

Law Enforcement Response to Terrorism: The Role of the Resilient Police Organization

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Abstract: Since September 11 the environment of contemporary policing has changed substantially. At the same time, it has become increasingly evident that police officers often demonstrate considerable resilience in the face of the critical incidents they face. This paper examines how resilience can be developed to promote officer well-being and performance when responding to acts of terrorism. It argues that to achieve this objective, it is necessary to expand the conceptualization of resilience in two important ways. First, terrorism has created an operating environment that differs qualitatively from that in which police agencies had been used to operating. Second, the agency itself plays a more important role in developing resilience than has hitherto been acknowledged. These new perspectives are integrated to argue that, when developing police resilience, the focus should be on recognizing the reality of contemporary policing and understanding how agencies and officers can learn from their experience of challenging events to develop in ways that facilitate their capacity to adapt and cope with challenges posed by their response to acts of terrorism. The ways in which agency and officer learning can occur and how the lessons learned can be sustained in the form of enhanced resilience are discussed. [International Journal of Emergency Mental Health, 2008, 10(2), pp. 125-136].

Key words: police, terrorism, resiliency, trauma, organizations

Since September 11, the environment of policing has changed irrevocably, with terrorism being an ever-present hazard for police agencies. Even as acts of terrorism make a substantial contribution to increasing traumatic stress risk, growing evidence that critical incidents, including those of terrorist origin, can be resolved in ways characterize by increased resilience and personal and professional growth (North et al., 2002) highlights the importance of identifying the factors predictive of positive outcomes and using this

knowledge to develop resilience. Although the discussion of resilience typically has been focused at the level of the individual officer, this paper examines it from the perspective of how interaction between police agencies and officers influences posttraumatic stress risk, thus providing a context for understanding and managing resilience.

Officers respond to incidents as members of law enforcement agencies in which organizational culture influences their thoughts and actions and represents the context in which challenging (critical incident) experiences (e.g., through interaction with colleagues, senior officers, and organizational procedures) are interpreted (Gist & Woodall, 2000; Mitroff & Anagnos, 2001; Paton, et al., 1999; Paton, Violanti, & Smith, 2003; Weick, 1995). Agency culture, as a result of its prescrib-

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ing officer induction and socialization, organizational structure, operating and reporting procedures, performance expectations, and training, influences how officers think about their role and their work as well as how they impose meaning on the incidents they attend and on the outcomes experienced as a result of responding to critical incidents (Gist & Woodall; Paton, 1994; Weick). Organizational culture thus exercises an important influence on the schema or interpretive framework that officers use to plan and organize their response to any incident. It is the relationship between this schema and officers' well-being and performance effectiveness that lends to the agency-officer relationship a capacity to inform understanding of resilience.

An event becomes critical when incident characteristics fall outside of the expected operational or response parameters and officers' mental models (reflecting assumptions/expectations derived from socialization, routine training, experience, and organizational practices) are unable to make sense of such novel, challenging events (Janoff-Bulman, 1992; Paton, 1994; Tedeschi & Calhoun, 2003). However, when examining resilience, events that fall outside the parameters of mental models can no longer automatically be assumed to lead to pathological outcomes (Paton, 2006). Rather, critical incidents (including acts of terrorism) that challenge existing interpretive frameworks can be conceptualized as catalysts for change (North et al., 2002; Paton & Burke, 2007). In this context, the focus should be on understanding how agencies and officers can learn from their experience of challenging events and develop a more sophisticated, interpretive schema that facilitates their capacity to adapt and cope with future challenges. This makes it important to consider how learning takes place and how the lessons learned are sustained in the form of enhanced resilience.

Given the role of the agency in the development and maintenance of a schema, any sustained benefit will be strongly influenced by the degree to which new insights, perspectives, knowledge, and relationships that emerge through operational experience become embedded in the culture of the organization in ways that enhance future adaptive capacity. Thus, it is argued here that developing a comprehensive understanding of posttrauma outcomes requires analysis at the level of both agency and officer, with the interaction between them playing a pivotal role in understanding and managing resilience.

An important tenet of this paper is the need to give police agencies a more prominent place in the process of

developing resilience than has hitherto been the norm in the literature of traumatic stress. The first argument for including an agency perspective in planning for resilience can be traced to the recognition that terrorism has resulted in significant changes to the environment within which police agencies and their officers work. This environment has not only become more challenging, it is also more dynamic than in the past. It is just this kind of circumstance that prompted Berkes, Colding, and Folke (2003) to argue for organizations to become resilient and to develop their capacity to adapt to an uncertain and riskier future. This paper first discusses the nature of the environmental change that an age of terrorism has introduced and its implications for organizational change. The second part of the paper discusses how the interaction between agency and officer influences stress risk and strategies for increasing resilience.

Acts of Terrorism and the Environment of Contemporary Policing

Despite a long history of responding effectively to emergency events, the nature of terrorist events presents police agencies with a unique set of problems (Carafano, 2003). As Carafano points out, events such as mass traffic accidents, plane crashes, and even mass shootings present a relatively more coherent response environment than do terrorist events. For example, the former incidents have a clear starting point, tend to be localized, have a finite duration, present a relatively predictable set of demands, and allow established procedures to be employed to manage the response. However, greater unpredictability regarding the nature and complexity (e.g., terrorists devote time to developing and implementing new ways to deliberately create maximum harm and fear), location, timing, and duration of acts of terrorism has created new challenges for agencies and officers. With terrorist events, the agency context is also rendered more complex by the need to operate under different legislative requirements and in more complex multi-organizational and multi-jurisdictional contexts. Agencies also have to plan to accommodate the implications of hazards that can be more complex and enduring than those that typify normal incidents. For example, a biohazard attack (e.g., pollution of water supplies, release of a biohazard such as smallpox) may have commenced prior to its existence being identified; present diffuse beginnings and ends; be difficult to detect by those first on the scene; spread in ways dictated by local conditions (some of which can change over time) such as building density, topography, and

prevailing weather; create relatively prolonged periods of impact; and result in a complex social environment characterized by confusion and uncertainty in the general population (Department of Homeland Security, 2003; Fisher, 2000; Lasker, 2004). Thus, in the case of terrorist actions, the operating environment in which agencies plan their response and how they will deploy their officers is qualitatively different from that in which the prevailing organizational culture has developed. A similar argument can be made regarding the experience of those who respond, with officers facing challenges that differ qualitatively from those they are likely to confront under normal circumstances.

Although police officers face danger on a daily basis (e.g., confrontation with armed offenders), terrorism can change the nature of the risk they face. With regard to sources of risk, exposure to hazardous agents (e.g., highly toxic chemical, biological, or radiation hazards) that are difficult to detect and can create significant acute and chronic health problems, as well as generate consequences that may persist for long periods of time, contribute substantially to stress risk. The need for protective clothing contributes to stress risk directly (e.g., its use is necessitated by the use of biological or chemical contaminants) and indirectly (e.g., increased heat stress from wearing protective clothing and from additional problems with operating equipment (Carafano, 2003)). Increased danger also emanates from the fact that, when responding to terror events, the scene could become an intentionally hostile environment for officers (Dept. of Homeland Security, 2003; FEMA, 2004; Maniscalco & Christen, 2002). Officers must attend events knowing that they themselves may be deliberately targeted and that the perpetrators are willing to die in the pursuit of their goal of inflicting the maximum level of loss and fear when targeting ordinary citizens. The latter point introduces a more insidious aspect of the environment of terrorism: the creation of a climate of fear.

Terrorist events possess a unique capacity to create a sustained climate of fear. Beliefs about vulnerability have been changed by the fact that the schemas that underpin how people interpret and comprehend complex experiences have been rendered less applicable by the growing threat of terrorism (Daw, 2001). Zimbardo (2001) stated that the fear generated by terrorism undercuts the sense of trust, stability, and confidence in one's personal world, thus affecting perceived safety and security. These beliefs are sustained by knowledge that terrorist incidents are deliberately perpetrated acts that can occur anywhere and at any time. The assump-

tions that had formerly enabled officers and community members alike to function effectively have become less reliable guides for behavior (Janoff-Bulman, 1992). Consequently, officers must explore a new way of being (Daw, 2001), and knowledge of terrorists, their culture, language, and psychology must be encapsulated in schemas that enhance the capacity of officers to adapt to the new reality in which they have to respond. The police agency has a significant role to play in developing these new interpretive frameworks.

This brief discussion of the issues that agencies and officers may have to contend with illustrates how terrorist events create an environment that differs qualitatively from the operating environment in which agency and officer expectations have developed over years or decades. These historical expectations have driven the development and maintenance of the culture and thus the policies, procedures, and practices that govern present day police work. The importance of acknowledging this issue stems from the fact that the foundation upon which agencies and officers respond to contemporary challenges (i.e., terrorism) derive from their historical assumptions (that past experience is an appropriate predictor of future experience). Consequently, the issues facing agencies and officers have been underestimated because these assumptions and expectations are not accurate predictors of the conditions agencies could encounter in the new era of terrorism (Brake, 2001; Carafano, 2003; Kendra & Wachtendorf, 2003; Paton, 1992). This highlights the need for police agencies to consider both their ability to adapt to a changing, riskier, and more uncertain future and to identify what they can do to facilitate the capacity of their officers to adapt to new demands. Even as it is undeniable that this new environment increases critical incident stress risk, it can also be conceptualized as creating a stimulus for the development of agency and officer capability.

Organizational Learning, Change, and Future Capability

It is almost a certainty that terrorism will not only increase over the coming years, it will also become more deadly (Cooper, 2001). Furthermore, the difficulty of defining who would most likely perpetrate such acts, what they may do, and when and where they could do so adds to this complexity, making it imperative that agencies progressively develop their adaptive capacity. Under these circumstances, it is important that police agencies learn from experience (theirs and that of others), to develop new ways of thinking and acting,

and commit to developing a capacity to manage the demands associated with acts of terrorism (Berkes et al., 2003; FEMA, 2004; Jackson, Baker, Ridgely, Bartis, & Linn, 2003; Kendra & Wachtendorf, 2003). What does this mean for organizational learning? Police organizations must confront the assumptions derived from a long history of effective response to emergency events and accept that they now operate within an environment that is different and that may be more hostile and dynamic. Agencies thus have to develop in ways that facilitate their capacity to adapt rapidly to whatever occurs.

The capacity to learn from experience should not be taken for granted (Berkes et al., 2003; Harrison & Shirom, 1999; Mitroff & Anagnos, 2001; Paton & Hill, 2006). For example, these authors discuss how bureaucratic inertia, vested political interests, centralized power and authority, and operating expectations developed to manage historical conditions have all conspired to block the perceived need to adapt to deal with changes in the environment. Change is also unlikely if organizations underestimate the potential consequences of new challenges by assuming that existing resources, procedures, and competencies will be adequate to deal with these new challenges (Berkes et al.; Carafano, 2003). That is, agencies fail to consider the possibility that the changes are significant enough to warrant new ways of thinking about and responding to environmental events.

Under these circumstances, agencies may underestimate or overlook threats or initiate inadequate actions, reducing their ability to match their capabilities to an environment that now includes highly unpredictable acts of terrorism, which will challenge their response capabilities and provide new sources of stress risk for their officers. Organizational cultures that embody these characteristics will attempt to render the consequences of acts of terrorism “understandable” by interpreting them in the light of previous experience, making it difficult for agencies to consider, far less confront, the demands associated with unpredictable and dynamic terrorist events. Assuming that preexisting capabilities and procedures will suffice increases the likelihood that response to future events will occur in an ad hoc manner, with effective response occurring more by chance than by sound planning and good judgment. Given the potential for terrorist acts to become more frequent and more unpredictable, it is essential that agencies commit to developing ways of knowing and acting designed to enhance resilience and agency and officer capacity to adapt to future challenges.

Organizational Change

To enhance adaptive capacity to deal with complex terrorist events, organizations must learn from past failures to think “outside the square” (Berkes et al., 2003; Kendra & Wachtendorf, 2003; Paton, 1994; Paton & Jackson, 2002). Not only must the organization learn to live with new forms of risk and greater uncertainty, it also must develop a culture appropriate for a contemporary operating environment within which acts of terrorism are a fact of life. Recognition of the importance of institutional learning thus becomes an important precursor of culture change. According to Berkes and colleagues this involves, first, ensuring that the memory of prior terrorism events and the lessons learned (in one’s own and other agencies), whether positive or negative, are incorporated into institutional memory and accepted as an enduring fact of police agency life. Second, realistic estimates of new forms of risk can inform planning for the culture, procedures, and competencies required for effective response (Jackson et al., 2003). Knowledge of the competencies required will be determined through analysis of the demands officers are likely to encounter and the procedures required to respond effectively (see discussion of simulation under “Response Schemas” below). This process will inform future officer and organizational development. Finally, recognition of the risk posed by terrorist events and the importance of learning from them must be consolidated into a culture that espouses the policies, procedures, practices, and attitudes required to facilitate a capacity for adaptive response to an uncertain future (Berkes et al.; Brake, 2001; FEMA, 2004; Jackson et al.; Kendra & Wachtendorf; Paton & Jackson); that is, to commit to developing a culture that instills in officers, via, for example, induction, socialization, training, and performance management procedures, the development and maintenance of a capacity to adapt to future challenges. It is also important to recognize that change is required not only to better position police agencies to respond to terrorist events but also to accommodate the fact that the agency culture and the procedures and expectations that flow from it have direct implications for officer well-being and response effectiveness.

Traditionally, traumatic stress reactions have been attributed predominantly to the interaction between physically and psychologically threatening experiences (e.g., handling human remains) and officer characteristics. Although this remains an important aspect of understanding posttrauma reactions, comprehensive understanding of this phenomenon

must include agency characteristics and their role in molding the schemas that influence how officers formulate their actions and that determine their well-being. It is to a discussion of this relationship that this paper now turns.

Organizational Influences on Officer Thinking, Well-Being, and Performance

Organizational factors have been identified as significant predictors of traumatic stress risk for officers responding to terrorist events (Carafano, 2003; Grant, Hoover, Scarisbrick-Hauser, & Muffet, 2003; Kendra & Wachtendorf, 2003). Officers' perceptions of organizational culture are not only a significant predictor of posttraumatic risk (Huddleston, Paton, & Stephens, 2006; Paton, Smith, Violanti & Eränen, 2000), it may even outweigh the influence of other factors. For example, compared with dispositional (hardiness) factors, social support factors, and formal support (debriefing) factors, Paton and colleagues (2000) found that perception of organizational culture was three times more influential as a predictor of traumatic stress outcomes. In this section, factors contributing to the agency-officer relationship are discussed in terms of their implications for understanding resilience.

One way in which the organizational culture influences officers' thinking and action is through prescribing the "way things are done," that is, through the relationship between the culture and its procedures. For officers working in this context, factors such as inadequate consultation, poor communication, a predisposition to protect the organization from criticism or blame, and excessive "red tape" can increase stress risk (Gist & Woodall, 2000; Huddleston et al., 2006; Burke & Paton, 2006). Furthermore, stress risk is greatest if response procedures (e.g., command structure, level of autocracy, degree of devolved authority) derived from routine work are assumed to be appropriate for terrorist response (Carafano, 2003; McKinsey, 2002; Kendra & Wachtendorf, 2003; Paton & Hannan, 2004). In contrast, a culture that supports autonomous response systems, a flexible, consultative leadership style, and practices that ensure that role and task assignments reflect incident demands can facilitate stress resilience (Gist & Woodall; McKinsey; Paton & Hill, 2006). The influence of response procedures on critical incident stress risk can be more specific. This can be illustrated with reference to the unique challenges of deployment, decision-making, and inter-agency collaboration that terrorist events pose for police agencies.

Agency Planning and Officer Deployment

Police agency involvement commences when an alarm is issued or a terrorist act occurs. During this initial phase, agencies are tasked with, for example, accessing intelligence about what has happened, differentiating fact from inference, making sense of confusing and often ambiguous information (Brake, 2001; DTRA, FBI, & USJFCOM, 2001; Kendra & Wachtendorf, 2003), and negotiating operational arrangements with other agencies and jurisdictions (Brake; Dept. of Homeland Security, 2003; Grant et al., 2003). The uncertainty and complexity inherent in the mobilization phase illustrates the fact that agencies must adapt plans to deal with unexpected emergent and evolving problems rather than being able to rely on activating standard operating procedures (Brake; Dept. of Homeland Security; Grant et al.; McKinsey, 2002).

The degree to which agencies can manage the uncertainty inherent in this task has significant implications for the stress risk in officers deployed to respond. The uncertainty means that agencies often have to deploy officers before a full appreciation of the nature or implications of a terror event is available. For example, police officers deployed immediately to the site of the Lockerbie disaster found it difficult to comprehend the carnage and death they encountered (Mitchell, 1991). While performing similar duties in a similar environment, officers deployed after the cause of the event had been identified (a terrorist bombing) demonstrated greater stress resilience because clarification of the nature of the incident allowed them to activate their operational schema and plan how to use their skills and knowledge. The organizational role is to facilitate this capacity to impose meaning on threatening and challenging demands, to limit the likelihood that officers will be overwhelmed by the demands with which they must contend (Paton, 1994).

To enhance officers' capacity to adapt, it is important that agencies guard against basing their mobilization plans on assumptions derived from routine emergencies or on unrealistic or untested plans (Carafano, 2003; Dept. of Homeland Security, 2003; Lasker, 2004). Plans should be derived from accurate analyses of community (e.g., accommodating the need to reconcile different actions) and professional (e.g., concerns for self and family, having to adapt plans to accommodate emergent issues, multi-agency/jurisdictional responses, etc.) response needs and expectations and be designed to accommodate the unique demands (e.g., a biohazard response) likely to be encountered. Agency influence

does not stop here, but extends in several ways into the response itself, with decision-making and multi-agency issues proving unique challenges for officers.

Decision-Making

The dynamic and complex nature of terrorist events generates a need for a level of creative decision-making that exceeds that required for response to “routine” emergencies (Jackson et al., 2003; Kendra & Wachtendorf, 2003). Creative decision-making requires deviation from standard procedures so that decisions may be made *in situ*. To promote resilience in this domain, agencies need to train officers in creative crisis decision-making and develop procedures to devolve decision-making authority to those working *in situ* who need to produce contingent solutions to novel problems (Alper & Kupferman, 2003; Carafano, 2003; Endsley & Garland, 2000; FEMA, 2004; Grant et al., 2003; Jackson et al., 2003; McKinsey, 2002; Paton & Hannan, 2004; Paton et al., 1999). Furthermore, agencies must recognize that they may not be responding with the level of autonomy or authority that they would experience under normal circumstances.

The Multi-Agency and Multi-Jurisdictional Context

The environment for acts of terrorism is unique in its need for a multi-agency and multi-jurisdictional response (Brake, 2001; Dept. of Homeland Security, 2003; FEMA, 2004; Grant et al., 2003; Jackson et al., 2003; Kendra & Wachtendorf, 2003). The complex nature of terrorist events brings together agencies that rarely interact or collaborate with one another under routine circumstances, which reduces the opportunities to allow shared understanding of their respective roles to develop. For example, when responding to terrorist events, police officers could find themselves having to work with representatives from hazardous materials response teams, urban search and rescue teams, community emergency response teams, anti-terrorism units, special weapons and tactics teams, bomb squads, emergency management officials, municipal agencies, and private organizations responsible for transportation, communications, medical services, public health, disaster assistance, public works, and construction workers (Carafano, 2003). The potential for role conflict and ambiguity under these circumstances can make a substantial contribution to critical incident stress risk. Consequently, developing a capacity to adapt to multi-agency and jurisdictional contexts becomes an important component of any po-

lice resilience strategy, with responsibility for doing so being added to the agency planning agenda.

Simply bringing together representatives of agencies who have little contact with one another under normal circumstances will not guarantee a coordinated response. Rather, such ad hoc arrangements can increase inter-agency conflict, result in a blurring of roles and responsibilities, and fuel frustration and feelings of inadequacy and helplessness (McKinsey, 2002; Paton, 1994). This capacity can be developed by integrating the respective agency roles through inter-agency team development activities (Brake, 2001; Flin & Arbuthnot, 2002; Grant et al., 2003; Paton et al., 1999) that focus on building understanding of the respective contributions of different agencies, develop collaborative management systems, and ensure effective inter-agency communication (Pollock, Paton, Smith, & Violanti, 2003). At one level, this issue reflects the need for structural integration between agencies to facilitate a capacity to collaborate during a crisis. However, the effectiveness of this collaboration is a function of the degree to which it is complemented by officers’ understanding of their respective contributions to the same plan and their shared understanding of each member’s role in the response (Brake, 2001; FEMA, 2004; Paton & Flin, 1999). This means that the schemas or interpretive frameworks that have traditionally guided officers’ operational decisions and actions and that play a crucial role in influencing posttrauma risk (Janoff-Bulman, 1992; Paton, 1994; Tedeschi & Calhoun, 2003) must be expanded to include multi-agency response characteristics. This can be accomplished through multi-agency training (FEMA; Pollock et al.). This is, however, not the only aspect of developing schemas to accommodate the unique demands of terrorist events.

Response Schemas

The interpretive frameworks used by officers provides the basis for rendering events coherent to the point where they can apply plans and competencies to manage the demands encountered (Janoff-Bulman, 1992; Paton, 1994).

The schemas or mental models that guide their response to terror events reflect officers’ socialization into their profession and organization, their training, the experiences they accumulate over time, and the operating practices that prescribe how they respond to routine emergencies (Paton & Burke, 2007). These become implicit (taken for granted) aspects of the mental models used by officers to make predic-

tions about future events, organize experiences, and make sense of the consequences of events and their reactions to them. However, the importance of these models as determinants of well-being and performance effectiveness tends to remain unrealized until officers encounter events that challenge their implicit assumptions (Paton, 1994). Terrorist events can result in officers having to contend with several factors that could challenge these assumptions.

In addition to the issues introduced earlier, several other aspects of a terrorist response may fall outside the parameters of schemas developed from "routine" experience. For example, because the causes of acts of terrorism are always attributable to deliberate human action intended to cause harm, these acts threaten perceived control, a prominent stressor in officers whose training is designed to promote control (MacLeod & Paton, 1999; Myers, 2001). The magnitude of the death and injury encountered, coupled in many cases with uncertainty regarding the cause of death or whether those officers have come into contact with infectious disease agents, represents another conceptual departure from expectations developed from prior experiences (Jackson et al., 2003). Performing body recovery and identification duties is as great a stress risk for officers (North et al., 2002; Simpson & Stehr, 2003) as is having insufficient, inadequate, or inappropriate resources to perform response tasks (Carafano, 2003; Paton, 1994) and having to deal with the fact that the terror response environment is simultaneously a disaster area, a crime scene, and a mass grave. These factors add to the complexity of the role relationships and tasking that officers have to manage.

Consequently, developing the capability of officers to adapt to the challenges posed by terrorist hazards is of paramount importance for agencies, officers, and communities alike. New schemas capable of facilitating the capacity to adapt to these new kinds of demands need to be developed. To do so, agencies and officers must confront prior assumptions and facilitate the development of interpretative competencies to accommodate the new reality of terrorism for contemporary policing.

The development of these interpretive mechanisms will be particularly important for police officers who may have to confront the consequences of terrorism and respond to the challenges it poses to themselves and the communities they serve on a regular basis (Alper & Kupferman, 2003; Grant et al., 2003; Kendra & Wachtendorf, 2003; Paton & Hannan,

2004; Simpson & Stehr, 2003). In general, training that develops the capability of operational mental models (essential to response planning and organizing action) to impose coherence upon atypical and challenging experiences and to accommodate the demands encountered should be an essential component of stress risk management (Dunning, 2003; Paton, 1994; Paton & Jackson, 2002).

In the past, when dealing with "routine" events, training practices and information about officers' prior experiences served as fairly effective mechanisms for transmitting and sustaining operational schemas. However, the qualitatively different nature of the terrorist environment renders these existing mechanisms less appropriate. Agencies cannot wait for officers to accumulate experience; they need to develop new schemas as quickly as possible. Consequently, agencies need a more sophisticated approach to confronting assumptions and reframing schemas in ways that accommodate the reality of operating within the context of the terrorist threat. A capacity for reframing can be developed using simulations.

Simulations provide opportunities for officers to experience the kinds of demands they will have to contend with, develop realistic performance expectations, review and revise response plans and roles, facilitate adaptation to the demands associated with body recovery duties, understand their stress reactions, and rehearse strategies to deal with stressful circumstances and reactions (Crego & Spinks, 1997; Deahl, Gillham, Thomas, Searle, & Srinivasan, 1994; Paton & Jackson, 2002; Thompson, 1993). Training is required that develops expectations of realistic outcomes, an ability to differentiate personal and situational constraints, and interpretive processes that review experiences as learning opportunities to enhance future competence and thus officers' capacity to adapt to challenging circumstances (Dunning, 2003; Paton, 1994).

Developing these more sophisticated psychological structures requires that simulations are constructed using information derived from two sources. One source is the systematic analysis of the competencies required for effective response to terrorist events. The second involves designing simulations capable of reconciling event characteristics (e.g., exposure to biohazards; personal danger; dealing with human remains; and cross-cultural aspects of death and loss) with the competencies required to manage them (e.g., hazard identification and interpretation; adaptive

planning; team and multi-agency operations; information and decision management) in ways that promote adaptive capacity (Paton & Hannan, 2004).

By including simulations within a training strategy, police agencies can proactively enhance officer resilience, develop their capacity to adapt to challenging circumstances, and protect their well-being. Given the complexity and uncertainty inherent within the new environment, this strategy will not eliminate the risk of posttrauma reactions. Consequently, post-event support resources will remain an important component of any critical incident stress risk management strategy. The organizational influence on resilience is not restricted to the response phase – it also extends into the post-event recovery period.

Managing Risk After the Event

It is important to remember that the support practices and procedures used to reintegrate officers back into routine work occur within an organizational context. Stress risk is increased if reintegration occurs within an organizational culture that discourages emotional disclosure, focuses on attributing blame to officers, or minimizes the significance of their reactions or feelings (Paton & Stephens, 1996; MacLeod & Paton, 1999). In contrast, an organizational culture that encourages managers to actively promote reintegration can complement other resilience strategies. Managers can assist adaptation by helping officers appreciate that they performed to the best of their ability and reducing performance guilt by realistically reviewing how situational factors constrained performance (MacLeod & Paton).

Managers can also contribute to the development of stress resilience by working with officers to identify the strengths that helped them deal with the terrorist emergency and building on this to plan how future events can be dealt with more effectively. Similarly, when reviewing response problems, the focus should be on ensuring that the review occurs in a positive climate in which discussion identifies ways that issues can be constructively resolved or contained in the future. The feedback from this process can contribute to identifying future training and support needs as well as organizational practices. If these actions are not taken, risk management programs should review the climate of the relationship between managers and staff (e.g., levels of trust) and seek ways to build this capacity (Gist & Woodall, 2000; Paton et al., 2003). Such analyses can promote future re-

sponse effectiveness, facilitate the establishment and/or maintenance of a resilient organizational climate, and contribute to the next iteration of agency and officer change and development.

Conclusion

Terrorism adds a new, unique, and challenging dimension to the environment of contemporary policing, one that differs qualitatively from that in which policing has historically occurred. It presents agencies and officers alike with a more complex, dynamic, and threatening environment. As a result, agencies and officers must be able to learn from experience and incorporate into the agency culture and officer schemata ways of ensuring a capacity to adapt to future events. Given the importance of the agency-officer relationships in this process, organizational culture (e.g., attitudes to emotional disclosure, performance expectations, empowerment) and practices (e.g., devolving authority, incident management protocols, inter-agency collaboration) play an important role in creating and sustaining a context that supports officer well-being and effectiveness (Jackson et al., 2003; Paton & Hill, 2006; Paton & Jackson, 2002). Cultural change can be transmitted to officers through, for example, induction and socialization procedures, training, simulations, and participative organizational development programs. Additional work is, however, required in order to operationalize the development of resilience by identifying the specific indicators that reflect how agency culture is enacted in ways that lead to resilience. Once identified, these predictors can be used by agencies to plan and evaluate their resilience strategy. The dynamic nature of contemporary policing means that the development and maintenance of agency and officer resilience should be viewed as an iterative process that encompasses personal and organizational learning.

REFERENCES

Alper, A., & Kupferman, S.L. (2003). *Enhancing New York City's emergency preparedness*. New York: New York Economic Development Corp.

Berkes, F., Colding, J., & Folke, C. (2003). *Navigating social-ecological systems: Building resilience for complexity and change*. Cambridge: Cambridge University Press.

Brake, J.D. (2001). *Terrorism and the military's role in domestic crisis management: Background and issues for*

Congress. Washington, DC: Congressional Research Service, Library of Congress.

Burke, K.J., & Paton, D. (2006). Predicting police officer job satisfaction: Traditional versus contemporary models of trauma in occupational experience. *Traumatology, 12*, 189-197.

Carafano, J.J. (2003). *Preparing responders to respond: The challenges to emergency preparedness in the 21st Century* (Heritage Lecture No. 812). Washington, DC: Heritage Foundation.

Cooper, H. H. A. (2001). Terrorism: The problems of definition revisited. *American Behavioral Scientist, 44*, 881-893.

Crego, J., & Spinks, T. (1997). Critical incident management simulation. In R. Flin, E. Salas, M. Strub, & L. Martin (Eds.), *Decision making under stress* (pp. 85-94). Aldershot: Ashgate.

Daw, J. (2001). Responding to the nation's sadness, anger and fear. *Monitor on Psychology, 32*. Retrieved July 3, 2002, from www.apa.monitor/nov01/

Deahl, M. P., Gillham, A. B., Thomas, J., Searle, M. M., & Srinivasan, M. (1994). Psychological sequelae following the Gulf War: Factors associated with subsequent morbidity and the effectiveness of psychological debriefing. *British Journal of Psychiatry, 165*, 60-65.

Defense Threat Reduction Agency (DTRA), Federal Bureau of Investigation (FBI), & U.S. Joint Forces Command (USJFCOM) (2001, March). *Human behavior and weapons of mass destruction* (Final Report). Washington, DC: Authors.

Department of Homeland Security (2003). Top officials (TOPOFF) exercise series: TOPOFF 2 (After Action Summary Report). Washington, DC: Department of Homeland Security.

Dunning (2003). Sense of coherence in managing trauma workers. In D. Paton, J.M. Violanti, & L.M. Smith (Eds.), *Promoting capabilities to manage posttraumatic stress: Perspectives on resilience* (pp. 119-135). Springfield, IL: Charles C. Thomas.

Endsley, M., & Garland, D. (2000). *Situation awareness: Analysis and measurement*. Mahwah, NJ: Lawrence Erlbaum.

FEMA (2004). *Responding to incidents of national consequence*. Washington, DC: FEMA.

Fisher, H.W. (2000). Mitigation and response planning in a bio-terrorist attack. *Disaster Prevention and Management, 9*, 360-367.

Flin, R., & Arbuthnot, K. (Eds.) (2002). *Incident command: Tales from the hot seat*. Aldershot: Ashgate.

Gist, R., & Woodall, J. (2000). There are no simple solutions to complex problems. In J.M. Violanti, D. Paton, & C. Dunning (Eds.). *Posttraumatic stress intervention: Challenges, issues and perspectives* (pp. 81-96). Springfield, IL: Charles C. Thomas.

Grant, N.K., Hoover, D.A., Scarisbrick-Hauser, A., & Muffet, S.L. (2003). The crash of United Flight 93 in Shanksville, Pennsylvania. In J.L. Monday (Ed.), *Beyond September 11: An account of post disaster research* (Natural Hazards Research and Applications Information Centre, Institute of Behavioral Science, Special Publication No. 39, pp. 83-108). Boulder, CO: University of Colorado.

Harrison, M. I., & Shirom, A. (1999). *Organizational diagnosis and assessment*. Thousand Oaks, CA: SAGE Publications.

Huddleston, L.M., Paton, D., & Stephens, C. (2006). Conceptualizing traumatic stress in police officers: Pre-employment, critical incident and organizational influences. *Traumatology, 12*, 170-177.

Jackson, B.A., Baker, J.C., Ridgely, M.S., Bartis, J.T., & Linn, H.I. (2003). *Protecting emergency responders: Volume 3. Safety management in disasters and terrorism response*. Cincinnati, OH: National Institute for Occupational Safety and Health.

Janoff-Bulman, R. (1992). *Shattered assumptions*. New York: Free Press.

Kendra, J., & Wachtendorf, T. (2003). Creativity in emergency response to the World Trade Center disaster. In J.L. Monday (Ed.), *Beyond September 11: An account of post disaster research* (Special Publication No. 39, Natural Hazards Research and Applications Information Centre, Institute of Behavioral Science, pp. 121-146). Boulder, CO: University of Colorado.

Lasker, R.D. (2004). *Redefining readiness: Terrorism planning through the eyes of the public*. New York: New York Academy of Medicine.

MacLeod, M.D., & Paton, D. (1999). Police officers and violent crime: Social psychological perspectives on impact and recovery. In J.M. Violanti and D. Paton (Eds.), *Police*

trauma: Psychological aftermath of civilian combat (pp. 25-36). Springfield, IL: Charles C. Thomas.

Maniscalco, P.M., & Christen, H.T. (2002). *Understanding terrorism and managing the consequences*. Upper Saddle River, NJ: Prentice Hall.

McKinsey & Co. (2002). *Improving NYPD emergency preparedness and response*. New York: McKinsey & Co.

Mitchell, M. (1991). The police after Lockerbie: What were the effects? *Police*, 23, 30-31.

Mitroff, I. I., & Anagnos, G. (2001). *Managing crises before they happen*. New York: AMACOM Books.

Myers, D. G. (2001). Do we fear the right things? *APS Observer*. Retrieved July 3, 2002, from www.psychologicalscience.org/1201/

North, C.S., Tivis, L., McMillen, J.C., Pfefferbaum, B., Cox, J., Spitznagel, E.L., Bunch, K., Schorr, J., & Smith, E.M. (2002). Coping, functioning, and adjustment of rescue workers after the Oklahoma City bombing. *Journal of Traumatic Stress*, 15, 171-175.

Paton, D. (1992). Disaster research: The Scottish dimension. *The Psychologist*, 5, 535-538.

Paton, D. (1994). Disaster relief work: An assessment of training effectiveness. *Journal of Traumatic Stress*, 7, 275-288.

Paton, D. (2006). Posttraumatic growth in emergency professionals. In L. Calhoun and R. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research and practice* (225-247). Mahwah, NJ: Lawrence Erlbaum Assoc.

Paton, D., & Burke, K.J. (2007). Personal and organizational predictors of posttraumatic adaptation and growth in police officers. *Australasian Journal of Disaster and Trauma Studies*, 2007-1, <http://www.massey.ac.nz/%7Etrauma/issues/2007-1/paton-burke.htm>

Paton, D., & Flin, R. (1999). Disaster stress: An emergency management perspective. *Disaster Prevention and Management*, 8, 261-267.

Paton, D., & Hannan, G. (2004). Risk factors in emergency responders. In D. Paton, J. Violanti, C. Dunning, & L. Smith (Eds.), *Managing traumatic stress risk: A proactive approach* (pp. 111-128). Springfield, IL: Charles C. Thomas.

Paton, D., & Hill, R. (2006). Managing company risk and resilience through business continuity management. In D. Paton & D. Johnston (Eds.), *Disaster resilience: An integrated approach* (pp. 249-266). Springfield, IL: Charles C. Thomas.

Paton, D., & Jackson, D. (2002). Developing disaster management capability: An assessment centre approach. *Disaster Prevention and Management*, 11, 115-122.

Paton, D., Johnston, D., Houghton, B., Flin, R., Ronan, K., & Scott, B. (1999). Managing natural hazard consequences: Information management and decision making. *Journal of the American Society of Professional Emergency Managers*, 6, 37-48.

Paton, D., Smith, L. M., Violanti, J. M., & Eränen, L. (2000). Work related trauma stress: Risk, vulnerability and resilience. In J. M. Violanti, D. Paton, & C. Dunning (Eds.), *Posttraumatic stress intervention: Challenges, issues and perspectives* (pp. 187-202). Springfield, IL: Charles C. Thomas.

Paton, D., & Stephens, C. (1996). Training and support for emergency responders. In D. Paton & J. Violanti (Eds.) *Traumatic stress in critical occupations: Recognition, consequences and treatment* (pp. 173-205). Springfield, IL: Charles C. Thomas.

Paton, D., Violanti, J.M., & Smith, L.M. (2003). *Promoting capabilities to manage posttraumatic stress: Perspectives on resilience*. Springfield, IL: Charles C. Thomas.

Pollock, C., Paton, D., Smith, L., & Violanti, J. (2003). Team resilience. In D. Paton, J. Violanti, & L. Smith. (Eds.), *Promoting capabilities to manage posttraumatic stress: Perspectives on resilience* (pp. 74-88). Springfield, IL: Charles C. Thomas.

Simpson, D.M., & Stehr, S. (2003). Victim management and identification after the World Trade Center collapse. In J.L. Monday (Ed.), *Beyond September 11: An account of post disaster research* (Institute of Behavioral Science, Natural Hazards Research and Applications Information Centre, Special Publication No. 39, pp. 109-120). Boulder, CO: University of Colorado.

Tedeschi, R.G., & Calhoun, L.G. (2003). Routes to posttraumatic growth through cognitive processing. In D. Paton, J.M. Violanti, & L.M. Smith (Eds.), *Promoting capabilities to manage posttraumatic stress: Perspectives on Resilience* (pp. 12-26). Springfield, IL: Charles C. Thomas.

Thompson, J. (1993). Psychological impact of body recovery duties. *Journal of the Royal Society of Medicine*, 86, 628-629.

Weick, K.E (1995). *Sensemaking in organizations*. Thousand Oaks, CA: SAGE Publications.

Zimbardo, P. (2001). *The psychology of terrorism: Mind games and healing*. Retrieved July 3, 2002, from American Psychological Association Web site: www.apa.org/science/

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