

LEADERS AND FOLLOWERS IN A DANGEROUS WORLD

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Abstract

This paper outlines an area of inquiry relative to the role of leaders and followers in crisis management. The objective of this paper is to encourage further research relating leader and follower behaviors to preparation, planning, managing and mitigating conditions or situations that result in a dangerous world. The paper begins with a broad scope but is written specifically for application within an industrial setting. The paper concludes with implications for practice for the engineering manager.

Introduction

Security as a part of living in a dangerous world has become a national pastime. For politicians, national security has become a sound bite opportunity. For local law enforcement, security is a response to a national traffic light. For citizens, security is an ever-personalized concern with familial implications. For engineering managers, security is a business issue. Security in a dangerous world is a process of crisis management. Crisis management is a systematic approach to threat assessment and vulnerability analysis, emergency preparation and planning, incident response and damage control or mitigation. Crisis management in a dangerous world addresses the environment of the immediate target be it a person, a facility or system, a company, or a political, social, cultural or financial infrastructure.

The driving forces of managing, working and living in a dangerous world are thousands of years old and as fresh as yesterday. Hostilities seem to have always existed, beginning with the first son, Cain. Terrorism, or asymmetric warfare, was first recognized as a military strategy by Sun Tzu who advised, "Attack him where he is unprepared, appear where you are not expected." (Gorman, 2003). The tools used to propagate terror, however, are as fresh as technology will permit. The user is sophisticated, the intent is lethal, and the discipline is patience (Ridge, 2004).

Where the Cold War was fought more in the philosophies of nations, the battles in a dangerous world can sometimes be fought in individual backyards (Strohm, 2004). Creating and maintaining a peaceful world requires a greater dedication of resources, greater intellectual capital and greater fiscal allegiance than any other political, economical, social or managerial challenge. To do it without sacrificing personal liberty seems, at times, counterproductive.

Actually, the American landscape has always contained danger. As a society, America has a long

record of muggings, serial killings, lightning strikes, earthquakes, wildfires and mudslides, all of which have properties that represent some kinship with asymmetric warfare. The history of America, from the times of native inhabitants, to the times of mechanized cavalry, is full of examples of burned crops, poisoned wells and slaughtered herds (Peters, 2003a). Each of these, whether natural or man-made, whether with or without warning, whether legend or fact, represent a threat to someone's, some group's, or some organization's security. Each of these, whether natural or man-made, caused fear to swell in the heart of the public. It is fear that is the modus operandi of those desirous of a dangerous world. Fear is borne of stress and culminates in panic if left unchecked.

Natural disaster response plans seem to provide the best model for security threat response plans, i.e., planning for the unwanted, the unexpected, and the dangerous. Disaster planning is a process of planning for detection, prevention, and response mechanisms. The efficacy of a disaster plan is demonstrated and refined during drills, so that under real emergencies, responders are prepared.

Literature

The issue behind crisis management associated with asymmetric warfare is not the psychological differences that separate the main players. It is an issue of assessing and mitigating threat. Assessing threat is a matter of coordinating information, i.e., intelligence and nurturing responsible communications across technical and cultural boundaries/interfaces (Peters, 2003b). Threats to homeland security seem to center on processes and facilities (transportation systems, power systems, etc.), proprietary systems (trade secrets, etc.), administrative systems (monetary systems, payrolls, etc.), public gatherings (events, meetings, elections etc.) and community resources (food stocks, water supplies, etc.). While some are focused on translating homeland security to hometown security, the engineering manager/leader in a business environment is primarily focused on threats against the first three in relation to her business responsibilities and in the latter two when it comes to her community service and family responsibilities.

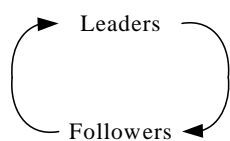
Peters (2002a) states "The men and women most likely to be called upon first to respond to and manage the fallout from a terrorist attack are not part of some well-oiled organization, nor are they generally part of the federal bureaucracy. They are quite literally our friends and neighbors, the millions of Americans

performing key public and private services—health care workers, fire fighters, transit officials and police officers.” These are not people in positions of political, financial or organizational power. These are not super-responders like Audie Murphy or Alvin York of war fame. We would generally think of responders as followers; people who do what they are told and more. These people serve with pride and dignity. These are people who have a sense of stewardship and who take on responsibility without authority and without hope of reward. These are people who, when response is required, must bridge organizational boundaries to exchange information, share resources and volunteer expertise. As Dynes (1970) and Kartez (1984) point out, these responders are the critical human resources in times of crisis, whose effectiveness is a result of structure, preparation, initiative, integrity and ingenuity.

Responders rely on strategies, visions, and missions that characterize the work of leaders and the culture of organizations. Responders—with the exception of solo heroes—operate within the structure of organizations whether formal or informal.

Leaders and followers in a dangerous world. After studying behavior responses during earthquakes, blizzards, accidents and hurricanes using judge-panel techniques, Weinberg (1978) underscored the importance of leaders, followers in preparing for, and in responding during emergencies. For purposes of this paper, leadership can be thought of as the systematic and progressive enlistment of followers in the realization of worthwhile, predetermined, collectively adopted organizational vision and culture based on shared values and trust (Dixon, 2003). For comparison, followership can be thought of as the free will recognition of leadership in the commitment towards realization of collectively adopted organizational vision and culture based on values and trust shared by leader and followers (Dixon, 2003). Note that these definitions imply that followers and subordinates are not the same and while both may be first responders, the characteristic behaviors of followers result in a response of higher value for a threatened organization. These definitions can be represented as a leader follower system as shown in Exhibit 1. In applying this system to crisis management, leaders and followers are equal partners sharing authority and responsibility.

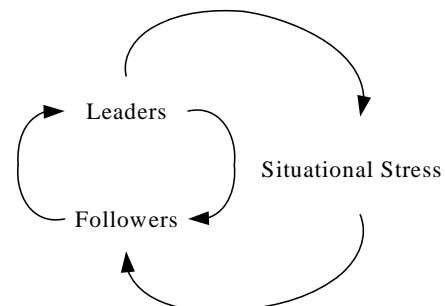
Exhibit 1. Leaders and Followers as Partners.



If the concepts of leaders and followers are isolated from traditional manager-subordinate concepts (Dixon, 2003), then, logically, leaders and followers can be co-stakeholders in crisis management. While research related to command structures and systems under stress has been conducted, preparation and training seems to have established themselves as the keys of incident mitigation. The military spends much of its time, money and resources in preparation and training and may represent a model for business. However, the mission of the military is, in essence, incident response. Businesses in critical sectors also spend resources on natural disaster and catastrophe planning. For the most part however, businesses have a different mission; incident response is a secondary part of a business mission. It seems pertinent then to examine the role of preparation for disaster, attacks and incidents in light of management roles and personalities in the business environment, particularly the interaction of leaders and followers under stress, as well as in preparation for times of stress. For leaders and followers, a systems diagram of this is shown in Exhibit 2, where crisis management is represented as situational stress. As leaders and followers interact, the situational need, or stress, influences the actions and reactions of the leader-follower dyad while at the same time leaders and followers retain their relationship as co-stakeholders and partners.

Chaleff (2003) theorizes on the role of leaders and followers during times of crises. He states that a primary role of leaders is to manage towards some level of calm so that people can get their work done. For followers the task is to be productive and supportive while a path through the crisis is chartered and completed. Chaleff's supposition of roles and responsibilities reflects the systems approach diagramed in Exhibit 2. The rapidity with which events unfold may hinder full leader-follower consultation as it would any manager-subordinate relationship. Crisis management tries to minimize the effects of stress through emergency planning and risk mitigation strategies to as great a degree as imaginable before a crisis.

Exhibit 2. Leaders and Followers under Stress



Chaleff charges the followers with greater roles during crisis management than during normal conditions including:

- Maintaining a greater information exchange among responsible parties, i.e., sharing actual and anticipated developments. Followers become the eyes, ears and intuition of a leader when information is coming faster than a single person's comprehension allows. This also includes minimizing unrelated contacts—spurious information— during a crisis.
- Participating in post-crisis reviews to identify opportunities for improvements in response, enhance emergency plans and identify additional risk mitigation opportunities.
- Support individuals, the emergency response group and the organization in post event stress/trauma management and lessons learned activities.
- Relinquish any authorities or responsibilities assumed out of necessity during the crisis. While the assumption of authority and responsibility may be consistent with succession plans, when the need no longer is present, the organization morale will benefit with a quiet transition to status quo.

Similarly, the leader role includes:

- Ensure followers are informed of issues related to the crisis or emergency as possible in order to maintain communication lines, minimize rumors and nurture input.
- Minimize distractions for emergency responders by minimizing outside queries not pertinent to actual crisis management.
- Provide an open environment for post-crisis reviews that encourages followers to share ideas for improving emergency plans, emergency response mechanisms and risk mitigation.
- Recognize and reward not only emergent super-responders but others who contribute non-heroic but necessary responses that enable responders to be 'super'. There is always somebody providing logistical support and these 'responders' should not be overlooked.
- Provide stress counseling as soon as possible should a risk become a crisis.

Leaders and followers in a dangerous world must both work to maintain mutual trust and organizational morale during crisis. By relying on organizational values as a cornerstone during emergency planning and during crisis management, those core values are reinforced and both leader and follower have a basis of trust in each other when trust is really of utmost

importance. When followers trust the leader to be consistent with shared values and leaders trust in follower support, morale may well be enhanced in the end. After all, if real struggle doesn't kill us, it will make us stronger.

In terms of leadership, engineering managers seem to be acutely prepared for crisis management leadership in a dangerous world. The American Society for Engineering Management (ASEM, 2004) describes Engineering managers as distinguished from other managers by the fact that they possess both an ability to apply engineering principles and a skill in organizing and directing technical projects and people in technical jobs. The ASEM definition of engineering management is the art and science of planning, organizing, allocating resources, and directing and controlling activities which have a technological component (ASEM 2004). As security threats evince increasing technical savvy, engineering managers appear to be especially prepared for crisis management. Similarly, engineers, with their training as problem solvers, appear to be suitable as followers.

Organizations in a dangerous world. Industrial and business organizations must rely on existing structures and resources when managing in a dangerous world. Competitive pressures do not permit stand-alone crisis management groups or departments within most organizations. Getting the right people with the right skills in the right places is enormously difficult for any organization (Peters, 2003a) and particularly when the organization is under threat as in times of crisis management.

Traditional bureaucratic, hierarchical organizations, i.e., mechanistic organizations, are poorly structured to cope with the characterless threats of asymmetric warfare (Peters, 2003c). Because the terrorist threat is constantly shifting and evolving, organizations that hope to counter threats must be constantly shifting and evolving, at least in their approach to crisis management. Those same structures, however, do offer organizationally defined decision-makers and an organizational structure which seems to reduce stress (French, 1941). Graham (1982) found that employees whose supervisors rated high on both the structure and consideration aspects of the Leader Behavior Description Questionnaire (Stogdill, 1963) experienced lower levels of job stress. Trends in research seem to indicate that groups and organizations prefer directiveness from the leaders in times of stress, i.e., crisis promotes authority centralization (Hermann, 1963) or authority acceptance (Berkowitz (1953b) and follower acceptance of decisiveness (Janis and Mann, 1977; Hemphill, 1950). These trends represent mechanistic cultures well.

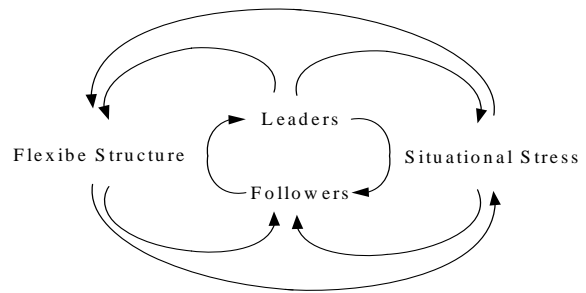
As if in contrast, participative organizations—organizations that expect cooperative decision-making at least and extensive information sharing at best—are recognized as preferred for informed decision as compared to single sourced decisions typical of traditional organizations (Streib, Folts and LaGreca, 1985). The transformational leader, typical of an organic culture, is touted for her ability to press groups to transcend immediate self-interests in pursuit of higher values (Bass, Hurder and Ellis, 1954) and the conversion of stress into challenge (Pines 1980; McCauley; 1987). These leaders are more open to ideas and suggestions—information—provided by followers and therefore more effective decisions (Tjosvold, 1984; Blake and Mouton, 1985).

The literature uncovers an organizational structure paradox related to interactions. For example, Gal and Jones (1985) found that the strength of informal structures within a military unit helped reduce perceived combat stress. However, threatened organizations tend to increase rigidity, i.e., inflexibility uncharacteristic of informal decision-making but characteristic of centralized authority (Staw, et al., 1981; Hermann, 1963). Alwon (1980) has a more direct finding that when danger threatens, subordinates want to be told what to do while Polis (1964) found that subordinates need strong leadership during times of increased stress. These situational influences result in leader-follower interfaces becoming more leader directive than participative (Lowin, 1968). Increased levels of emergency preparation induced greater levels of structure, procedures and autocratic or authoritarian direction from leaders (Fodor, 1976, 1978). This type of leader dominated, leader-follower interaction lead to what Bass (1990) labels as “successful but not necessarily effective leadership.” Moses and Lyness (1988) find that adaptive managers are far better to cope with stress than others are. They define adaptive managers as those with a broad perspective, who are receptive to feedback and use intuition and logic in decision-making.

Pool (1997) describes evidence of flexible organizations, i.e., organizations with formidable hierarchy and exacting procedural details but that are constantly changing, questioning the status quo and looking for ways to work better. As evidence, he describes the functioning aircraft carrier and a nuclear power plant. These organizations appear to have layered organizational structures, but given the demands of a situation, will form collegial teams when under pressure or stress to perform. These organizations are enigmatic in their ability to be both centralized and uncentralized, rule-bound and learning-centered, and simultaneously hierarchical and collegial. Pool says these organizations emphasize constant communications and constant learning that results in

organizational ambiguity. Given the type work the two examples are involved in, the flexible organization seems to have appeal as a model for building an emergency response/management sub-organization within the confines of any organization whether bureaucratic or participatory. Exhibit 3 offers a systems model of the flexible organization.

Exhibit 3. Leaders, Followers, Stress and Structure.



The format requirements of this paper do not support a full exploration of the implications of a flexible organization. What Exhibit 3 attempts to represent is that while the leader-follower dyad remains intact—albeit influenced—during situational stress, the flexible structure influences the leader-follower dyad as a dynamic response mechanism. By responding dynamically, the adaptive structure can influence the effects of situational stress under crisis management. Collegial teams form to bolster confidence and there by offset the effects of stress. When stress is reduced, the flexible structure can adapt a more mechanistic approach to operations. While obviously, a simplistic representation, Exhibit 3 attempts to illustrate a progressive approach to the influence of structure on crisis management.

Information. A common theme emerges for crisis management, information exchange. Regardless of the organization structure, the efficient flow of information and expertise among all levels of an organization is critical to effectively managing any crisis whether the crisis is fiscal, organizational, managerial, or terror related. Information exchange is a potent response mechanism for leaders and followers involved in crisis management. Ridge (2004) quotes the 9/11 commission, “The biggest impediment...is the human or systemic resistance to sharing information.” Deciding who needs to know what and when is difficult (Harris, 2002b). Ridge (2004) also points out that sharing too much information may be helpful to the wrong people, i.e., those responsible for creating a

dangerous world. It is much more difficult under the extreme stress of an emergency.

The free exchange of information is not something that serendipitously happens under normal conditions, particularly in bureaucracies, but is expected and required to occur flawlessly during an incident response. This requires forethought, planning and training, the hallmarks of crisis management.

Summary. When managing in a dangerous world becomes crisis management, i.e., threats are realized, business organizations must have in place an integrated cadre of knowledgeable leaders and followers within a structure that supports crisis management and the free exchange of pertinent information. Crisis management leaders and followers must be versed in support/response services capabilities, process knowledge—including limitations of systems, structures and components, environmental issues and community interests. During a crisis, this may imply many different groups of responding leaders and followers across multiple levels of an organization, particularly in cases of threats to large industrial complexes. Regardless of the size of the threat or the size of the organization, it is the integration of team knowledge and incident relative information with preplanned response actions planning and communication that makes crisis management effective. Planning implies preparation. Preparation implies training. Additionally, training is instrumental in minimizing mob action borne out of panic. Obviously, training is not effective if left to the moment of crisis timing. The intent of leaders and followers in crisis management should be to move from “Homeland Security” to “Hometown Security” regardless of the threat’s source, the threat’s magnitude or the threat’s target. That effort requires and understanding of and expertise in applying a complex and integrated crisis management responses system.

Research Proposal

Two research questions are resident in this discussion: What are the unique roles of leaders and followers in crisis management? What is the nature of the interaction of leaders, followers and organizational structure during crisis management?

Developing these research questions into testable hypothesis will be an extensive undertaking. As a draft set of hypothesis for the potential researcher, consider the following propositions:

P_{A1}: Unique leader and follower roles, behaviors, and interactions are required during crisis management.

P_{A0}: There are no circumstance-unique leader and follower roles, behaviors and interactions.

The propositions, while not nearly representative of a testable form, offers some perspectives for consideration. If behaviors are isolated from the discussion, and if unique roles can be associated with planning, preparing and mitigating a threat, can the roles and interactions be isolated such that focused training could be designed? As training and preparation (materials, systems, etc.) evolve, it is reasonable to expect a responding organization to have a greater ability to meet and mitigate security threats and disaster thereby reducing the potential losses. It would seem logical then that the greater the state of role preparation coupled with a higher recognition of readiness by potential perpetrators, the less value the target, whether process, proprietary, administrative, public or community, would have. A valueless target represents no target at all. For behaviors, the interested researcher may wish to explore whether unique behaviors, as suggested by Chaleff (2003), exist in the frame of emergency planning and incident response.

The discussion has also broached the subject of the impact of organizational structure relative to emergency/crisis management. As a draft set of hypothesis for the potential researcher, consider the following propositions:

P_{B1}: Organizational structure during routine times is suitable for emergency/crisis management.

P_{B0}: Organizational structure during routine times is not suitable for crisis management.

Again, further work is required to develop the propositions into testable hypothesis, nevertheless the impact and importance of organizing for crisis management can not be left for granted. The situational demands seemingly require responsive people in responsive roles operating within responsive organizational structures for effective crisis mitigation. Left to chance, the results could even further the intents of the perpetrators, a very unappealing scenario. Organizational structures must be able to support deterrence as well as mitigate effects and those structures may not be ideal for routine production/service. Again, engineering managers with their training in systems and systems engineering may be in a unique position to help craft or help others to craft dynamic organizational structures capable of meeting situational demands.

Variables and measures. Four variables are immediately evident: leader behaviors, follower behaviors, organizational structure and the situation effects or level of stress. The Leader Profile (Sashkin, 1998) may prove to be a useful tool in measuring leadership behaviors for a study of this nature. Similarly, The Followership Profile (Dixon, 2003) could be used to measure follower behaviors. Recognizing that incidents leading to a crisis

management situation may or may not have quantifiable measures, the result of any incidents would result in stress which may be representative of the intensity of an incident when controlled for a capacity to deal with stress. Bass (1990) reports on work by Spielberg, et al., (1970) in developing objective measures of stress using anxiety and concluded, however, that performance under stress conditions varies in contrast to tasks, stressors and initial state. Finally, Likert's (1961) work may be useful in establishing organizational type.

Constraints. The research will have challenging constraints in measuring leadership, followership behaviors relative to situational and structural influences during crisis management. Acquiring data during real incidents is considered impractical and unsafe. Contrived laboratory scenarios, drills and practice exercises may provide some level of realism but lack real effects—fire, fumes, fear—that may significantly impact anxiety induced stress. The availability of video from emergency responses while appealing may not be accessible for obvious reasons.

Interactions. Bass (1990) reports on research covering interactions that may provide insights during development of a research plan. He recognizes interactions between stress and leader motivation, stress and organizational structure, leadership and hypervigilance (panic), leadership and prolonged stress, stress and prolonged decision making. Note the absence of the follower roles and follower behaviors.

Some research of follower performance/follower behavior under stress has been conducted. However, the application of the term *followers* in reported research is more typical of subordinates than of the followers described by (Dixon, 2003; Chaleff, 2003). For example Hermann (1963) and Berkowitz (1953b) offer research that finds subordinates under stress are more likely to accept task-oriented leadership.

Implications for Practice

Adapting Peters (2002b) aspects of a security plan, engineering managers as crisis management leaders and followers have unique capabilities for identifying and establishing organizational responses to a dangerous world in the areas of: 1) process security; 2) critical infrastructure protection; 3) promise and limitations of technology; and 4) coordination and training of 'technology expert' first-responders. Any response would require a systematic approach requiring integration of systems, capital resources and people. Obviously, the system would result in a multi-functional, cross-functional, fully integrated response 'team' that would require specific training and preparations. While it is beyond the scope of this paper

to outline training and metrics for crisis management, the following recommendations for the mitigation of acts, conditions and situations, i.e., crisis management, that are a result of living and managing in a dangerous world are offered for the practitioners' consideration.

1. Continuous improvement of threat-and-vulnerability analysis. It must be assumed that those who would threaten the security of our business organizations are operating with the most recent technology. It behooves the engineering manager to be cognizant of the technology and understand the risks to the organizations. Due diligence towards threat and vulnerability analysis is required to keep planning and training abreast of current threats.

2. Educate the workforce about emergency precautions, emergency management, and emergency response and the organizational values behind those preparations. Bass (1990) reports that preparedness and "overlearning" help individuals to cope with stressful situations. Cross-functional training is required beyond first responders. Assigning non-essential personnel to assembly points limits their ability to fill-in should a first responder become incapacitated. Training exercises, e.g., drills, must not only test but also teach responders and managers how to perform cooperatively (Danzig, 2004).

3. Nurture a cross-discipline, systems approach that leads to the free exchange of pertinent information relative to emergency planning, emergency precautions, emergency management, and emergency response. Information exchange is of paramount importance in emergency response. Information resource centers must be available for responders as well as support personnel.

4. Integrate organizational, i.e., computer, personnel, facility, security across sub-organization physical and virtual boundaries. Include backup systems in case electronic databases or communications should become disabled because of ancillary or direct realized threat.

5. Ensure that the primary and backup channels of communication used during emergencies are functional, load capable by routine testing and drill play. Additionally, there should be a commonality in communications methods (Danzig, 2004). Every system has a capacity limit. No medical facility has the capacity for treating large numbers of injuries simultaneously. Drills should include training for system overloads. Depending on the nature of an emergency, excess communication capacity must be available. Communication plans are essential to effective crisis management (Clark, 1986).

6. Ensure the training of engineering first-responders and support mechanisms are current for the systems, structures, and components of active and deactivated processes, and in-progress projects. This requires a general awareness of recent and ongoing process modifications. Mitroff, et al., (1987) point out the importance of technical preparation.

7. Provide focused leadership and resources for emergency precautions, emergency management, and emergency response (Form and Nosow, 1958). Part-time emergency management does not appear to be adequate in today's dangerous world.

8. Establish the groundwork for cross-discipline harmony as well as coordination between organizational and community (including other local industries) stakeholders through planning and drills that include chain-of-command roles and responsibilities. These stakeholders can be hyper-territorial under normal conditions. Issues must be resolved during 'quiet' times.

9. Include representatives of the press in planning, training and drilling. Ultimately, the press will be reporting on any emergency. Their foreknowledge may be helpful in communicating the message of calm during an emergency and help to minimize over-hyping that creates a 'duct tape' panic. The intent, and they should know it, is for the press to disseminate information, not response critiques (Gorman, 2003). Similarly, the dangers of under-hyping an event may result in unnecessary human or infrastructure casualties.

10. Create an awareness mentality among all levels of the organization. The eyes, ears and intuition of the engineering workforce and the general workforce should be aware of risk and threat potential not only from a sound-practice standpoint but also as part of a recognition that we are all managing working, and living in dangerous times.

11. Beware the diversion. Sophisticated threats may be preceded by diversions. Sophisticated plans will address multiple response requirements.

12. Factor succession planning into preparedness drills (Lanzara, 1983). Rotate drills and training among those who may ultimately be unlikely survivors.

Peckinpugh (2004) warns that it is easy to review, study and assess your way out of acting. That is, until a major event forces a response. Engineering managers should not be caught in that cycle. Acting does take time, attention and resources. The most important

mechanism in managing in a dangerous world may well be the alert follower.

Finally, if an organization becomes proficient in crisis management, it has one additional great threat, success. As the possibility of an unmitigatable threat grows more remote, the possibility of crisis becomes less real and the cost of vigilance harder to justify. As long as managing in a dangerous world is part of business, we must be as diligent with our concerns and defenses, our planning and preparations and our mitigation management and response efficacy as we are with our family's safety.

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