigation efforts and to identify which responders would benefit from post-deployment referral. In sum, the EHRMS is about collecting information to trigger and support decisions to take safety actions for responders (control measures).

While offering much detail as to how responder health surveillance and monitoring may be conducted, the EHRMS does not dictate how responder agencies are to act upon the data thus accumulated. The mechanics of carrying out prevention and mitigation measures are left to the devices of the various response agencies attempting to follow the guidelines. In this way, the *Technical Assistance Document* can be likened to a simple smoke detection device. A basic smoke detector will give the alert that conditions are present consistent with fire, thereby providing vital, possibly lifesaving information. But a detector alone will not direct the occupants how to react (evacuate, call fire department, put out the fire). Those who are alerted must have and carry out a response plan. By the same token, the EHRMS can assist responder agencies to recognize when a mental health intervention is indicated. But the emergency management community must have command of resources to provide the appropriate aid.

The EHRMS is a valuable work in that it provides essential tools for assessing responder health. In doing so, ERHMS implicitly concurs with the principle that the emergency management community's responsibility to disaster responders extends to their mental/emotional well-being. But the ERHMS's sparse comments with regard to responder "emotional health status," while alluding to the issue of psychological well-being and "psychological toxins," provides little pragmatic substance for delivery of responder psychosocial resources.[14]

A prior study conducted by the NIOSH in conjunction with RAND, *Protecting Emergency Responders, Volume 3, Safety Management in Disaster and Terrorism Response*, includes within its recommendations that the emergency management

[13] Ibid.

[14] U.S. National Response Team, *Emergency Responder Health Monitoring and Surveillance, Technical Assistance Document*, 6–7.

community, "Protect the Mental Health of the Response Workforce by Managing Critical Incident Stress."[15]

Regrettably, the structure of NIMS is currently not interpreted to effectuate the ERHMS's intent with regard to the potential mental health needs of responders. Nor is there any mechanism within NIMS for either development or implementation of the NOISH/RAND recommendation to protect the mental health of the response workforce. The framework of NIMS and the training modules that support it do not directly speak to the mental/emotional well-being of disaster responders.[16]

ERHMS avers its intention to be consistent with the National Incident Management System. This paper will propose that a necessary step to carrying out the purport of the EHRMS is interpreting the National Incident Management System (NIMS) to encompass responder emotional/mental health. Such an interpretation will comport with both the EHRMS and the NOISH/RAND recommendations. When NIMS is so interpreted, the responsibility for provision of responder psychosocial resources will be vested with the incident command.[17] Emergency managers will necessarily be provided training regarding mental health risks and acquainted with services available to support the responders. In this way, when EHRMS detects a need for a mental health intervention, emergency management will have command of the tools needed to respond, and the NOISH/RAND recommendation to protect the mental health of the response workforce can be realized.

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[15] Brian A. Jackson, *Protecting Emergency Responders*, Vol 3, *Safety Management in Disaster and Terrorism Response* (RAND Publication No. MG-170) (Santa Monica, CA: RAND Science and Technology Policy Institute and the National Institute for Occupational Safety and Health, 2004), http://www.rand.org/pubs/monographs/MG170.html.

[16] Federal Emergency Management Agency, "Appendix B," in *National Incident Management System* (Washington, DC: Federal Emergency Management Agency, 2008).

[17] Both the ERHMS and the NOISH/RAND recommendations place responsibility for responder health with the safety officer within incident command, in coordination with the medical unit if there be one.

3. Linking Social Support and Resiliency

The latest trend for addressing the exposure of service personnel to critical stress has been a move towards building individual resilience.[18] As part of the Department of Defense's Comprehensive Soldier Fitness, the California National Guard (CNG) has recently incorporated a resilience component to its training. Developed by the University of Pennsylvania, the CNG Master Resilience Training Program is designed to promote greater resilience in CNG personnel. The competencies strengthened through the training are calculated to mitigate the adverse emotional and mental impressions of critical stress. Without abandoning traditional interventions, such as counseling, chaplaincy, and peer-to-peer support, the body of work reflected in the training is geared towards prevention/ mitigation and represents the most contemporary thinking in the field.

Material to this thesis is the Master Resilience Program's corroboration of two interrelated propositions: 1) the plausibility of mitigating the adverse effects of stress by enhancing resilience; and 2) that social support can beneficially contribute to resilience. Upon these premises, the thesis will posit enhancing resilience to critical stress, by fostering social support.

But the Master Resilience Program is just one example of a prevalent theme within the military and emergency management communities building resilience as a strategy for mitigating risk of harm caused by stressors. In 2012, the Institute of Medicine published its report, *Building a Resilient Workforce: Opportunities for the Department of Homeland Security: Workshop Summary*. That study was supported by collaboration between the National Academy of Sciences and the Department of Homeland Security. It examines factors influencing workplace effectiveness and resilience, reviews resilience programs and interventions, and explores the interplay between individual and organizational resilience and performance measures.

What gives the Institute of Medicine's report its heft are the pedigrees of the contributors. The impressive assembly includes scholars and professionals who advance their opinions from first-hand observations of real-world experiences and disaster

[18] Institute of Medicine, *Building a Resilient Workforce.*

responses. This report authenticates several things: 1) that disaster workers are exposed to extreme stressors, and as a consequence, some experience negative effects of critical stress; 2) that building resilience is a valid mitigating strategy to address critical stress; and 3) that social support is recognized as contributing to resilience.[19]

Among contemporary writings expounding upon social support and resilience is a white paper published in 2011 by the Defense Centers of Excellence, *Identification of Best Practices in Peer Support Programs: White Paper*. Providing a comprehensive and objective analysis of peer-to-peer programs, the white paper reiterates, "Strong social support networks have been linked to resilience, which is fundamental component of successfully managing stress."[20] Defining peer support as "assistance provided by a person who shares commonalities with the target population . . ." the analysis highlights the special effectiveness of programs that are able to leverage the benefits from the "uniqueness of peer status."[21]

The study validates that the potency of "uniform-to-uniform" dialogue is the capacity for peers to provide "emotional support, information and advice, practical assistance, **and help in understanding or interpreting events** [emphasis added]."[22] The work's illumination of peer social support is central to the instant thesis, because it corroborates the nexus between social identification, social support and resilience.

4. The Potential for Priming Social Support amid Temporary Disaster Response Teams Using Precepts of Social Identity Theory and Swift Trust

A seminal work in its field, *Social Identity and Intergroup Relations* canvases the precepts of social identity theory.[23] The publication, meticulously compiled and edited by

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[19] Ibid.

[20] Nisha Money, Monique Moore, David Brown, Kathleen Kasper, Jessica Roeder, Paul Bartone, Mark Bates, *Best Practices Identified for Peer Support Programs*, Defense Centers of Excellence for Psychological Health & Traumatic Brain Injury, 2011, http://www.dcoe.mil/content/Navigation/Documents/Best_Practices_Identified_for_Peer_Support_Programs_Jan_2011.pdf, 4.

[21] Ibid., 14.

[22] Ibid.

[23] Tajfel, *Social Identity and Intergroup Relations*.

Henri Tajfel, explores how identifying oneself as being a part of a group can provide positive value to an individual's sense of self.

In the context of homeland security, a growing body of work uses social identity theory as an analytical tool to explain what motivates individuals to conform to group mores and actuates them to extremism.[24] This construct superimposes Tajfel's theoretical framework to the architecture of radicalization, recruitment, and targeting by terrorist organizations.

In *Multiculturalism and Intergroup Relations*, Fathali M. Moghaddam expands upon the work of Tajfel and psychologist Muzafer Sherif and discourses upon the concept of superordinate goals. The concept of superordinate goals proposes "under certain conditions group members come to perceive themselves as belonging to subgroups encompassed by a superordinate group identity."[25] The concept of the superordinate group identity is crucial to the instant effort because a characteristic of disaster response work is the need for a multi-agency and multi-jurisdictional response.[26] When disaster response teams are assembled from diverse responding agencies, a team's ability to see its collective roll in the overall operation and to form a superordinate group with a shared social identity may be a key to its potentiality for social support.

S. Alexander Haslam has conducted studies and authored a body of work exploring the role social identity theory and self-categorization play in structuring people's experience of stress and hence their stress outcomes. In "Taking the Strain: Social Identity, Social Support, and the Experience of Stress," the findings of Haslam and his co-authors provide support for the following: 1) That social identification is associated with perceptions of social support and reduced stress. 2) That the relationship between social identification and stress is mediated by social support. 3) The experience

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[24] Seth J. Schwartz, Curtis S. Dunkel, and Alan S. Waterman, "Terrorism: An Identity Theory Perspective," *Studies in Conflict & Terrorism* 32, no. 6 (2009): 537–559; David W. Brannan, Kristin Darken and Anders Strindberg, *The Practitioner's Way Forward: Terrorism Analysis* (Salinas, CA: Agile Press, 2014).

[25] Fathali M. Moghaddam, *Multiculturalism and Intergroup Relations: Psychological Implications for Democracy in Global Context* (Washington, DC: American Psychological Association, 2008), 102.

[26] Douglas Paton and John M. Violani, "Terrorism Risk Assessment and Management," in *Psychology of Terrorism*, ed. Bruce Bongar et al. (Oxford: Oxford University Press, 2007), 237.

of beneficial social support is more likely to occur to the extent that individuals are socially identified with those in a position to provide support.[27]

The findings of Haslam and his co-authors suggest,

> Social support is not a free-floating variable that is visited at random on particular individuals. Instead, it is highly correlated with social identification, suggesting that **people only perceive and only receive social support when they sense that they share self-defining group membership with those in a position to provide it** [emphasis added].[28]

The work of Haslam et al. establishes premises that are foundational to the hypothesis posed by this paper. Their conclusions build a triangle linking social identification with social support and social support with reduced stress. From these premises, this thesis will postulate whether fostering social identification within a disaster response work group will prime social support, which in turn can enhance resilience.

Note must be made that amidst the literature reviewed and in the context of responder stressors, one work remarked on a potential untoward effect of social identification. In "Terrorism Stress Risk Management," Paton and Violanti suggest that team cohesiveness could contribute to vulnerability, "if situational constraints result in a response being perceived as less effective than anticipated."[29] However, the authors do not advance that this possible disadvantageous prospect of social identification outweighs the benefits to be derived from social support.

The bodies of work examining the links between resilience and social support and social support and social identification have not, thus far, focused upon temporary teams. Temporary systems have been defined as "a set of diversely skilled people, working together on a complex task over a limited period of time."[30] It is intriguing that "temporary groups display behaviors that presuppose trust, although they do not have a

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[27] Haslam et al., "Taking the Strain."

[28] Ibid. 366.

[29] Paton and Violani, "Terrorism Risk Assessment and Management," 241.

[30] Richard A. Goodman and Lawrence P. Goodman, "Some Management Issues in Temporary Systems: a Study of Professional Development and Manpower: The Theater Case," *Administrative Science Quarterly*, 21 no. 3, (1976): 494–50 quoted in Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355.

history of trust development."[31] Meyerson et al. evolved the definition of temporary systems, "listing nine characteristics that define temporary systems, which have the potential to develop trust:

1) Participants with diverse skills are assembled by a contractor to enact expertise they already possess;
2) Participants have a limited history of working together;
3) Participants have limited prospects of working together again in the future;
4) Participants are often part of limited labor pools and overlapping networks;
5) Tasks are often complex and involve interdependent work;
6) Tasks have a deadline;
7) Assigned tasks are non-routine and not well understood;
8) Assigned tasks are consequential; and
9) Continuous interrelating is required to produce an outcome."[32]

The group dynamics of temporary systems are of significance to this investigation because disaster responses necessitate the formation of temporary work groups. And it is the apparent gap in access to psychosocial resources suffered by multi-jurisdictional responders assigned to temporary workgroups that this paper seeks to address.

An aspect of temporary teams that has been subject of inquiry is "swift trust," a form of trust that may be cultivated in organizations that have not had time to develop trust in traditional ways.[33] Swift trust has been defined as "a unique form of trust that occurs between groups or individuals brought together in temporary teams to accomplish specific tasks, often under time constraints."[34] The preponderance of literature pertaining to swift trust expatiates upon its application to temporary teams, most commonly in the information technology sector and its efficacy for enhancing team performance.

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[31] Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355.

[32] Debra Meyerson, Karl E. Weick and Roderick M. Kramer "Swift Trust and Temporary Groups," in *Trust in Organizations: Frontiers of Theory and Research*, ed., Roderick M. Kramer and Tom R. Tyler (SAGE Publications, Thousand Oaks, CA, 1996), 165–95 quoted in Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355.

[33] Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355.

[34] Michael J. Fahy, "Understanding Swift Trust to Improve Interagency Collaboration in New York City" (master's thesis, Naval Postgraduate School, 2012), 4.

However, in 2011, *Team Performance Management* published a pivotal study, "Swift Trust in Leaders in Temporary Military Groups," by Peder Hyllengren, Gerry Larsson, Maria Fors and Misa Sjoberg, of the Swedish National Defense College, Jarle Eid of University of Bergen, and Olav Kjellevold Olsen of Royal Norwegian Naval Academy.[35] This work culminates in a hierarchical model of characteristics that contribute to development of swift trust (or the lack thereof) in military leaders. The model is presented in terms of two superior categories, "individual-related characteristics" and "relationship-related characteristics."[36] The former category focuses upon the personal attributes and competencies of the leader. Relationship-related characteristics include communication/social skills, leadership, and management. It is within these later categories that building blocks for fostering swift trust are identified. These may collaterally encourage team identity including: "create common goals in the group," "sees the whole picture," "support/empathy," "social smoothness," "presence," and "alikeness."[37]

In his thesis, "Understanding Swift Trust to Improve Interagency Collaboration in New York City," Michael J. Fahy posits whether swift trust could enhance inter-agency collaboration between the New York Police Department (NYPD) and the New York City Fire Department (FDNY).[38] Examined in the context of first responders, Fahy's inquiry follows the course of other analyses and evaluates the influence of swift trust (or lack thereof) upon team performance. Much of Fahy's focus is upon the interplay between swift trust and collaboration. His conclusion is that while the development of swift trust between NYPD and FDNY would be beneficial to both, there are still cultural and operative barriers retarding the establishment of swift trust between these two groups of responders. He also remarks that current training (for NYPD and FDNY) is largely ineffective at developing interagency swift trust.

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[35] Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355.

[36] Ibid., 361.

[37] Ibid.

[38] Fahy, "Understanding Swift Trust."

It must be kept in mind that Fahy's work studied the potential for inter-agency swift trust between groups to enhance operational efficacy on cooperative efforts. His conclusions regarding hurdles to the development of inter-agency swift trust, organizational and cultural barriers, reflect group characteristics. Expounding upon Chief Joe Dugan's analysis of New York City's Urban Search and Rescue Team, New York Task Force 1 (NY-TF1), Fahy also tests the application of swift trust to formation of combined, temporary teams (members from two in-groups re-configuring to work as one).[39] Exploring the training and operations of the NY-TF1, Fahy's analysis continues highlighting organizational factors, as opposed to personal factors, which can contribute to swift trust enhancing the combined team's operational capability. Significantly, Fahy concludes, "As part of the strategy to develop swift trust and improve collaboration, emergency responders from all agencies must begin to view themselves as part of a team."[40]

Fahy's work sets the stage for hypothesizing whether swift trust can be equated with or transmuted into "accelerating" group identity within a temporary team. Will the dynamics Fahy discourses as inhibiting the formation of swift trust between groups likewise thwart the formation of group social identity? Or can team leaders encourage temporary team members from different jurisdictions to view themselves as part of a superordinate team? And if group identity can be "accelerated," will it prime temporary team members to resilience-enhancing social support in the same manner that swift trust contributes team collaboration?

5. Conclusion

A possible impediment to the emergency management community's acceptance of a construction of the National Incident Management System that requires a component to address disaster responder psychosocial resources may be a misconception that such an interpretation would embrace additional liability. On the contrary, such an endeavor,

[39] Ibid., 51–52.

[40] Ibid., 64.

aimed at mitigating the damaging effects of critical stress inherent to disaster response work, should lessen workers' compensation and disability claims.

Much has been written about critical stress and first responders that expounds on the vulnerability of disaster workers to being adversely impacted by the extreme stressors they encounter. A substantial portion of the literature discoursing critical stress interventions debates best practices. This thesis does not endeavor to reach any conclusions with regard to the efficacy of one method over another. What is taken from an overview of the various schools of thought is that they universally acknowledge the significance of providing responders access to critical stress interventions and psychosocial resources.

"Resilience" is the latest buzzword for addressing critical stress of service personnel. Methods for building personal resilience are being implemented by our armed forces. The body of work exploring this subtopic conveys greater credence because its sponsorship originates with the military and other governmental entities.

The phenomenon of swift trust, cultivated within the information technology sector to form effective temporary work teams, has been analyzed for application to military leaders and evaluated as a potential tool for honing interoperability between groups of responders. The works exploring the dynamics of swift trust have focused upon its efficacy in terms of improving team collaboration and performance. Still to be investigated is whether group identity in temporary systems can be "accelerated" to foster social support (a key contributor to individual resiliency).

C. RESEARCH DESIGN

1. Object of Study

This study focuses upon the current framework of the Incident Command System (ICS) within the National Incident Management System (NIMS) that provides for disaster responder physical safety. The object of this study is the adequacy of the NIMS structure to address disaster responder psychosocial well-being.

The thesis further examines the correlation between social support and resilience. It also explores the factors that encourage swift trust in temporary systems and how swift trust contributes to collaboration and performance. Suggesting the possibility that group identity might be "accelerated" in disaster work groups, in the manner that swift trust is developed in temporary teams, this work posits whether "accelerated" group identity would be calculated to foster social support.

2. Rationale

NIMS dictates a uniform organizational structure for disaster response. Pursuant to NIMS, it is the duty of emergency managers to ensure the physical safety of the responders under their command; however, NIMS does not directly speak to the psychosocial well-being of the disaster workers.[41] Individual emergency response organizations may provide for responder mental/emotional health support, but such assistance may be limited to local availability. Mutual aid disaster responders from diverse jurisdictions can be exposed to continuous, intense stress while distanced from the support of family and friends, employer provided counseling, pastoral care, and their own "home team" of peers. Social support is a vital component of resilience. In temporary systems, swift trust, which requires group identity, contributes towards collaboration and team performance. If group identity can be "accelerated" in temporary disaster teams in the manner akin to swift trust, perhaps a collateral benefit would be augmented social support.

3. Data Sources

Data has been gathered from a range of secondary sources: policies and guidelines of the United States; governmental and academic literature, including studies and reports from prior mutual aid disaster responses, and review of the practices of individual emergency response organizations with respect to providing mental/emotional health support for responders; literature correlating social support to personal resiliency; and literature elucidating the precepts of social identity theory and swift trust.

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[41] National Incident Management System, Department of Homeland Security 2008, 52 and Appendix B: Incident Command System, 93–94, www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.

4. Type and Mode of Analysis

The policy analysis will briefly define the problem, select criteria by which to judge existing policy, and propose a solution.

(1) The Problem

The absence of specificity within NIMS for addressing responder psychosocial well-being is problematical given the documented vulnerability of disaster responders to adverse mental or emotional impacts of critical stress. The predicament is compounded by the confluence of circumstances, which can result in mutual aid responders being distanced from traditional critical stress intervention resources and social support.

(2) Criteria by Which Existing Policy is Judged

This work examines the emergency management community's principles and policy pertaining to the protection of responder psychosocial well-being as articulated by the National Incident Management System (NIMS), the Emergency Responder Health Monitoring and Surveillance (ERHMS) system, and the recommendations issued by the National Institute for Occupational Safety and Health (NIOHS) and RAND. This study further explores the potentiality for impediments to disaster responders accessing psychosocial resources during multi-jurisdictional responses. Moreover, it examines literature pertaining to resilience and social support and studies into social identity theory and swift trust. From that analysis, the thesis will postulate whether "accelerating" group identity could foster social support in temporary teams.

(3) Recommendations for Improving Existing Policy and a Strategy for Implementation

This thesis proposes interpreting NIMS and the training modules that support it to require a component that addresses disaster responder psychosocial well-being. The CDC, NIOSH, U.S. NRT have developed ERHMS, a system for emergency responder health monitoring and surveillance. Implicitly ERHMS is intended to include responder mental health. In an extensive white paper, RAND has recommended building an integrated safety function into the Incident Command System, under the auspices of the

safety officer.[42] This thesis suggests that implementation of the recommendations of RAND pertaining to responder mental health, echoed in the ERHMS are suitably encompassed within the purview of the safety officer. This work recommends development of a training module for emergency responder team leaders that would leverage the precepts of social identity theory and swift trust amongst mutual aid/multi-jurisdictional operational teams to foster peer social support. It further proposes creation of a pilot project implementing such a training program among urban search and rescue emergency managers.

5. Output

The analysis should confirm or refute the value of interpreting NIMS including assignment of responsibility for the mental/emotional well-being of disaster responders. The analysis should further support or abrogate investing resources towards developing "accelerated" group identity amongst mutual aid responders.

D. BUILDING TEAM BELAY

> *Belay: verb* \bi-ˈlā,\ : to attach (a rope) to something so that it is secure : to attach a secure rope to (a person) for safety.
>
> *Belay: noun* \bi-ˈlā,\: the securing of a person or a safety rope to an anchor point (as during mountain climbing); *also* **:** a method of so securing a person or rope.[43]

Disaster responders are exposed to continuous periods of intense stress, and as a consequence, some suffer mental or emotional adverse effects. Many emergency service providers, recognizing critical stress as a valid concern, organizationally attempt to offer their responders access to traditional critical stress interventions. But when a catastrophic event occurs, and mutual aid is invoked, disaster workers and volunteers will respond from diverse jurisdictions, frequently without immediate access to the psychosocial assistance provided by their home agencies.

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[42] Jackson et al., *Protecting Emergency Responders*.

[43] *Merriam Webster*, s.v. "belay," accessed May 5, 2014, http://www.merriam-webster.com/dictionary/belay.

Our uniform organizational structure for disaster response, the National Incident Management System (NIMS) is ambiguous with respect to the mental/emotional well-being of disaster responders. Because disaster responders, assembling from diverse jurisdictions to render aid, are often distanced from conventional critical stress interventions and traditional sources of social support they are, metaphorically, rappelling off an emotional cliff; the conditions they must witness and endure put them at risk of psychological free fall. The proposed "rigging" of informal peer exchanges amongst multi-jurisdictional operational teams, utilizing devices of swift trust to improvise social identity "safety ropes," is herein conceptualized as "building team belay."

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II. MENTAL HEALTH AS AN ELEMENT OF RESPONDER SAFETY: WHERE PROBLEM, PRINCIPLES AND POLICY MEET ON THE PRECIPICE OF A PRACTICAL GAP

Disaster responders are witness to horrific scenes.[44] Heroically, they answer humanity's cries for help, bent upon relieving the devastation wrought by natural and man-caused disasters. Their call to service can immerse them in the aftermath of every imaginable and unthinkable catastrophe: tornadoes, hurricanes, tsunamis, earthquakes, mass casualty accidents, and terrorist attack, any agent by which mayhem can descend upon a populace. For weeks, sometimes months on end, they live and work amidst the wreckage, death and destruction such calamities leave in their wake. The worst of what emergency personnel have seen and smelled and the duties they have had to perform is rarely shared outside the disaster response community with loved ones or "civilian" friends. The images are too horrible.

But this valor comes at a tremendous cost. What has been learned from studies of those who responded to catastrophic events, such as 9/11, Hurricane Katrina, and the Oklahoma City Bombing, is that the conditions disaster workers must endure can have negative psychological influence.[45] Pursuant to contemporary principles, emergency agencies, most commonly at the local level, are attempting to address the psychosocial needs of responders. However, as it is presently interpreted, national emergency management policy is not keeping pace with current guidelines and recommendations. In combination with the policy's ambiguity, a confluence of cultural and circumstantial barriers can cause a practical gap in access to psychosocial resources for disaster responders.

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[44] Alexander, Psychol, and Klein. "First Responders after Disasters."

[45] Jackson et al., *Protecting Emergency Responders*.

A. DISASTER RESPONDERS ARE EXPOSED TO CONTINUOUS INTENSE STRESSORS, AND AS A CONSEQUENCE, SOME EXPERIENCE NEGATIVE IMPACTS OF CRITICAL STRESS

Emergency workers, who are responding to assist at the scenes of natural and man-caused disasters, can be assailed by a cacophony of horrific sensorial stimuli: smelling the stench of burned and decomposing flesh; handling dismembered and mutilated bodies; hearing screams of pain, anguish and grief; witnessing ineradicable images of human remains. Disaster responders to mass casualty incidents have to deal with the bloodied, crushed, charred, bloated, disfigured remnants of people, as they reclaim the fragments of lifeless children and adults, youths and tots

Moreover, in the performance of their duties, responders must often place their own physical safety at risk and their personal reactions on hold. On any given deployment, they may be called upon to work amid hazards of falling debris, aftershocks, exposure to blood and airborne pathogens, extreme weather conditions, unsanitary settings, smoke, toxic fumes, radiation hazards and inhalational particulate. The negative influence of such stressors can only be compounded by the physical discomfort, exhaustion, disrupted sleep, and emotions of fear, anxiety, and grief the responder must withstand. Elementally, disaster workers experience their own feelings about the traumatic event(s) that activated their deployment. However, responders often delay their reactions for extended periods of time in order to maintain focus upon safety and the mission at hand.[46]

Deploying to traumatic events, suppressing their own negative reactions, experiencing anxiety for personal safety, and bearing the intense stress evoked by their responsibilities can be deleteriously taxing to the responder's psyche.[47] In point of fact,

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[46] Katherine Harmon, "The Changing Mental Health Aftermath of 9/11—Psychological 'First Aid' Gains Favor over Debriefings: Scientific American," *Scientific American*, September 10, 2011, http://www.scientificamerican.com/article.cfm?id=the-changing-mental-health&WT.mc_id=SA_emailfriend.

[47] Larry E. Beutler et al., "The Need for Proficient Mental Health Professionals in the Study of Terrorism." In *Psychology of Terrorism*, ed. Bruce Bongar et al. (Oxford: Oxford University Press, 2007), 32; Paton and Violani, "Terrorism Risk Assessment and Management," 233–234; "Traumatic Incident Stress," last modified December 30, 2013, National Institute for Occupational Safety and Health Education and Information Division, http://www.cdc.gov/niosh/topics/traumaticincident/.

first responders and disaster workers are "at special risk for Post Traumatic Stress Disorder and other negative emotional consequences of disaster."[48] Such negative emotional consequences can manifest in many ways, including: depression, anxiety, nightmares, disinterest in food, isolation, and substance abuse.[49] Herein, these negative emotional consequences are collectively referred to as "critical stress."[50]

Members of our armed forces comprise another population of public servants, whose duties place them in personal danger, expose them to atrocities, the necessity of suppressing visceral reactions, and the harmful influences of persistent intense stress. And like disaster responders, our service personnel exhibit signs of critical stress, including acute stress and diagnosable post traumatic stress disorder (PTSD). Accordingly, despite the palpable dissimilarities between civilian emergency responses and military deployments, there are many overlaps in analyses of critical stress amongst disaster responders and deployed military personnel. To date, much of the material exploring individual resilience to critical stress is the work of, and focused upon, the military community.

B. PROVIDING CRITICAL STRESS INTERVENTIONS: ARTICULATED PRINCIPLES AND AMBIGUOUS POLICY

1. Principles: Doing What Is Right

Acknowledging the risks posed to their members by critical stress, emergency response organizations and the military are implementing forms of critical stress

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[48] Gibbs and Montagnino, *Disasters: A Psychological Perspective*, 10.

[49] "Emergency Preparedness and Response, Safety and Health Guides—Critical Incident Stress Guide," Occupational Safety and Health Administration, accessed March 17, 2014, https://www.osha.gov/SLTC/emergencypreparedness/guides/critical.html

[50] For purposes of this paper, the term "critical stress," comprehends stress responses that manifest by the subject experiencing negative physical and/or psychopathological symptomology. For example, the appellation "critical stress," as used herein, encompasses Post Traumatic Stress Disorder (PTSD), or any one the criteria that comprise a PTSD diagnosis, such as: " . . . re-experiencing the traumatic event, usually in flashbacks or nightmares; . . . avoidance of situations and stimuli that could reawaken the trauma, for example, numbing one's feelings or withdrawing from others; and . . . increased level of arousal, for instance, sleep difficulties, irritability, and concentration problems." See also footnote 3. Margaret Gibbs, and Kim Montagnino, "Disasters, A Psychological Perspective," accessed November 24, 2012, http://www.training.fema.gov/emiweb/edu/docs/EMT/GibbsPsychology.doc, 8.

management, and utilizing various critical stress interventions.[51] Organizationally provided psychosocial resources, most readily available at a local level, include: critical incident stress management, critical incident stress debriefings, employee wellness programs, employee assistance programs, access to local Department of Mental Health providers, workers' compensation, chaplains, psychological first aid, and trained peer-to-peer support.

The provision of such psychosocial resources for disaster responders coincides with the principles articulated in numerous government emergency management related publications. The Emergency Responder Health Monitoring and Surveillance (ERHMS) system was promulgated in 2012 by the National Institute of Occupational Safety and Health (NIOSH) working collectively with the U.S. National Response Team (NRT), and a number of federal agencies, state health departments, labor unions, and volunteer emergency responder groups. The ERHMS is comprised of two documents, the *NRT Technical Assistance Document* and *A Guide for Key Decision Makers*.[52] A summary of the ERHMS describes the program as providing "guidelines for the protection of emergency responders over a full range of emergency types and settings."[53]

The *NRT Technical Assistance Document* states: "The exposures addressed in this document include chemical and physical hazards, **as well as** '**psychological toxins**' [emphasis added]. These include encountering extremely stressful situations, such as witnessing loss of life, injuries, separated families, and destruction."[54] The document goes on to make the assertion,

> **Monitoring for potential mental health needs is important** [emphasis added]. Response-related challenges include uncertainty about the impact

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[51] Jackson et al., *Protecting Emergency Responders*.

[52] "Emergency Responder Health Monitoring and Surveillance (ERHMS)," Center for Disease Control and Prevention, accessed July 17, 2013, http://www.cdc.gov/niosh/topics/erhms/.

[53] Ibid.

[54] U.S. National Response Team, *Emergency Responder Health Monitoring and Surveillance*, *Technical Assistance Document*, v.

> of the disaster, threats to livelihood and diminished quality of life, fatigue, family and dependent care issues, and other stressors.[55]

The purported intent of ERHMS is:

> to identify exposures and/or signs and symptoms early in the course of an emergency response **in order to prevent or mitigate adverse physical and psychological outcomes** and ensure workers maintain their ability to respond effectively and are not harmed in the course of this response work [emphasis added].

Unfortunately, while the ERHMS Responder Training Documentation Form includes a "Self Care/Buddy Care: Physical, Emotional, Medical Work Schedule," the ERHMS never spells out to whom the responsibility for addressing responder psychosocial care belongs. The ERHMS's sparse comments regarding responder "emotional health status," while alluding to the issue of psychological well-being, lack pragmatic substance.

Emergency management's obligation to safeguard the mental as well as the physical well-being of responders also appears throughout the 2005 NOISH/RAND collaboration, *Protecting Emergency Responders , Volume 3, Safety Management in Disaster and Terrorism Response*. Several portions of that paper examine the issue of critical incident stress as an element of the overall hazard environment faced by responders to major disasters. In summation, the NOISH/RAND analysis propounds Recommendation 6.7: "Protect the Mental Health of the Response Workforce by Managing Critical Incident Stress."[56]

The recommendation to protect the mental health of the response workforce by managing critical incident stress (6.7) was founded upon the study's findings that:

- Traumatic nature of disasters can have significant effects on individual responders and response organizations as a whole.
- There has been a cultural change in the responder community that has resulted in responder organizations implementing some form of critical stress management.

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[55] Ibid., 30.

[56] Jackson et al., *Protecting Emergency Responders*.

- There is controversy over methods of critical stress interventions.
- Without examining particular methods, the study addressed critical stress management, "as an element of the overall hazard environment faced by responders to major disasters with respect to preparedness and response planning."
- It is important to consider critical incident stress in response planning.
- Beyond emergency responders, such as police and firefighters, planning should address the needs of non-traditional disaster workers as well.
- Importance of support to families of emergency responders
- As an element of preparedness, communities need to develop local resources for handling critical incident stress or have a plan to access other resources.
- While preventative measures have been garnering support in the responder community, little research existed on "stress inoculation" (a military concept) and "pre-briefings."[57]

The recommendation concludes that the controversy over the efficacy of various methods of critical stress interventions:

> … indicates a need for further examination of this issue and further development of strategies to address the effects of traumatic incidents on individuals. In light of the potential long-term effects on individuals and response organizations, responders indicated that it was important to monitor workers during an incident for signs of excessive stress and follow up afterwards to ensure that individuals in need of treatment get it.[58]

The recommendation is to "take action," without specifying what action(s) to take.

Tips for critical incident stress management are also recounted by the U.S. Department of Health and Human Services in *A Guide to Managing Stress in Crisis Response Professions*, and on the Center for Disease Control and Prevention's web page, National Institute for Occupational Safety and Health, "Workplace Safety Health Topics,

[57] Ibid., 62–64.

[58] Ibid., 64.

Traumatic Incident Stress."[59] These publications are excellent for raising awareness about critical incident stress. Moreover, they provide emergency managers with some practical advice about managing stress before, during and after an event.[60] However, while these guides are replete with helpful suggestions, they fall short of establishing standards for emergency management.[61] The Occupational Safety and Health Administration (OSHA) *Critical Incident Stress Guide* resoundingly states, "OSHA has no standards that apply to the hazards associated with critical incident stress."[62] For policy, (whereby principles become implemented), we must look to the National Incident Management System.[63]

2. Policies: Doing What Is Written

The National Incident Management System (NIMS), utilized in the United States, provides a uniform emergency management structure, which places all coordination under incident command with delegation to command staff and the four branches (planning, operations, logistics, fiscal/admin) depending upon the scale of the event.

Unfortunately, the current NIMS structure does not directly address the responder mental/emotional well-being. NIMS places responsibility for responder safety with the incident commander initially. As the size and dimensions of an emergency event warrant

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[59] "Traumatic Incident Stress," last modified December 30, 2013, National Institute for Occupational Safety and Health Education and Information Division, http://www.cdc.gov/niosh/topics/traumaticincident/.

[60] Practical suggestions include being familiar with NIMS ICS, encouraging breaks, providing non-caffeine fluids, mitigating effects of extreme temperatures and reducing noise. The post event "action steps" include "Developing protocols to provide workers with stigma-free counseling so that workers can address the emotional aspects of their experience." USDHHS, *A Guide to Managing Stress*; "Traumatic Incident Stress," last modified December 30, 2013, National Institute for Occupational Safety and Health Education and Information Division, http://www.cdc.gov/niosh/topics/traumaticincident/

[61] "Emergency Preparedness and Response, Safety and Health Guides—Critical Incident Stress Guide," Occupational Safety and Health Administration, accessed March 17, 2014, https://www.osha.gov/SLTC/emergencypreparedness/guides/critical.html.

[62] According to OSHA, "OSHA has no standards that apply to the hazards associated with critical incident stress. However, in the interest of the health and safety of the emergency responders and workers, the agency recommends that the following information be shared to help reduce the risks associated with critical incident stress." "Emergency Preparedness and Response, Safety and Health Guides—Critical Incident Stress Guide," Occupational Safety and Health Administration, accessed March 17, 2014, https://www.osha.gov/SLTC/emergencypreparedness/guides/critical.html.

[63] Federal Emergency Management Agency, "Appendix B."

expansion of the command structure, the responsibility for responder safety may be delegated to a safety officer. Pursuant to Federal Emergency Management Agency (FEMA) Incident Command System (ICS) glossary, the safety officer is: "A member of the Command staff responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety."[64]

FEMA's Safety Officer Checklist, distributed by the Emergency Management Institute, describes tasks that should be considered as minimum requirements for the position. For example, a safety officer is to identify hazardous situations and ensure adequate levels of protective equipment are available and being used. Significantly, the only reference to responder mental/emotional well-being is relegated to item number 13, "Coordinate critical incident stress, hazardous materials, and other debriefings, as necessary."[65]

Within FEMA's 2008 publication describing the National Incident Management System, Appendix B contains this definition of the safety officer:

> b. Safety Officer:
>
> The Safety Officer monitors incident operations and advises Incident Command on all matters relating to operational safety, including the health and safety of emergency responder personnel. The ultimate responsibility for the safe conduct of incident management operations rests with the IC or Unified Command (UC) and supervisors at all levels of incident management. In turn, the Safety Officer is responsible for developing the Incident Safety Plan—the set of systems and procedures necessary to ensure ongoing assessment of hazardous environments, coordination of multi-agency safety efforts, and implementation of measures to promote emergency management/incident personnel safety, as well as the general safety of incident operations. The Safety Officer has emergency authority to stop and/or prevent unsafe acts during incident operations. . . .[66]

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[64] *Glossary and Related Terms*, s.v., "Safety Officer," FEMA Incident Command System Resource Center, February 2012, http://training.fema.gov/EMIWeb/is/ICSResource/Glossary.htm#S.

[65] *Glossary and Related Terms*, s.v., "Checklist, Safety Officer Position Checklist," FEMA Incident Command System Resource Center, February 2012, http://training.fema.gov/EMIWeb/is/ICSResource/Glossary.htm#C.

[66] Federal Emergency Management Agency, "Appendix B," 93.

Following this definition, FEMA provides an illustration of the Incident Command System (ICS), with examples of assistant safety officers assigned to operational branches (see Figure 1).

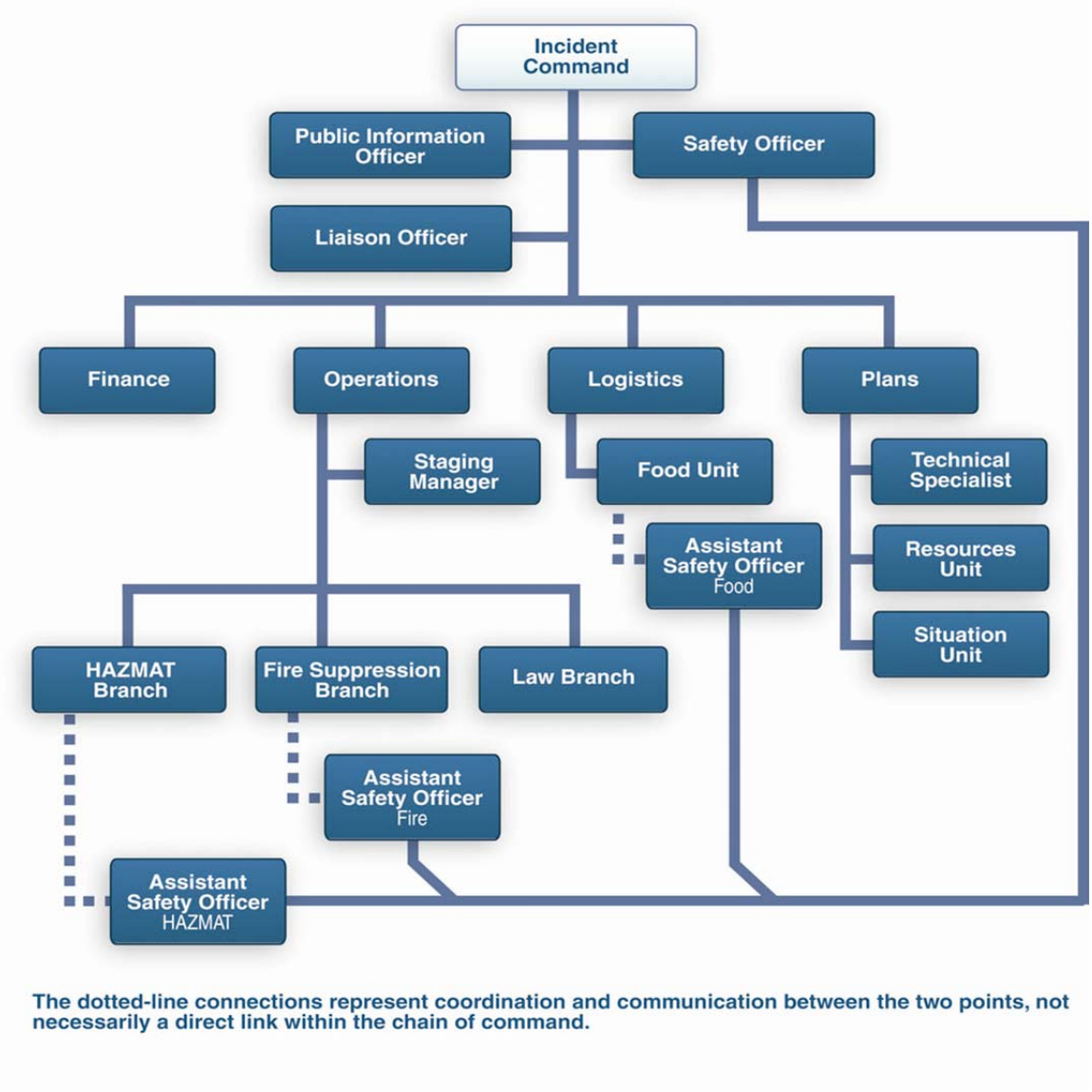

Figure 1. Example of the role of safety officer and assistant safety officer in ICS in a multi-branch incident.[67]

[67] Ibid., 94.

Noteworthy, is that FEMA's definition of safety officer is silent as to responder emotional health as is the description of the NIMS core curriculum for safety officer.[68] Historically, FEMA's Emergency Management Institute provided a 50-minute session on critical incident stress management as part of the Disaster Response Operations and Management curriculum of the Upper Division College Course (session 23). However, the current (2014) curriculum does not offer such a course for emergency managers.[69] Unless and until the framework of NIMS is interpreted as requiring the incident commander/safety officer be accountable for the mental well-being of disaster responders, emergency managers' education about interventions and resources to address responder critical incident stress will remain elective.

In the context of overall disaster response, emergency workers are only tangentially considered in the U.S. guidance on provision of humanitarian assistance. When our central government engages during very large catastrophic events, the emphasis for humanitarian assistance during a disaster is focused upon the civilian populace.

Within the Emergency Support Function #8 "Public Health and Medical Services Annex," the only mention of disaster workers is buried in a paragraph entitled "Health Surveillance" (under Public Health and Medical Services Core Capabilities) which states, "Uses existing all-hazards surveillance systems to monitor the health of the general and medical needs population, as well as that of the response workers, and identify emerging trends related to the disaster."[70]

The ambiguity in our policy with respect to psychosocial resources is hazardous. FEMA has made critical stress management courses available through the Emergency

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[68] Federal Emergency Management Agency, *National Incident Management System Training Program*, 2011, http://training.fema.gov/EMIWeb/IS/ICSResource/assets/nims_training_program.pdf; Emergency Management Institute, *EMI Fiscal Year 2014 Training Catalog FY14 Catalog*, Federal Emergency Management Agency, 2014, http://training.fema.gov/EMICourses/docs/FY14%20Catalog.pdf.

[69] The Emergency Management Institute currently offers, E0352, "Crisis Counseling Assistance and Training Program" as part of the Training State Trainers curriculum. Emergency Management Institute, "EMI Fiscal Year 2014 Training Catalog FY14 Catalog."

[70] Federal Emergency Management Agency, *Emergency Support Function #8: Public Health and Medical Services Annex*, 2013, http://www.fema.gov/media-library/assets/documents/32198, ESF 8–5.

Management Institute and has shaped a disaster management structure responsive to the public's mental health needs during a catastrophic event. However, the framework of NIMS neither encourages pursuit of the mental health protecting principals articulated by ERHMS, nor ensures implementation of the NIOSH/RAND recommendation "6.7 – Protect the Mental Health of the Response Workforce by Managing Critical Incident Stress."[71]

Because social support and conventional interventions, to the extent they are provided, are most readily available at the local level, the policy's ambiguity is especially perilous for individuals responding to disasters outside their home jurisdiction. For the U.S. emergency management system to adequately address the mental/emotional health of multi-jurisdictional disaster responders, NIMS must be understood as requiring the incident commander/safety officer be responsible for both the physical and emotional health of the responders.[72]

Implicitly carried with this interpretation would be the proliferation of training modules to support it, including more widely disseminated components addressing disaster responder stress. Through core NIMS training, emergency managers, and perhaps other leaders in the homeland security enterprise would become cognizant of their responsibility for the mental well-being of disaster responders. It would become the duty of the incident commander, and in larger events the safety officer, to ensure provision of humanitarian assistance to the members of all the operational teams. In this way, the emotional health of emergency workers who are responding outside of their own local jurisdictions would be addressed. As it stands, multi-jurisdictional responders can be left standing on their own.

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[71] Jackson et al., *Protecting Emergency Responders*, 62.

[72] Referring back to Figure 1, if the safety officer is recognized as responsible for the emotional health of responders, one could envision the safety officer, where appropriate, assigning assistant safety officer(s) to the oversee the provision of humanitarian assistance to the responders comprising the operations branch.

C. THE PRACTICAL GAP

There is a confluence of circumstances, whereby the psychosocial needs of disaster responders may go unmet.

1. Neither NIMS Nor Its Guidelines Specifically Make Responder Mental/Emotional Health a Responsibility of Incident Command

The ambiguity of NIMS and its guidelines leaves open to interpretation whether or not incident command's responsibility for responder health and safety encompasses mental/emotional well-being. Therefore, ensuring disaster responder access to psychosocial resources may or may not be within an entity's emergency plan. Emergency managers are not required, nor necessarily trained, to recognize the critical incident stress risks faced by disaster responders. Nor must they be knowledgeable about what psychosocial resources are available to assist responders in the event such are needed.

Moreover, because critical stress management is not part of the NIMS core curriculum for emergency managers, what training can be obtained is not uniform. Therefore, the manner of psychosocial resources accessible to responders at any given incident will vary with the disposition, knowledge and/or biases of incident command. There is no clear responsibility for emergency managers to investigate and ascertain what the best practices for critical incident stress intervention are, nor for incident command to be apprised of the psychosocial resources within reach.

2. Debate over Best Practices Can End with None

The controversy over best practices in critical incident stress intervention leaves the field open to the deprecation of cynics.[73] Emergency managers who are reluctant to undertake responsibility to provide responders with access to psychosocial resources, may argue that the ongoing debate justifies their inertia. Without industry-accepted standards, how are they to proceed? Is it not better to provide no resources, than introduce a harmful influence? Unfortunately, the current controversy may also be fueling the existent cultural stigma against responders seeking "mental health" resources.

[73] Jackson et al., *Protecting Emergency Responders*, 62–65.

3. Cultural Stigma

Regrettably, when critical stress interventions are made accessible, some disaster workers will hesitate to avail themselves of the assistance. They may be hindered by a cultural stigma surrounding "mental health." The basis for their reluctance may be grounded upon feared career repercussions. They may be uncertain whether or not their security clearance may be jeopardized if they seek psychological assistance or fear the possibility that a provider will find them "not fit for duty." They may also fear of appearing to colleagues as "weak" or "unsafe." In addition, real or imagined concerns about prejudice, reputation and advancement may all combine to prevent responders from accepting offered help.[74]

4. Logistics (Impracticality)

Mutual aid is a cornerstone of emergency management. Response to a catastrophic event necessarily requires resources beyond those of the locality struck by disaster. Disaster workers from multiple jurisdictions are deployed across state lines and internationally to render aid. As a consequence, at the same time that they are facing exposure to extreme stressors, responders may be physically out of reach of employer-provided critical stress interventions. Away from their local jurisdictions, these mutual aid responders may not have access to employee assistance, critical incident stress management protocols, workers' compensation, or department of mental health providers. To compound their predicament, individual responders are distanced from their home and may also be separated from traditional sources of psychosocial support: colleagues, family, friends and pastoral care.

[74] Institute of Medicine, *Building a Resilient Workforce*, 26–34; Joseph I. Ruzek, Shira Maguen, and Brett T. Litz, "Evidence-Based Interventions for Survivors of Terrorism," in *Psychology of Terrorism*, ed. Bruce Bongar et al. (Oxford: Oxford University Press, 2007), 264–265.

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III. SPANNING THE GAP: LINKING SOCIAL SUPPORT AND RESILIENCY—INTRODUCING PRECEPTS OF SOCIAL IDENTITY THEORY AND SWIFT TRUST

Literature addressing responder, military, and civilian exposure to critical stress universally catalogues the availability of positive social support for facilitating recovery from trauma.[75] Social connectedness is an essential factor among the models for early critical stress intervention, such as psychological first aid and peer-support, after a disaster.[76] Studies of critical incident stress also link social support with resilience.[77] The enhancement of social support is recognized as a primary factor to promoting resiliency that may serve to protect against or assist the recovery from traumatic events.[78]

By investigating nuances of social connectedness, can we tap into sources for resilience-fostering social support? The studies of social identity theory and swift trust examine the influences of social support upon group members' motivational behavior, and operational performance, respectively.[79] Social identity theory elucidates individuals' inherent need to "belong," and the psychological remunerations actuating one to conform to group mores. The social support that is elemental among "home" emergency response teams can be viewed and explained in terms of social identity theory.[80] Swift trust

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[75] Brett Litz and Matt Gray, Richard Bryant, and Amy Adler, "Early Intervention for Trauma: Current Status and Future Directions," United States Department of Veterans Affairs, National Center for PTSD, accessed September 10, 2012, http://www.ptsd.va.gov/professional/pages/early-intervention-for-trauma.asp; "Traumatic Incident Stress," last modified December 30, 2013, National Institute for Occupational Safety and Health Education and Information Division, http://www.cdc.gov/niosh/topics/traumaticincident/; World Health Organization, *Psychological First Aid: Guide for Field Workers*, 2011, http://whqlibdoc.who.int/publications/2011/9789241548205_eng.pdf; USDHHS, *A Guide to Managing Stress*.

[76] David M. Benedek, Carol Fullerton, and Robert J. Ursano, "First Responders: Mental Health Consequences of Natural and Human-Made Disasters for Public Health and Public Safety Workers," *Annual Review of Public Health* 28 (2007): 62; Money et al., *Best Practices Identified for Peer Support Programs*.

[77] Paton and Violani, "Terrorism Risk Assessment and Management," 227.

[78] California National Guard, *California Comprehensive Soldier Fitness Resilience Trainer Assistant Course* (Sacramento, CA: California National Guard, 2012); Money et al., *Best Practices Identified for Peer Support Programs*.

[79] Tajfel, *Social Identity and Intergroup Relations*; Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups."

[80] Haslam et al., "Taking the Strain."

explores intra-group dynamics that contribute towards maximizing performance from temporary teams. Among the "temporary work groups" that have been examined through the lens of swift trust are teams comprised of responders from diverse agencies, temporary military groups, and remote information technology project teams.

A. VALUE OF SOCIAL SUPPORT—RAISING RESILIENCE

> "**The basic notion of resilience is the capacity to bounce back from stress, pressure, or disturbance** [emphasis added]."[81]

A leading trend for addressing responder and service personnel exposure to critical stress is the movement towards building resilience.[82] As defined in the Institute of Medicine's *Building a Resilient Workforce: Opportunities for the Department of Homeland Security: Workshop Summary*, "The basic notion of resilience is the capacity to bounce back from stress, pressure, or disturbance."[83] Without abandoning traditional interventions, such as counseling, chaplaincy and formal peer-to-peer support, current training practices in the field of critical stress are geared towards prevention and mitigation. A key component of resilience is social support, which can be derived from a variety of sources, including family, friends, colleagues and community.[84]

During day-to-day operations, responder work/rest routines are conducive to an atmosphere infused by peer social support. Engaged in a calling where job shifts can exceed 12 hours, co-workers eat together and sleep under the same roof. The strong bonds that develop between emergency responder teammates, such as law enforcement partners, fire engine crews, paramedic units, are founded upon mutual experiences, mundane and extraordinary. Jointly dedicated to missions serving the public, these men and women risk their lives side by side, entrusting each other with their safety and

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[81] Institute of Medicine, *Building a Resilient Workforce*, 44.

[82] Ibid.

[83] Ibid.

[84] Lucia Pietrantoni and Gabriele Prati, "Resilience Among First Responders," special issue, *African Health Sciences* 8 (December 2008): 18; Philip T. McCabe, "First Responders: Self Care, Wellness, Health, Resilience & Recovery—Dealing with Stress: Personal, Departmental/Job, Home & Family in the Aftermath of Disasters," presented at New Jersey University of Medicine and Dentistry School of Public Health, September 1, 2005. www.njcphp.org/legacy/drup/index.php?q=node/115.

survival. Sharing both the triumphs and the tragedies of rescue work, they are too often participants at scenes so horrific that no one outside their community could truly comprehend. So they talk with one another. At the station, over a meal, taking a break, they talk with one another. For each other, they are a source of social support. And after shift, on routine days, these responders return to the social support of their families, friends and community involvement.

In their study, *Resilience among First Responders*, Lucia Pietrantoni and Gabriele Prati opine that first responders' reliance upon personal and social resources could aid their coping with critical incident stress.[85] Inopportunely, the quintessential multi-jurisdictional response can diminish or impede disaster workers' access to many or all of their established social support systems. Deployments of certain specialty rescue "teams," such as National Urban Search and Rescue (USAR), are comprised assembling cracker-jack specialists from numerous jurisdictions. While these specialists are intermittently brought together for training, they are not "colleagues" in that they do not regularly work together, side by side, on a year-round basis. Collectively, they are trained to operate as a team, but they do not share a history of working together day-to-day and socially interacting as "teammates."[86]

Although the individual responders likely gain self-esteem from being a part of the National USAR, they may not necessarily socially identify with temporary work

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[85] Lucia Pietrantoni and Gabriele Prati, "Resilience Among First Responders,"518.

[86] "In the wake of the devastating mudslide that struck northwest Washington on Saturday [3-22-14] Governor Edmund G. Brown Jr. today [3-24-14] directed the California Governor's Office of Emergency Services (Cal OES) to deploy specialists from California's Urban Search & Rescue teams to assist in response to recovery efforts.

"The 18 specialists from California include four representatives from the San Diego Fire-Rescue Department (CA-TF 8), eight from Riverside City Fire Department (CA-TF 6), two from Los Angeles City Fire Department (CA-TF 1), one from Orange County Fire Department (CA-TF 5), and three from Sacramento City Fire Department (CA-TF 7).

There are eight of these Urban Search and Rescue Task Forces teams based in California—each composed of 70 or more personnel—that participate in the National Urban Search and Rescue System managed by FEMA ad provide California with approximately 640 personnel specializing in disciplines such as search and rescue, first aid, heavy equipment operations, canine search and rescue, hazardous materials, logistics and communications." California Governor's Office of Emergency Services, "California Sends 18 Urban Search and Rescue Personnel to Assist with Deadly Washington Mudslide" press release, March 24, 2014, www.calema.ca.gov/Newsand Media/Pages/News.aspx.

groups. To the extent "swift trust"[87] is developed between the members it is task driven, based upon organizational rather than interpersonal characteristics.[88] The work of Haslam and his co-authors supports the proposition that in order to benefit from a group's social support, it is important that one identifies with the group.[89] This defining one's self through group affiliations is the core of social identity theory.

B. THE IMPORTANCE OF FEELING ONESELF A MEMBER OF A GROUP—SOCIAL IDENTIFICATION ENABLES SOCIAL SUPPORT

> "**[A] sense of shared identity is argued to be a basis for both giving and receiving social support** [emphasis added]."[90]

John Turner suggests that social identification can refer to "any social categorization used by a person to define him—or herself and others."[91] Henri Tajfel defined social identity as "[t]he individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of the group membership."[92] A group is "any given body of people who consider themselves so."[93] In its simplest terms, social identity encompasses viewing oneself as part of a group, and feeling good about oneself, and the group, because of it.

Brannan, Darken and Strindberg apply social identity theory to the study of terrorism as "a model for understanding how the relationship between the individual member and the group affects group behavior, and a model for understanding intergroup relations and conflict."[94] Through social identity theory, they explain how the "group is a source of social identity," and "this identity hinges on the positive value and positive

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[87] Fayh defines swift trust as "a trust that forms between individuals or groups without a prior relationship." The concept of swift trust will be explored in the next section. Fahy, "Understanding Swift Trust," 2.

[88] Ibid., 19.

[89] Haslam et al., "Taking the Strain," 367.

[90] Ibid., 357.

[91] John C. Turner, "Towards a Cognitive Redefinition of the Social Group," 17–18.

[92] Ibid., 18.

[93] Andres Strindberg and David Brannan, "Social Identity Theory, Module II" (internal document, Naval Postgraduate School, 2013).

[94] Brannan, Darken, and Strindberg, *The Practitioner's Way Forward*, 1.

emotional attachment of group membership." They suggest that in order to perpetuate their existence, groups must provide their members with a positive social identity.[95]

One means for a group's elite to improve the positive value and emotions associated with the in-group, in relation to a dominant out-group, is "social creativity."[96] Brannan, Darken and Strindberg describe social creativity as "largely a matter of inculcating/indoctrinating group members with a new sense of themselves and of their group's purpose."[97] They discourse on the effectiveness of social creativity as a tool for group leadership to enhance members' social identity and "thus protect group cohesion." Might emergency team leaders utilize this powerful tactic to enhance disaster responders' social identity with their temporary work groups to foster social support?

In the milieu of stress resilience and recovery, social identity has been assessed as contributing to the efficacy of social support. As stated by Haslam et al., "[A] sense of shared identity is argued to be a basis for both giving and receiving social support."[98] Why is this? S. Alexander Haslam has conducted studies and authored a body of work that explores the role social identity theory and self-categorization play in structuring people's experience of stress and hence their stress outcomes. In "Taking the Strain: Social Identity, Social Support, and the Experience of Stress," Haslam and his co-authors guide us through research analyzing the psychological processes of experiencing stress.

A foundational premise of this work is that "the impact of any given stressor depends on the way that it is construed by the person who is exposed to it."[99] Initially, stress was conceptualized as the outcome of a two-phase process of appraisal: primary appraisal—the perceiver's assessment of the degree of threat posed by a stressor; and secondary appraisal—involving the perceiver's assessment of their own ability to cope with that threat.[100] With focus upon the mechanisms through which social support

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[95] Ibid., 4.

[96] Ibid.

[97] Ibid., 7.

[98] Haslam et al., "Taking the Strain," 357.

[99] Ibid., 356.

[100] Ibid.

reduces stress, four functionalities were identified, each form of input contributing to a positive secondary appraisal (the perceiver's assessment of their ability to cope the threat). According to Haslam et al.:

> Specifically, [social support] can provide an individual with (a) a sense of acceptance and self-worth (emotional support), (b) affiliation and contact with others (social companionship), (c) concrete aid, material resources, and financial assistance (instrumental support), or (d) information useful in understanding and coping with potentially stressful events (informational support).[101]

Haslam and his co-authors observe that when viewed through the lens of social identity and self-categorization, a more complex model of stress is suggested, one "in which appraisal processes and stress outcomes are structured by group memberships that are internalized by individuals to a greater or lesser extent."[102] The findings of Haslam et al. were that "(a) the nature and strength of a person's group identification and (b) the meaning of a specific stressor in relation to that identity are both very important predictors of any given stressor's impact."[103] Haslam et al. also propose that social support is not a "free-floating variable" that people tap into. Rather, Haslam and his co-authors suggest, "People only perceive and only receive social support when they sense that they share self-defining group membership with those in a position to provide it."[104]

How does this pertain to disaster responders? Within their home jurisdictions, emergency workers daily interact, identify and self-categorize with their colleagues. They belong to the same agency. They share both mundane and intense experiences. They define for each other the normalcy of their reactions to critical stress incidents. They are positioned to give and receive social support amongst their in-group. But as discussed in previous sections, the disaster responder who is part of a large deployment may be distanced from the local in-groups with whom he/she identifies.

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[101] Ibid.

[102] Ibid., 357.

[103] Ibid., 366.

[104] Ibid.

During an emergency, responders arrive on scene perceiving themselves as belonging to certain social groups, including their respective deploying agency (such as Sacramento Metropolitan Fire, Los Angeles Fire Department, etc.). In *Multiculturalism and Intergroup Relations*, Fathali M. Moghaddam expands upon the work of Tajfel and psychologist Muzafer Sherif, as he explores the idea of superordinate goals. The concept of superordinate groups proposes "under certain conditions group members come to perceive themselves as belonging to subgroups encompassed by a superordinate group identity."[105] Theoretically, it follows that when assembled to form temporary work teams, multi-jurisdictional disaster responders, who each socially identifying with their home agency (subgroup), might be brought to perceive themselves as also belonging to a superordinate group (the disaster response team).

Fahy's work expounded upon hurdles preventing multiple agencies, specifically the NYPD and FDNY, from successfully collaborating when responding to the same incident. The obstacles Fahy identified, organizational and cultural barriers, were chiefly group characteristics. In addition, Fahy points to differing procedures and communications protocols as impediments coordinated operational efficiency. These hindrances were apparent at responses where the two groups, each maintaining their own group identity, tried to synchronize their efforts. However, in his examination of New York City's Urban Search and Rescue Team (NY-TF1), a combined temporary team comprised of both NYPD and FDNY together, Fahy highlights factors that contribute to the development of swift trust.[106]

Fahy describes "swift trust" as "a trust that forms between individuals or groups without a prior relationship"[107] "...a unique form of trust that occurs between groups or individuals brought together in temporary teams to accomplish specific tasks, often under

[105] Moghaddam, *Multiculturalism and Intergroup Relations*, 102.

[106] Fahy, "Understanding Swift Trust," 51–52

[107] Ibid., 2.

time constraints."[108] His research examines the behaviors displayed by temporary groups "that presupposes trust without any history of trust development among the group."[109]

A recurrent academic definition of "swift trust" is the "unique form of collective perception and relating that is capable of managing issues of vulnerability, uncertainty, risk and expectations."[110] Assessed in the context of team performance, the study of swift trust is founded upon the premise that trust is needed for "cooperation and the information sharing needed to achieve collaborative problem solving."[111] Swift trust is proposed to operate in temporary teams, particularly when there is pressure.[112]

Fahy identified dynamics facilitating swift trust, including quality initial interactions and formulation of a team identity.[113] Dr. Roxanne Zolin has observed, "The initial condition for swift trust is that participants perceive that they belong to the temporary team."[114] Other factors that can contribute to accelerating trust amid temporary teams include: a leader's positivity, the tenor of the first meeting, communication/social skills, and the frequency with which the group meets.[115]

Yet to be explored is the fostering of team identity amongst temporary disaster work groups and whether, like swift trust, that process can be "accelerated." The development of stratagems for cultivating superordinate groups amongst responders may find root in Tajfel's minimal group paradigm.

Moghaddam's analysis illuminates Tajfel's minimal group paradigm. Pursuant to this scheme, Moghaddam advances that "just about any criterion for social categorization

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[108] Ibid., 4.

[109] Ibid.

[110] Meyerson et al., "Swift Trust and Temporary Groups," quoted in Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355.

111 Roxanne Zolin, "Swift Trust in Hastily Formed Networks," Naval Postgraduate School, 2002, http://nps.edu/Academics/Institutes/Cebrowski/Research/HFN/Swift%20Trust%20in%20HFN.pdf, 4.

[112] Ibid.

[113] Fahy, "Understanding Swift Trust," 36.

[114] Zolin, "Swift Trust in Hastily Formed Networks," 4.

[115] Hyllengren et al., "Swift Trust in Leaders in Temporary Military Groups," 355; Fahy, "Understanding Swift Trust," 38–40.

can be used by group members to construct a positive and distinct identity for themselves."[116] The intrinsic value (or triviality) of the criterion is not crucial to its influence on the intergroup. In the minimal group paradigm experiments, subjects exhibited group bias based upon social categorization that had been wrought upon a minimal criterion (e.g., how one sees ambiguous colors on slides). The studies' participants were not known to each other, and they did not have or expect to have contact with the members of the "group." In these characteristics, the experiment subjects can be likened to members of temporary work groups, such as multi-jurisdictional disaster response teams.

By extrapolating from these concepts of social identity theory and swift trust, one may posit if they are encouraged to perceive themselves as "belonging" to a superordinate group whether disaster responders deployed from diverse jurisdictions may be availed social support from the temporary work team.

[116] Moghaddam, *Multiculturalism and Intergroup Relations*, 93–95.

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IV. BUILDING TEAM BELAY: "ACCELERATING" GROUP SOCIAL IDENTITY WITHIN TEMPORARY TEAMS TO PROPAGATE SOCIAL SUPPORT

> The most promising strategy for primary prevention of problems related to occupational stress interventions in these professions must deal with enhancing those features of organizational performance, . . . and social support that provide effective response and promote personal and organizational resilience.[117]

Building team belay, contemplates a strategy for bolstering resilience to critical stress, by devising and employing criteria calculated to prompt group identification amid temporary disaster response teams.[118]

A. RIGGING SUPERORDINATED IN-GROUPS AMONG TEMPORARY TEAMS—THE HYPOTHESIS

In a catastrophic event, responders will be deployed from diverse jurisdictions to assist with response and recovery. This multi-jurisdictional/mutual aid response will require individual team members to leave their local jurisdictions, and local operational teams, in order to perform disaster work in another city, state, or country. Under such circumstances, home-agency group identification may not be available to the responder as a source of social support and resilience. Is there a way to bring the station house "kitchen table" into the disaster responders' canteen?

The research suggests that temporary multi-jurisdictional teams can be united, if the individuals comprising them can view themselves as part of a larger group, a superordinate in-group. Drawing upon exemplars of the minimal group paradigm, it should be possible to fabricate social categorization upon even an insubstantial criterion.

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[117] Richard Gist, "Promoting Resilience and Recovery in First Responders," In *Psychology of Terrorism*, edited by Bruce Bongar et al. (Oxford: Oxford University Press, 2007), 426.

[118] Col. Paul Bliese, an organizational psychologist from the Walter Reed Army Institute of Research (WRAIR) in Washington, DC and the WRIAR's overseas lab, the U.S. Army Medical Research Unit-Europe in Germany, remarked, "[t]he literature suggests that group cohesion supports resilience," Institute of Medicine, *Building a Resilient Workforce*.

When bringing together temporary multi-jurisdictional disaster response teams, some emergency management team leaders intuitively attempt to propagate familiarity. The means that have been employed are varied. In one instance, a National USAR team leader had the bus take the "scenic route," the long way round, when transporting newly arrived responders to the disaster site. His object was to give the temporary teams members an opportunity to develop name/face recognition.[119] In another instance, an international urban search and rescue team leader issued distinctive t-shirts to all those who deployed from his country, identifying the rescuers from Sweden as a superordinate group. Although the responders had deployed from different agencies and locals, the t-shirts, which became a symbol of that rescue effort, served as one criterion for social categorization amongst all the Swedish responders.[120]

Multi-jurisdictional disaster responders should not have to rely upon the innate acumen of their team leaders to propagate group social identification amongst temporary team members. This study supports dedicating resources to the development of devices for "accelerated" group identification. In the absence of social identification, social support, an element essential to resilience, will not be fostered.[121]

B. FURTHER RESEARCH AND DEVELOPMENT—DEVISING TOOLS FOR TRAVERSING FROM GROUP IDENTIFICATION TO SOCIAL SUPPORT TO RESILIENCE

Still to be investigated is whether techniques can be contrived for emergency team leaders to introduce to their temporary teams criteria that will prime group identification. Those credentialed in education, training and exercises should be tasked with contriving simple devices for cultivating superordinate groups; devices that can be incorporated into the NIMS core courses for emergency team leaders; devices that can easily be employed

[119] Lorenzo Gigliotti (Deputy Chief Special Operations, California Governor's Office of Emergency Services), personal communication July 2913. Discussion related to circumstances of a National USAR deployment to aid tornado victims.

[120] Lars Hedstrom (Executive Director, Institute for National Defense and Security Policy Studies, Swedish National Defense College), personal communication, July 9, 2013. Discussion related to experience as head of Swedish Rescue and Support Team response to Thailand after the tsunami catastrophe.

[121] Haslam et al., "Taking the Strain."

in the field. Every operational team leader of a temporary group should have means for instigating a shared perception of team membership within his or her "tool kit."

More research needs to be devoted to the development of such devices. The minimal group paradigm suggests one avenue of investigation explore whether same-colored carabineers, water bottles, wristbands, or lanyards, or a team name, slogan, or moniker could serve as a criterion to initiate social characterization of a group. The studies into swift trust suggest that team leaders should be taught the importance of the initial meeting, exuding positivity, assigning tasks that bring the team together with frequency. As a mechanism for initiating contact, something as simple as asking a group of responders to perform equipment checks upon each other would provide a means for team members to connect. They would be given a minor task, which would entail making eye contact and possibly physical contact to check and adjust gear.[122]

Given that social identification is essential to giving and receiving social support, it behooves the emergency management community to investigate how to foster temporary group members to construct a positive and distinct identity for themselves as a group. Worthy of further study is whether group identification would prime temporary group members to informal social exchange, such as increasing the likelihood of having coffee or meal together. If social identity can be "accelerated," then temporary team members would be poised to provide and receive social support, an integral component to enhancing resilience.

The impetus for such investigation would be supplied by FEMA interpreting the responsibilities of the incident command/safety officer and Essential Safety Function #8, to explicitly include meeting the needs of rescuers and response workers. To clarify that NIMS' assignments encompass responsibility for the responder mental/emotional health, currently required NIMS core courses should be augmented to include management of psychosocial resources. Best practices must be discussed, and individual agencies must be prompted to ascertain and implement programs calculated to provide emergency responders access to critical stress interventions. NIMS core courses could be amended to

[122] James Breckenridge (psychologist), personal communication, April 2013.

include teaching team leaders devices for cultivating superordinate group identity amongst multi-jurisdictional, mutual aid disaster responders.

Refining the responsibilities of safety officer within NIMS will require a proposal to and collaboration with FEMA. The training requirements and modules for safety officer already exist, and they need only be expanded upon to embrace oversight of the psychosocial welfare of the disaster responders. The wheel need not be reinvented. The vehicle for delivering standardized training (and auditing compliance with educational requirements) has already been put into motion by FEMA. Implementation will merely require the augmentation of existing training modules. Best practices and available resources will then dictate how safety officers meet the psychosocial needs of disaster responders at any given event.

As their responsibilities are explicated under NIMS, the safety officers will find they must become versed in the humanitarian assistance resources they can call upon and dispatch to support the responders during a large mutual aid event: local chaplaincies, accredited volunteer groups, the host jurisdictions' mental health providers, and non-governmental organizations (NGOs), such as the Red Cross. Many of these entities currently provide aid to civilian disaster survivors. Accordingly, the interpretation of ESF #8 to specifically address the psychosocial welfare of disaster responders could advance the expansion of the safety officers' role under NIMS.

One means of garnering support within the emergency management community would be through the launch of a successful pilot program. Given the recurrent multi-jurisdictional dynamic of National Urban Search and Rescue (USAR) team deployments, the National USAR would provide an ideal testing ground for implementing such a pilot program.

Training the emergency managers of the various agencies that comprise the National USAR teams, in tactics calculated to foster superordinate group identification, could enhance informal peer-to-peer social support amongst multi-jurisdictional response teams, building responder resilience to critical stress. Such a pilot would bring the psychosocial care of National USAR team responders within the NIMS framework.

While benefiting the team members, it will hopefully provide validation for acceptance of this proposal. If successful, it may lead to exploration of adaptation for a military application to enhance the social support available to demobilized service personnel.[123]

Considering the significant National USAR team resources located in California, it would not be unreasonable to approach the California Governor's Office of Emergency Services (Cal OES) with a proposal for developing such a pilot project. Cal OES' California Specialized Training Institute has the subject matter expertise and resources to develop a curriculum for the National USAR team leaders, which would teach leveraging precepts of social identity theory and swift trust to build superordinate group identification.

[123] The high suicide rate among National Guardsmen returning from deployment suggests that peer social support is critical for demobilized veterans. If the team unit identity can be perpetuated remotely, demobilized service personnel would have access to a source of social support. Different devices, such as providing secure web forums for continuing contact and requiring initial periodic contributions or check-ins should be explored.

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V. CONCLUSION

It is incumbent upon emergency managers to be accountable for the psychosocial care of the disaster responders, just as it is their duty to ensure the physical safety of the responders under their command. However, our uniform organizational structure for disaster response, the National Incident Management System (NIMS), is ambiguous as to the mental/emotional well-being of disaster responders.

One avenue for our emergency management system to address the psychosocial care of multi-jurisdictional disaster responders is an interpretation of NIMS that stipulates the incident commander/safety officer is responsible for both the physical and emotional health of the responders. Implicitly, carried with this interpretation would be the training modules to support it, including more widely disseminated components addressing disaster responder stress. Through core NIMS training, emergency managers and perhaps other leaders in the homeland security enterprise would become cognizant of their responsibility for the psychosocial well-being of disaster responders. It would be the clear duty of the incident commander, and in larger events the safety officer, to ensure provision of humanitarian assistance to the members of all the operational teams. In this way, the emotional health of emergency workers who are responding outside of their own local jurisdictions would be addressed.

At first blush, interpreting NIMS and ESF #8 as addressing responder psychosocial needs could be presumed to increase the potential liability exposure of emergency management agencies and their leaders. In actuality, neither is assuming additional responsibility. Although not delineated in NIMS, the emergency response community is ultimately accountable for the total health and safety of the disaster responders. The cost of treatment and monetary compensation for injury to the mental/ emotional well-being of disaster responders is already embedded within their workers' compensation premiums. What is to be hoped is that actual workers' compensation claims will be reduced as informal peer social support is fostered and enhances resilience to critical stress. Greater resilience amongst the disaster workers is calculated to decrease

impact of critical stressors, which would result in fewer incidents of posttraumatic stress and other stress related injuries.

Research supports the emergency management community dedicating resources to the development of "accelerated" group identity. Just as swift trust contributes to operational performance in temporary teams, "accelerated" group identity is calculated to augment social support amongst temporary team members. Multi-jurisdictional disaster responses can separate individuals from their home teams and from conventional critical stress interventions and traditional sources of social support. Social support is a vital component of individual resilience to critical stressors. But social support is not a "free flowing" resource. Social identification is a pre-requisite to the exchange of social support. Therefore, it is important for emergency team leaders to be able to cultivate amongst members of temporary disaster response work groups the perception that they belong to a superordinate group. When disaster responders perceive themselves as belonging to a superordinate group, they can become accessible to group members as recipients and givers of social support. By augmenting responders' resilience to critical stress, the social support of the temporary team becomes a safety line. When circumstances delay or deny responder access to conventional stress interventions, through "accelerating" group identification, the emergency team leader will have built team belay.

LIST OF REFERENCES

Alexander, David, C. Psychol, and Susan Klein. "First Responders after Disasters: A Review of Stress Reactions, At-Risk, Vulnerability, and Resilience Factors." *Prehospital and Disaster Medicine*, 24, no. 2 (2009): 87–94, http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=ECE40881C924F9594208A5453A2EAA17?doi=10.1.1.176.1579&rep=rep1&type=pdf.

Benedek, David M., Carol Fullerton, and Robert J. Ursano. "First Responders: Mental Health Consequences of Natural and Human-Made Disasters for Public Health and Public Safety Workers." *Annual Review of Public Health* 28 (2007): 55–68.

Beutler, Larry E., Gil Reyes, Zeno Franco, and Jennifer Housley. "The Need for Proficient Mental Health Professionals in the Study of Terrorism." In *Psychology of Terrorism*, edited by Bruce Bongar, Lisa M. Brown, Larry E. Beutler, James N. Breckenridge and Philip G. Zimbardo (32–44). Oxford: Oxford University Press, 2007.

Brannan, David W., Kristin Darken, and Anders Strindberg. *The Practitioner's Way Forward: Terrorism Analysis*. Salinas, CA: Agile Press, 2014.

Byrne, Michael. "Alabama: When the Going Gets Tough, Even the Tough Seek Help." June 17, 2011. Federal Emergency Management Agency. https://www.fema.gov/blog/2011-06-17/alabama-when-going-gets-tough-even-tough-seek-help.

California Governor's Office of Emergency Services. "California Sends 18 Urban Search and Rescue Personnel to Assist with Deadly Washington Mudslide." Press release. March 24, 2014. www.calema.ca.gov/Newsand Media/Pages/News.aspx.

California National Guard. *California Comprehensive Soldier Fitness Resilience Trainer Assistant Course*. Sacramento, CA: California National Guard, 2012.

Chumley, Steven. "The Best Approach to Crisis Intervention." Master's thesis, Naval Postgraduate School, 2012.

Emergency Management Institute. *EMI Fiscal Year 2014 Training Catalog FY14 Catalog*. Federal Emergency Management Agency. 2014. http://training.fema.gov/EMICourses/docs/FY14%20Catalog.pdf.

"Emergency Preparedness and Response, Safety and Health Guides—Critical Incident Stress Guide." Occupational Safety and Health Administration. Accessed March 17, 2014. https://www.osha.gov/SLTC/emergencypreparedness/guides/critical.html.

"Emergency Responder Health Monitoring and Surveillance (ERHMS)." Center for Disease Control and Prevention. Accessed July 17, 2013. http://www.cdc.gov/niosh/topics/erhms/.

Fahy, Michael J. "Understanding Swift Trust to Improve Interagency Collaboration in New York City." Master's thesis, Naval Postgraduate School, 2012.

Federal Emergency Management Agency. "Appendix B." In *National Incident Management System*. Washington, DC: Federal Emergency Management Agency, 2008.

———. *Emergency Support Function #8: Public Health and Medical Services Annex*. 2013. http://www.fema.gov/media-library/assets/documents/32198.

———. *National Incident Management System Training Program*. 2011. http://training.fema.gov/EMIWeb/IS/ICSResource/assets/nims_training_program.pdf.

Gibbs, Margaret, and Kim Montagnino. "Disasters: A Psychological Perspective." Accessed November 24, 2012. http://www.training.fema.gov/emiweb/edu/docs/EMT/GibbsPsychology.doc.

Gist, Richard. "Promoting Resilience and Recovery in First Responders." In *Psychology of Terrorism*, edited by Bruce Bongar, Lisa M. Brown, Larry E. Beutler, James N. Breckenridge and Philip G. Zimbardo (418–433). Oxford: Oxford University Press, 2007.

Harmon, Katherine. "The Changing Mental Health Aftermath of 9/11—Psychological 'First Aid' Gains Favor over Debriefings: Scientific American." *Scientific American*. September 10, 2011. http://www.scientificamerican.com/article.cfm?id=the-changing-mental-health&WT.mc_id=SA_emailfriend.

Haslam, S. Alexander, Anne O'Brien, Jolanda Jetten, Karine Vormedal, and Sally Penna. "Taking the Strain: Social Identity, Social Support, and the Experience of Stress." *British Journal of Social Psychology* 44, no. 3 (2005, September): 355–70. doi: 10.1348/014466605X37468.

Henke, Rachel M., Ron Z. Goetzel, Janice McHugh, and Fik Isaac. "Recent Experience in Health Promotion at Johnson & Johnson: Lower Health Spending, Strong Return on Investment." *Health Affairs (Millwood)* 30, no. 3 (2011): 490–499.

Hyllengren, Peder, Gerry Larsson, Maria Fors, Misa Sjoberg, Jarle Eid, and Olav Kjellevold Olsen. "Swift Trust in Leaders in Temporary Military Groups." *Team Performance Management* 17, no. 7/8 (2011): 354–368.

Institute of Medicine. *Building a Resilient Workforce: Opportunities for the Department of Homeland Security: Workshop Summary*. Washington, DC: The National Academies Press, 2012.

Jackson, Brian A., John C. Baker, M. Susan Ridgely, James T. Bartis, and Herbert I. Linn, *Protecting Emergency Responders*. Vol. 3, *Safety Management in Disaster and Terrorism Response* (RAND Publication No. MG-170). Santa Monica, CA: RAND Science and Technology Policy Institute and the National Institute for Occupational Safety and Health, 2004. http://www.rand.org/pubs/monographs/MG170.html.

Litz, Brett, Matt Gray, Richard Bryant, and Amy Adler. "Early Intervention for Trauma: Current Status and Future Directions." United States Department of Veterans Affairs, National Center for PTSD. Accessed September 10, 2012. http://www.ptsd.va.gov/professional/pages/early-intervention-for-trauma.asp.

Marmar, Charles R., Shannon E. McCaslin, Thomas J. Metzler, Suzanne Best, Daniel S. Weiss, Jeffery Fagan, Akiva Lieberman, Namdi Pole, Christian Otte, Rachel Yehuda, David Mohr, and Thomas Neylan. "Predictors of Posttraumatic Stress in Police and Other First Responders." *Annals of the New York Academy of Sciences* 1071, no. 1 (2006): 1–18.

McCabe, Philip T. "First Responders: Self Care, Wellness, Health, Resilience & Recovery—Dealing with Stress: Personal, Departmental/Job, Home & Family in the Aftermath of Disasters." Presented at New Jersey University of Medicine and Dentistry School of Public Health. September 1, 2005. www.njcphp.org/legacy/drup/index.php?q=node/115.

McKoy, Kathy D. "The Impact of Stress on First Responders: A Phenomenological Study." Ph.D. dissertation, Capella University, 2010.

Moghaddam, Fathali M. *Multiculturalism and Intergroup Relations: Psychological Implications for Democracy in Global Context*. Washington, DC: American Psychological Association, 2008.

Money, Nisha, Monique Moore, David Brown, Kathleen Kasper, Jessica Roeder, Paul Bartone, and Mark Bates. *Best Practices Identified for Peer Support Programs*. Defense Centers of Excellence for Psychological Health & Traumatic Brain Injury. 2011. http://www.dcoe.mil/content/Navigation/Documents/Best_Practices_Identified_for_Peer_Support_Programs_Jan_2011.pdf

New Jersey Center for Public Health Preparedness at the University of Medicine & Dentistry New Jersey. "First Responders Self Care, Wellness, Health, Resilience and Recovery Dealing with Stress." September 1, 2005. www.njcphp.org/legacy/drup/index.php?q=node/115.

New York City. “9/11 Health: Rescue and Recovery Workers—What We Know.” 2012. http://www.nyc.gov/html//doh/wtc/html/rescue/know.shtml.

Paton, Douglas, and John M. Violani. “Terrorism Risk Assessment and Management.” In *Psychology of Terrorism*, edited by Bruce Bongar, Lisa M. Brown, Larry E. Beutler, James N. Breckenridge and Philip G. Zimbardo (225–246). Oxford: Oxford University Press, 2007.

Pietrantoni, Lucia, and Gabriele Prati. “Resilience among First Responders.” Special issue. *African Health Sciences* 8 (December 2008): 14–20.

“Peer Support at Ground Zero: Interview with Engineer Ann Peggs.” International Association of Women in Fire and Emergency Services. 2002. http://www.i-women.org/archive_articles.php?article=9.

Rutkow, Lainie, Lance Gable, and Jonathan M. Links. “Protecting the Mental Health of First Responders: Legal and Ethical Considerations.” *Journal of Law, Medicine & Ethics* 39 (2011): 56–59.

Ruzek, Joseph I. Shira Maguen, and Brett T. Litz. “Evidence-Based Interventions for Survivors of Terrorism.” In *Psychology of Terrorism*, edited by Bruce Bongar, Lisa M. Brown, Larry E. Beutler, James N. Breckenridge and Philip G. Zimbardo (264–264), Oxford: Oxford University Press, 2007.

Schwartz, Seth J., Curtis S. Dunkel, and Alan S. Waterman, “Terrorism: An Identity Theory Perspective.” *Studies in Conflict & Terrorism* 32, no. 6 (2009): 537–559.

Tajfel, Henri. *Social Identity and Intergroup Relations*. Cambridge: Cambridge University Press, 1982.

Tracy, Scott. “How Cumulative Stress Affected the Lived Experience of Emergency Medical Service Workers after a Horrific Natural Disaster: Implications for Professional Counselors.” Ph.D. dissertation, Duquesne University, 2007.

“Traumatic Incident Stress.” Last modified December 30, 2013. National Institute for Occupational Safety and Health Education and Information Division. http://www.cdc.gov/niosh/topics/traumaticincident/.

Turner, John C. “Towards a Cognitive Redefinition of the Social Group.” In *Social Identity Theory and Intergroup Relations*, edited by Henri Tajfel. Cambridge: Cambridge University Press, 1982.

U.S. Department of Health and Human Services (USDHHS) *A Guide to Managing Stress in Crisis Response Professions* (DHSS Pub. No. SMA 4113). Washington, DC: U.S. Department of Health and Human Services, 2005.

U.S. National Response Team. *Emergency Responder Health Monitoring and Surveillance: A Guide for Key Decision Makers*. Washington, DC: U.S. National Response Team, 2012.

———. *Emergency Responder Health Monitoring and Surveillance, Technical Assistance Document*. Washington, DC: U.S. National Response Team, 2012.

World Health Organization. *Psychological First Aid: Guide for Field Workers*. 2011. http://whqlibdoc.who.int/publications/2011/9789241548205_eng.pdf.

Zelko, Hilary. *On the Front Line: The Work of First Responders in a Post 9/11 World*. Ithaca, NY: Smithers Institute School of Industrial & Labor Relations, Cornell University, 2004.

Zolin, Roxanne. *Swift Trust in Hastily Formed Networks*. Naval Postgraduate School. 2002. http://nps.edu/Academics/Institutes/Cebrowski/Research/HFN/Swift%20Trust%20in%20HFN.pdf.

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