A PREDICTION MODEL FOR INCIDENT RESOLUTION

Hugh M. McGowan, Ph.D.

Published in Journal of Police Crisis Negotiations (Fall 2007) Vol. 7, No. 2

Introduction

Years ago Johnny Carson was the star of late night television. In one of his reoccurring comedy skits Johnny would don a huge turban and become “The Great Karnac.” In this role he magically knew the answer to a question that was placed in a sealed envelope. This skit always got a lot of laughs. During an actual hostage situation one of my negotiators whispered to me that it was a shame that I didn’t have one of those huge swami-like turbans like the one Johnny Carson used to wear. I wasn’t getting the tongue-in-cheek humor because I asked why would I need that. He replied that when the on-scene-commander asked how I thought this situation was going to be resolved, I could just reach into my “bag of tricks,” put on my “Great Karnac” turban and magically predict the outcome. The commander would be so impressed by my splendid attire and my brilliant prediction, the whispering negotiator assured me, that no matter what the outcome my showmanship would still carry the day. I thanked my associate for his unsolicited suggestion but reminded him that the on-scene-commander was not known for having a great sense of humor so, in order to continue in my present assignment, I would decline his turban idea.

Among the many problems encountered by police negotiation teams at hostage and barricade situations is the question asked by almost every on-scene-commander. There are various ways it is phrased but it usually comes down to “how is this situation going to be resolved?” The choices are peaceful or violent, favorable or non-favorable and/or some combination of these options. During my 13 years as the Commander of the NYPD’s Hostage Negotiation Team, I was often faced with this question and, in many instances, I found myself offering a prediction that was based more on feeling then fact. However, I did believe that there had to be some better way of assessing these situations that would be based on variables that could be tested with some degree of accuracy. Flipping a coin would give a team leader a 50-50 chance of being correct but that would not be any more professional than donning a “Great Karnac”

turban. Mere chance or outrageous costumes certainly weren't the answer but, was there a model that could be easily employed and whose accuracy could be measured? I believed there could be but before I present the model I developed, lets look back at the history and literature that lead to its development.

Background

Much of the scholarly literature on hostage and barricade situations is written by mental health professionals or law enforcement personnel with a psychology background (Lancely, 1979; Strentz, 1983; Powell, 1989; Borum & Strentz, 1992; Logan, 2001). As a result, the police have traditionally viewed these encounters as problems of proper identification of typed and profiled suspects (Reiser & Sloane, 1981). However, the psychological orientation tends to remove both rational and irrational actors from their social contexts. The mental health community uses personality types as predictors of behavior based on their psychological characteristics (Fuselier, 1981; Schlossberg, 1996; Violanti, 1996).

When these writers allude to the hostages in these situations, they are usually designated as "bargaining tools." Hostages may be subject to the "Stockholm Syndrome". These feelings are frequently reciprocated by their captor(s) (Strentz, 1979; Strentz, 1991; Grossman, 1995; Fuselier, 1999). On the other hand, in this same literature, the police are usually presented as rational actors, acting logically and with due deliberation (Bohl, 1992). Seldom, except in novels or made-for-television movies, does one get any sense of the dynamics that go on behind police lines and such descriptions are rarely accurate (Schlossberg, 1979; Fusselier, 1986; DeMille, 1990; Van Zandt, 1991; Deaver, 1995).Many mental health professionals and academics have actively assisted the law enforcement community in understanding and resolving hostage and barricade situations. Many of the articles written on hostage and barricade situations have a psychological orientation and favor the case study and narrative over the statistical analysis approach.

Hacker's Contribution to Cooperative Effort

The law enforcement community and the entire criminal justice system have benefited from the efforts of academics and practitioners who struggled to overcome the mistrust between the two disciplines. Frederick J. Hacker, who in 1976 wrote Crusaders, Criminals, Crazies: Terror and Terrorism In Our time, was a major influence in this struggle. Hacker believed that society would suffer if the barriers of traditional mutual mistrust between academics and police remained in place. He insisted that new ways of working together must be found, and law enforcement and behavioral science would benefit from the ensuing changes. In Hackers' introduction he expressed this belief when he says:

> "I believe that nonviolent ... solutions to inevitable conflicts must and can be found and that in the overwhelming majority of cases, recourse to violence represents only self-serving moral cowardice, lack of imagination, and a failure of knowledge and spirit (p.xvi).

Hacker's Motivational Model

Hacker designed an interpretive model for understanding explosive symptomatic violence based on his clinical and forensic psychiatric practice and experience. He says that sometimes mental illness is either deliberately or inadvertently misdiagnosed and on occasion, it can be feigned. Utmost simplicity, according to Hacker, is a utopian scientific ideal that is often achieved by simply leaving out that part of reality which contradicts a deceptively clear conclusion. Moreover, the complexity of reality demands the search for, and toleration of, real world ambiguities and contradictions (p. xiv). Hacker firmly believes that the knowledge and skills of these disciplines could and should be joined together in a working partnership for the benefit of the community (Reich, 1990).

Hacker's "Crusaders, Criminals and Crazies" motive model, as a typology for

hostage-takers, has been utilized by many scholars. When Hacker uses these three prototype classifications he say that the "Crusader" refers to the rebel, revolutionary or social protestor; the "Criminal" are those individuals who act unlawfully for their own profit and the "Crazies" refers to those who suffer from an emotional imbalance or brain disorder (Hacker, p.9). In describing their motivations, Hacker details the following characteristics for each prototype:

> ***Crusaders*** - are unselfish and sacrificial with a task-orientated thought processes; they are functionally rational but unconventional in terms of prevailing values. They have concrete and abstract goals; they seek attention, are dramatic, publicity-conscious and indifferent to high risk but realistic often in service of unrealistic ends.
>
> ***Criminals*** - are selfish and self-protective with a task orientated thought processes; they are realistic with concrete goals which usually are personal and involve material gain. They are usually "understandable", and not psychologically orientated. They consider themselves professional and avoid high risk.
>
> ***Crazies*** - are self-centered and sacrificial with thought processes that are highly personal, often non-rational or irrational, sometimes delusional with abstract goals. They are often incomprehensible but seeking help. Their actions are usually high risk (p.12-17).

Hacker was not the first to identify hostage-takers using this type of labeling system. In the October 1974 FBI Law Enforcement Bulletin, Detective Harvey Schlossberg, an NYPD police with a Ph. D. in clinical psychology, is credited with developing profiles of the typical hostage-taker and they fell into the following three broad categories: the **professional criminal** who has his escape blocked during the commission of a crime, the **psychotic** with a depraved mind, and the **terrorist** with a cause (Culley, p.5).

These or similar terms are repeatedly found in hostage-taking literature and this

motive-based method of incident classification was adopted by the FBI in the 1970's and have continued to be used as the model (Lanceley, 1979; Fuselier, 1981; Strentz, 1983; Hassel, 1987; Douglas & Olshaker, 1995). Even so, the FBI in a September 1975 article warns that: “... human motivation is intrinsically a multifaceted phenomenon and in many cases unclear, even to the subject himself, [and] some social scientists may consider this method less than exact” (FBI Academy, TRAMS Unit).

Schlossberg, rather than just providing a profile of a hostage-taker, stated that hostage situations can be broken down into three basic types. He lists the same three types of individuals or hostage-takers previously listed by Culley but admits that "labels have no real meaning beyond clinical classification (1979, pp.212-214). Schlossberg does offer some techniques for involving the three types of hostage-takers but his emphasis is placed on two basic principles: first, the hostage, in and of him or herself, has no value; and second, it is just as important for the hostage-taker as the police that the hostage situation does not become violent. He says the hostage is a tool for getting attention or an audience, and that in any violent confrontation, the victory will go to the police because they have more personnel and more guns (Police Psychologist, 1977). Schlossberg makes suggestions for police response procedures or first responders which he labels crisis intervention theory. He does not isolate predictive variables in these situations, probably in large part because of his reliance on a motivational model. Harvey Schlossberg identified the initial profile of the hostage-taker and Frederick Hacker formalized it into a model that he believed had universal application.

Crelinsten and Szabo's Collaborative Efforts

Ronald D. Crelinsten and Denis Szabo supported Hacker's goal to mobilize academics and practitioners in a collaborative effort to address this problem. In their text Hostage-Taking they state the following in the introduction:

> “The extension of scientific inquiry may favor more rational understanding in this field and consequently a more dispassionate and less panicky

> appraisal of hostage situations. The scientific community is traditionally concerned with theory and methodology. The practitioners not only have access to all data, but also are traditionally concerned with pragmatic, day-to-day problem-solving. Why should we not make an imaginative effort to combine everyone's interest and abilities to engage in this endeavor?" (1979, p.x)

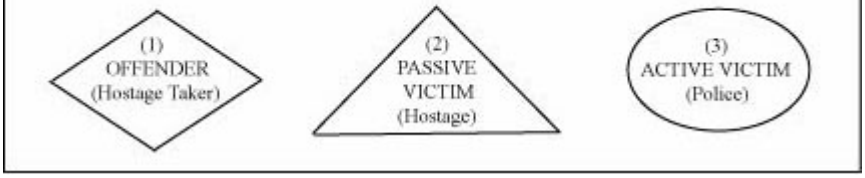
The theme that unites their text is the relationship between theory and practice and the interface between research and policy (p.x). Crelinsten and Szabo further state that any hostage-taking model must ask the following question: what kinds of classification are most useful in achieving the goal of preventing or at least controlling a hostage situation? Therefore, depending on what one is attempting to understand or control, certain elements are recognized and sorted out in particular ways to develop particular topologies. The key question then is how to categorize hostage-taking phenomena to make the task of understanding less difficult. They cite the NYPD hostage training program which divides offenders into Hacker's three categories of professional criminal, psychotics and terrorists. Obviously, they say, the demands and motives would vary for the three groups which would perhaps require different response strategies. Now, say Crelinsten and Szabo, a new term, not explicitly mentioned before, and has arisen: "motive." "Motive is not observable, and it is merely a hypothetical construct derived from behavior" (p.14). They say that the motive element is often used in the psychiatric and legal field. Since their primary concern is with the acts committed, the police are rarely interested in motive. As a result, Crelinsten and Szabo conclude their discussion of typology with the statement that "...motive and demand are intimately related but... the same demand need not have the same motive in all cases" (p.14). Therefore, the reasoning behind any typology is that it facilitates an attack on the problem (Clinard & Quinney, 1973). In terms of prevention and/or control, a typology

based on context is the most useful rather than a typology based on motive.

Crelinsten and Szabo's Contextual Model

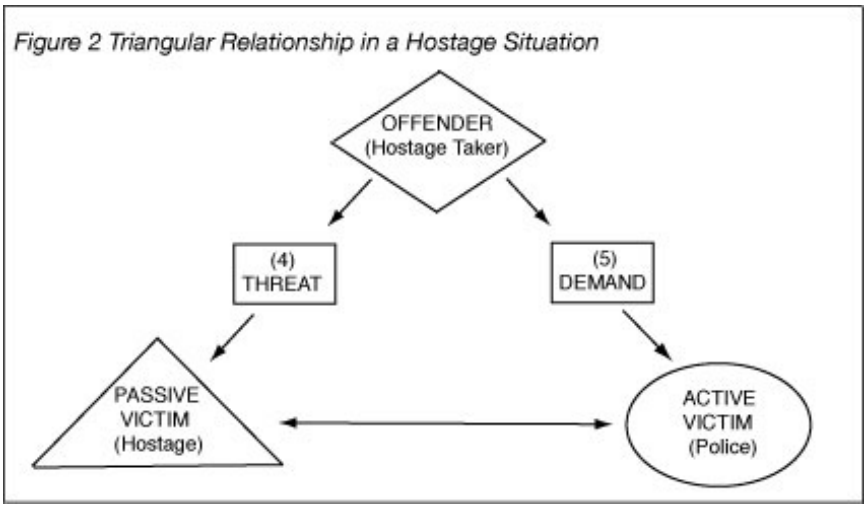
Crelinsten and Szabo view Hacker's motivational model as inadequate for prediction purposes. They substituted a model which places emphasis on context rather than motive. They argued that two important steps must be taken before strategies can be developed for controlling hostage-taking. The problem should be broken down into its elements and then classified without attempting a causal explanation. If the Crelinsten and Szabo model is used to identify and separate the interactions between the various players that are occurring in these encounters, they will be in a better position to apply theory to practice (p.1). This type of analysis enables one to study the hostage-taking phenomenon in a non-motivational context and predict the resolution with greater accuracy. Crelinsten and Szabo substitute "passive victim" and "active victim" in place of the terms hostage and the police. These replacement terms help to define clearly two basic elements which characterize a hostage situation. A hostage situation involves "a person or persons held against their will as a security for the fulfillment of certain terms." Thus, the hostage, or passive victim is a means to an end. The police, or active victim, can meet the demands of the hostage-taker. The hostage-taker, or offender (1), uses the passive victim or hostage (2) to apply pressure on the active victim or police (3). This is shown schematically in Figure 1.

Figure 1 Basic Elements in a Hostage Situation

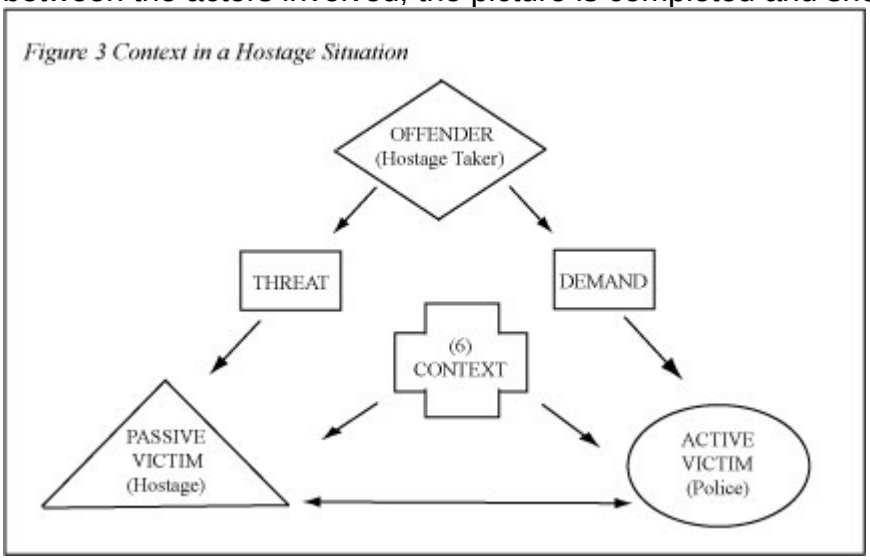


Two other elements must be added to this picture to describe the relationship

between the offender and his two victims. These elements are the threat (4) and the demand (5) and they are applied to the passive victim and the active victim, respectively. The one constant in hostage-taking is its triangular aspect with the involvement of three parties as seen in Figure 2.

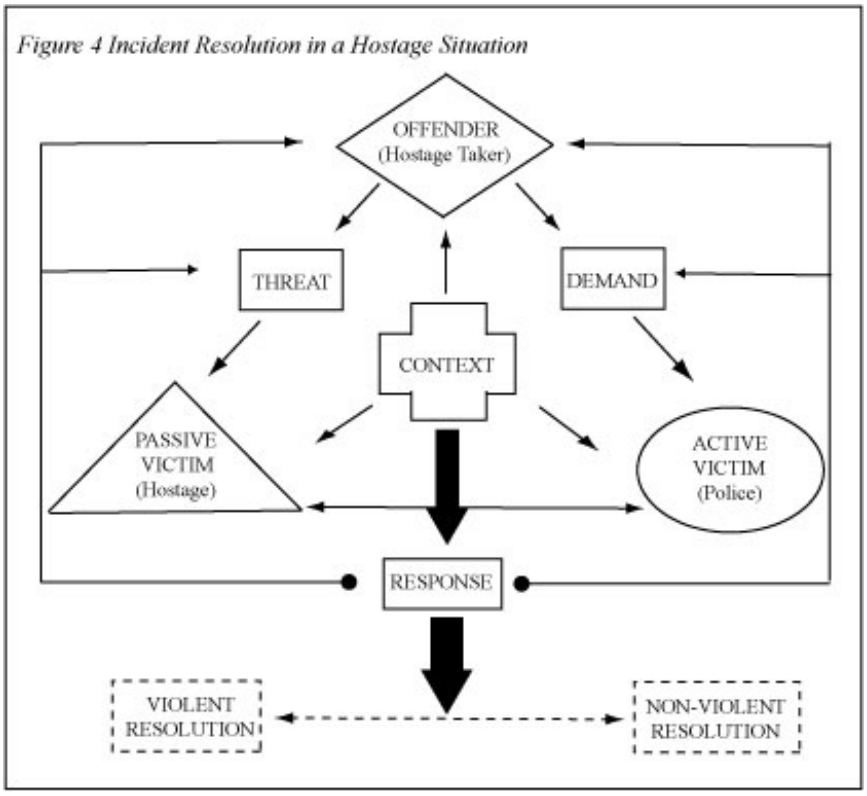


When a sixth element, the ***context*** (6), is added which involves the interactions between the actors involved, the picture is completed and shown in Figure 3.



One point that emerges from this model is that the terms active and passive do not precisely describe the two kinds of victims. The implication of these terms is that only the active victim can determine the outcome of the situation. In fact, "the passive

victim often can and does influence the final resolution" (Crelinsten & Szabo, p.4). The passive victim can overpower the offender or escape or convince the offender to release them and surrender (Bolz, 1987). The fact that the passive victim/hostage can influence the outcome in these and other ways makes it clear that the hostage is much more than just a "bargaining tool." This model also shows that the police are a victim of the hostage-taker and, as such, not always able to act rationally and with due deliberation. The dynamics of these situations can be seen to be more complex using this model as compared to Frederick Hacker's motivational model. In the Crelinsten and Szabo model, shown in Figure 4, there is a direct and continuous relationship between the parties involved.



What this comparison displays is a typology that is radically different from Hacker's "Crusaders, Criminals and Crazies" motive based model. The motive element is not observable and is based on a construct derived from behavior and often used in

psychiatric and legal perspectives. If limited to the motive orientation, the focus will be exclusively on the offender and the other players in these incidents will be neglected. Crelinsten and Szabo's parsimonious model offers greater opportunity for insight and understanding of hostage and barricade incidents.

Crelinsten and Szabo present a model that has not been used to examine any data for testing their hypotheses. At the conclusion of their text, the authors state that there is unanimous agreement among both practitioners and academics that there is a need for further research.

Context, Containment and Conversation Model

While the Crelinsten and Szabo model contains many of the important elements of these incidents that have been neglected or overlooked by others who have examined these situations, some modification of this model is necessary to improve it as an operational tool. Crelinsten and Szabo use the word demand but I prefer the term conversation. Demand connotes being in a position of power or control, whereas conversation implies an exchange of ideas or thoughts among equals. Conversation is a more neutral word and would seem to allow greater leeway in the dialogue process. This conversation is not the casual pleasantries one might exchange with a neighbor or co-worker but rather, is a dialogue that is cautious but directed. A relationship must be established before starting to address the hostage-taking and a climate of understanding and trust must be in place before any meaningful dialogue can be attempted. Based on personal experience in these situations, another point to consider is that many of the early "demands" made in the incident can be attributed to face-saving and posturing on the side of the hostage-taker or barricaded individual. Often, these demands are not repeated or insisted upon when the negotiator and the subject establish and maintain a climate of trust and understanding. The negotiators will never ignore the demands, whether reasonable or outlandish, but should expect that the initial demands or statements may be modified over time. Often initial demands become

requests that will be granted conditioned on the subject releasing hostages or coming out peacefully. One of the guiding principles of hostage negotiation is to avoid emotionally charged terminology, such as "demands", "surrender", or any word or phrase that could be misconstrued or imply a superior-inferior relationship.

These modifications do not radically change the Crelinsten and Szabo Contextual Model but they do bring it more in line with the actual components that are interacting in these situations. If Hacker's Crusaders, Criminals and Crazies is considered the old *"Three C's Model"* then the modified Crelinsten and Szabo's Contextual Model could be labeled the *"New Three C's Model"*.

This arrangement places the emphasis on context, containment and conversation rather than motive. The containment of the incident is necessary to separate the hostage-taker and hostage from the police. The hostage-taker can bring about a confrontation if the containment is not in place. This could result in the police ending the negotiation and resolving the situation by force. If the containment is established and maintained, anxieties can be lessened over time, and a negotiated settlement may be reached. This could delay the use of force, or at least deadly force, to bring about a resolution of the situation. The need for containment in hostage and barricade situations cannot be over-emphasized. Furthermore, the Crelinsten and Szabo model, with the modified context variable, would assist in predicting the outcome of an incident.

New Three C's Model Construction

The prediction model presented here was developed from my doctoral dissertation research and the data was obtained from the files of the NYPD's HNT (McGowan, 2004). In that research 75 independent variables grouped into 7 separate areas were identified from 360 hostage and barricade incidents. The 360 incidents consist off 170 hostage situations and 190 barricade incidents from 1988 to 1997. Only the variables that make up the prediction model will be presented. Also, for this essay,

a hostage situation is defined as an incident where a person(s) are held against their will by one or more individuals to force the police to act or not act in certain ways. No distinction is made regarding whether there are any substantive demands in these hostage situations. Barricade incidents are situations in which one or more persons, without hostages, isolate themselves in a protected position, and have or threaten the use of a weapon to harm themselves or others. Included in this category would be suicidal individuals such as jumpers. Incidents involving the crimes of kidnapping, abduction and custodial interference, and prison riots are omitted.

Context Variable

Context is the first dichotomous variable in the prediction model. Before examining these variables the term should be clarified. Crelinsten and Szabo use the term context to describe a physical or situational setting, such as a bank or inside an airplane in flight (p.4). However, police response is influenced by factors that are more complex than mere location. Therefore, a context that accounts for the hostage-takers (HT) or barricaded individuals (BI) behavior rather than the locale of the incident is substituted. The HT/BI's conduct is a more important factor than the physical location of the incident because the behavior of the HT/BI's raises the anxiety and emotional level of the responding police officers. Factors, such as location, may or may not have an influence on the conduct and behavior of the police. For example, if a hostage or barricade situation develops in a hospital some of the patients, because of the seriousness of their illnesses, can not be easily evacuated. Also, any interruption of their care or treatment could lead to a worsening of their illness and possibly their death. In this instance, location is an important component of context. On the other hand, a hostage or barricade incident could take place in a part of a hospital that is away from the area where patients are treated, such as administrative offices or a basement storage room. This area could be isolated and the police presence would have minimum impact on the hospital operations or patient care. In this second scenario, location

would not be considered an important component of context.

In this model, any violence or injury to a participant prior to the arrival of the police at the incident and/or a violent confrontation when the police arrive on the scene will be considered an unfavorable context. Included in the definition of violence would be displaying a weapon or firearm, and any other conduct that is threatening or menacing. For example, if a hostage is menaced by the hostage-taker with a firearm this type of behavior would also pose a threat to the police. While this may not completely account for all of the behavior of the hostage-taker or the barricaded individual, it does take into consideration the most serious or threatening conduct. For the purposes of the Context variable, verbal threats alone are considered to be nonviolent regardless of what words make up the threat. What behavior is violent and what behavior is nonviolent is determined using the "nursery rhyme method." Therefore, "sticks and stones may break my bones" equals violent behavior but "names will never harm me" equals nonviolent behavior.

In many incidents, the prior injury or violence is the reason the police are called. Nevertheless, prior violence or injury does not always mean that an incident will have a violent outcome. Likewise, if there is no prior violence or injury and there is no violent confrontation when the police arrive at the location, this would be considered a favorable context. This again does not mean the incident will be resolved without violence or injury. If context is correctly defined and quantified it will prove to be an important variable but it must be evaluated with consideration of the other factors that influence the incident resolution. The variables that are included in the definition of context will provide a predictor of outcome that is superior to the location or setting context advanced by Crelinsten and Szabo.

Context is determined based on the conduct of the HT/BI in each case and not on the location of the incident. An unfavorable context is defined as any violence or injury to a participant prior to the arrival of the police at the incident and/or a violent

confrontation when the police arrive on the scene. On the other hand, a favorable context would be if there is no prior violence or injury and there is no violent confrontation with the police.

In the study previously cited we found that in 146 out of 170 hostage situations there is no injury prior to the arrival of the police. In 185 out of 190 barricade incidents there is no injury prior to the arrival of the police. Overall, in 331 out of 360 total situations, or more than 90%, there is no injury prior to the arrival of the police.

Additionally, in over one-half of all incidents there is either no confrontation with the police or the confrontation is a verbal encounter. For the purposes of the Context Hypothesis verbal threats are considered to be nonviolent regardless of what words make up the threat. However, in more than 30% of hostage situations and over 25% of barricade incidents, a firearm has been fired or threatened to be used by the subject. When incidents with firearms are combined with incidents involving other dangerous instruments (knives, swords, hammers, etc.), firearms or other dangerous instruments are present in more than 40% of hostage and barricade incidents.

When the separate categories of possible confrontations are re-coded to show the frequency of violent and nonviolent confrontations when the police first arrive at the incident we find that there is almost an equal chance of having a confrontation in hostage situations (47.1% vs. 52%). There is a slightly lower chance that a confrontation will occur in a barricade situation (58% vs. 41.6%). If only the prior injury variable is used, the confrontation variable would lose the opportunity to test this model on many of the significant incidents.

Context is operational zed as the combination of two variables; confrontation and injury prior to police arrival. When these two variables are combined, allowing for an injury prior to the arrival of the police and a confrontation with the police occurring in the same incident, the results shows that an unfavorable context occurs in slightly over half of the hostage only situations (53.5%). The opposite is true in barricade only situations

where more than half begin with a favorable context (56.8%). In all situations, it is almost equally divided between favorable and unfavorable contexts. A favorable context is one in which there is no violence or injury prior to the arrival of the police and there is no violent confrontation with the police when they arrive at the incident.

Containment Variable

Containment is the second dichotomous variable in the prediction model and the data shows that in a large majority of incidents (84.4%), the police are able to contain the HT or BI to a confined area. In some incidents, containment is easily obtained by the police because the subject, not wanting to be apprehended, will place furniture or other obstacles in front of the entrance into their residence. By this action, the subject prevents the police from forcing entry but also block their only means of escape. This keeps the police out of the location and the subject inside, which, in most instances, is what is desired by the first officers on the scene. This act of barring the door usually means the police will not be forced into a physical confrontation before they are prepared to do so, if necessary and it allows for additional personnel to arrive on the scene to assist with the situation.

In addition to the physical containment of the subject in a hostage or barricade situation, another tactic that has been shown to be very effective is to limit the contact the subject has with people outside the barricaded location by controlling their telephone communications. The police, with the cooperation of the local telephone company, can prevent incoming calls and the only outgoing calls permitted would be to trained police negotiators. If it is not possible to obtain this communication containment, the task for the police of trying to bring about a peaceful resolution becomes extremely difficult.

It would almost seem by definition that barricade situations would have to be contained but the reader is reminded that barricade situations include suicidal episodes, such as a person threatening to jump off a bridge or high building. Usually there is no

physical barrier preventing the police from approaching the subject. However, if they come too close, the subject threatens to leap to their death. Therefore, in these instances, there is no containment but the police are restrained from taking the person into custody by the threat. There are also hostage situations where an adult holds a child in their arms and threatens to jump from a high place. Again, there is no physical barrier blocking the police but the threats serve the same purpose in restraining the police.

Conversation Variable

Conversation is the third dichotomous variable in our model and would be considered favorable if a dialogue is developed and continues to resolution and unfavorable if a dialogue is not developed and/or is started but broken off and not reestablished. In our research when the Hostage Negotiation Team's (HNT) specific behavior at an incident is taken into account we find that negotiators attempt, actually start, coach or takeover a dialogue from the first officers at the scene, or some other third party in 263 cases (73%).The "not controlled" number was arrived at by combining the "canceled en-route" incidents with the "stand-by status" incidents and the "unable to start a dialogue" incidents and all these incidents were mutually exclusive of each other. HNT controlled the conversation in over one-half of the hostage situations and over three-quarters of the barricade incidents.

Resolution Variable

Resolution is the only dependent dichotomous variable in this study. Resolution is whether there was or was not violence and or injury in the incident outcome. There was no violence in 109 hostage only situations (64%) and in 138 barricade only incidents (73%) and the total of all situations with no violence is 247 (69%). There was violence in 61 hostage only situations (36%) and 52 barricade only incidents (27%) and the total for all situations that ended in violence was 113 (31%).

Statistical Analysis

In a bivariate analysis of the Context hypothesis we compare the 163 hostage and barricade incidents with a favorable context with the 107 hostage and barricade incidents with an unfavorable context. This shows that those that had a favorable context were more frequently resolved without violence. A violent resolution occurred in 24 hostage and barricade incident where there is a favorable context and in 66 hostage and barricade incidents where there is an unfavorable context. The test of this hypothesis shows that, as the model predicted, if a favorable context exists there is a greater likelihood the hostage or barricade incident will be resolved without violence.

An analysis of the 70 hostage incidents where there is favorable context with the 57 hostage incidents where there is an unfavorable context shows that those that had a favorable context were more frequently resolved without violence. A violent resolution occurred in 9 hostage incidents where there is a favorable context and in 34 hostage incidents where there is an unfavorable context. If a favorable context exists there is a greater likelihood the hostage incident will be resolved without violence.

An analysis of the 93 barricade incidents with a favorable context with the 50 barricade incidents with an unfavorable context shows that those that had a favorable context were more frequently resolved without injury or violence. A violent resolution occurred in 15 barricade incidents with a favorable context and in 32 barricade incidents with an unfavorable context. If a favorable context exists there is a greater likelihood the barricade incident will be resolved without injury or violence.

The bivariate analysis of context suggests that a favorable context is indeed an important component in predicting that an incident will be resolved without violence/injury. The analysis shows, first in all situations, then in hostage only situations, and finally in barricade only situations the model correctly predicts that if a favorable context exists there is a greater likelihood the situation will be resolved without injury or violence. In all situations the likelihood of no violence/injury with a favorable context is

87.2%, in hostage only situations it is 88.6%, and in barricade only situations it is 86.1%.

A comparison of the 233 hostage and barricade incidents where there is containment (favorable) with the 37 hostage and barricade incidents where there is no containment (unfavorable) shows that those with a favorable containment were more frequently resolved without injury or violence. A violent resolution occurred in 71 hostage and barricade incident with a favorable containment and in 19 hostage and barricade incidents with an unfavorable containment. The test of this hypothesis shows a tendency toward the model prediction that while not significant, does show a close relationship between containment and whether the hostage or barricade incident will be resolved without injury or violence.

A comparison of the 120 hostage incidents where there is containment with the 7 hostage incidents with no containment shows that those that had containment were more frequently resolved without injury or violence. A violent resolution occurred in 34 hostage incidents with containment and in 9 hostage incidents with no containment. This shows that, as the model predicted, if there is containment, there is a greater likelihood the hostage incident will be resolved without injury or violence. A comparison of the 113 barricade incidents with a favorable containment with the 30 barricade incidents with an unfavorable containment shows that a violent resolution occurred in 37 barricade incidents with a favorable containment and in10 barricade incidents with an unfavorable containment. This test shows that the relationship was not significant. It appears that barricade situations seem to be less dependent on containment than hostage only situations.

The last part of the bivariate analysis is the comparison of all hostage and barricade incidents when the police control the conversation. In 98 controlled conversation (favorable) hostage and barricade incidents compared to 172 conversations not controlled (unfavorable) hostage and barricade incidents, the

relationship between conversation and the likelihood the incident would be resolved without injury or violence was not significant. A violent resolution occurred in 42 hostage and barricade incidents where the conversation is favorable and in 48 hostage and barricade incidents where the conversation was not favorable.

A comparison of the 83 hostage incidents where the conversation is favorable with the 44 hostage incidents where the conversation is not favorable shows a violent resolution occurred in 26 hostage incidents where the conversation is favorable and in 17 hostage incidents where the conversation is not favorable. This shows that, as the model predicted, if the police control the conversation, there is a greater likelihood the hostage incident will be resolved without injury or violence.

Finally, a comparison of the 89 barricade incidents where the conversation is favorable with the 54 barricade incidents where the conversation is not favorable shows violent resolution occurred in 22 barricade incidents where the conversation is favorable and in 25 barricade incidents where the conversation is not favorable. This relationship was not significant.

In the larger study, previously mentioned, a multivariate analysis was conducted using logistic regression which enables us to predict the probability of violence/injury in the resolution for a given situation. A summary of the results will follow. The sample for the logistic regression includes all 360 cases. The independent variables (context, containment and conversation) are not significantly related to one another so there is no question of multicollinearity. Multicollinearity is only a problem if the independent variables are correlated at .70 or higher (Allen, 1997, p.177). Here the correlations between the independent variables are all close to 0 suggesting almost no relationship between context, containment and conversation.

Of the three independent variables, Context is the best predictor of violence/injury in the incident resolution. When the context is favorable, the odds of violence/injury in the resolution are 79.1% lower than when there is an unfavorable

context. The estimated odds of a nonviolent non-injurious resolution are nearly 5 times greater for a favorable context than for an unfavorable one. That is, about 48 cases with a favorable context will end in a nonviolent non-injurious resolution per 10 cases with an unfavorable context. In hostage only cases the estimated odds of a nonviolent non-injurious resolution are more than 5 times greater for a favorable context than for an unfavorable one. That is, more than 50 cases with a favorable context will end in a nonviolent non-injurious resolution per 10 cases with an unfavorable context. The estimated odds of a nonviolent non-injurious resolution in barricade only cases are more than 4 times greater for a favorable context than for an unfavorable one. That is, more than 40 cases with a favorable context will end in a nonviolent non-injurious resolution per 10 cases with an unfavorable context.

Containment is the next best predictor. When the hostage-taker or barricaded individual is contained, the odds of violence/injury in the resolution are 53% lower than when not contained. If the incident is contained, the odds of violence/injury in resolution are 80.4% lower than if not contained. Containment is a significant factor in hostage situations but in barricade incidents and in all situations combined the relationship is not statically significant.

Conversation is the weakest predictor of violence/injury in the resolution. When the HNT develops and or continues a dialogue (i.e. when there is Conversation), the odds of violence/injury in the resolution are 44.6% lower than when no dialogue is developed. According to the logistic regression analysis Conversation is not statically significant. This outcome seemed counter intuitive and quite contrary to my personal experience in managing hostage and barricade situations. I was at a loss to explain this result until I reexamined the data that made up the Conversation variable. There are 360 separate incidents that make up this data set. However, the HNT only “controlled” the conversation in 220 incidents. The “not controlled” number consists of those incidents where the HNT was “canceled en-route” combined with the “stand-by status”

incidents and finally the “unable to start a dialogue” incidents. All these situations are mutually exclusive of each other. When logistic regression analysis was performed on this reduced number of incidents, which truly reflect those situations that the HNT had influence on, the results are quite different. Conversation is now statically significant and becomes the best predictor of violence/injury in the incident resolution. This re-evaluation of the data was not permitted in my doctoral dissertation but outside of that specific realm, it justifies the placement of the Conversation variable in our prediction model. Now we can show how this Prediction Model is applied to actual incidents. Since the actual names are not necessary for the purposes of this article, I have changed the names to protect the innocent and the not-so innocent.

Case Number One

This first case was selected because, at first glance, it appears to be the type of hostage situation that one would expect to hear reported on the evening news - a criminal caught in the act holds police at bay while threatening to harm a hostage. Essentially, these are the circumstances of this situation, but its similarity with other hostage situations of this type ends quickly. The elderly victim or hostage held against her will in this case led a normal, uneventful life. She had never experienced anything like this life threatening episode, and yet she quickly took control of her emotions and, after her release, she seemed to be no worse for her experience. This is not always the case for younger women or men who find themselves in these situations. Although initially very frightened when she first encountered a strange young man in her apartment, she acted quickly to calm the intruder. She even offered to make her uninvited guest some breakfast, which he politely declined. But not meaning to “meddle”, in her words, she also gave some “grand-motherly” advice to the hostage-taker about finding some kind of employment with a future, rather than burglarizing homes, which he said he would consider. After the situation was resolved, the media labeled her the “Jewish Grandmother” hostage and pestered her to sell her story. She

declined all offers. But a few months later, a made-for-television movie, based loosely on this incident, aired on a major television station. Contrary to the way the story was told on television, she really didn't single-handedly negotiate her release from a poor misguided youth while holding off a police SWAT team that was determined to break down her door and blast the hostage-taker to pieces. Obviously, creative license gives screen writers enough leeway to tell a story any way they choose, and so what if it really doesn't reflect actual events. Rather then being a poor fellow forced into a life of crime to feed his family, the hostage-taker was a vicious career criminal who had stalked and seriously assaulted elderly citizens in more than 70 "push-in" type robberies over a period of months. Why he didn't assault and rob this elderly victim must be attributed to the alarm raised by other residents and the fast response and tactics of the police.

Context and Containment Phase

Early on a weekend morning an elderly couple was awakened by a loud sound outside their bedroom window. When they went to the window, they saw a young man standing on the terrace outside their fourth floor apartment. They immediately called 911; but before the police arrived, the male had climbed up the terrace's metal framework and was seen entering a fifth floor apartment occupied by their 84 year-old neighbor, Rona W. Shortly after the police arrived on the scene, they interviewed the original 911 caller, proceeded to the fifth floor apartment, knocked on the door and demanded entry. They heard a muffled scream from inside the apartment and tried to force open the front door. From inside the residence, they heard a male voice saying, "...stop or I'll...kill her."

The police promptly began to evacuate adjacent apartments. One officer went to the window of an apartment that shared a fire escape with the apartment occupied by the hostage-taker. He saw a young man climbing through the window onto the fire escape. The male had what appeared to be a gun in his hand which he pointed at the officer and stated, "I have a gun [so] get away from the window." The officer withdrew

but kept the fire escape in view. The young man retreated back into his apartment. Officers blocked the entrance to the fifth floor apartment and while other officers were watching the fire escape and terrace so all avenues of escape were closed off. The police officers on the scene, after containing the incident, requested the Emergency Service Unit (ESU) and Hostage Negotiation Team (HNT) to respond to the scene. Precinct officers maintained their containment of the situation until they were replaced by ESU.

By this time, the Context and Containment phase of the model had been completed. A preliminary determination could be made based on these factors. It was previously mentioned that violence or injury before the police arrive on the scene, and/or a violent confrontation when the police arrive, are important elements of Context. In this situation there was no violence or injury before police arrival and the only confrontation with the police consisted of verbal threats. The officer who saw the hostage-taker/burglar had a gun pointed at him but it did not raise the level of violence or injury merely because a gun was pointed in the direction of an officer. At the onset it was stated that only actual injuries or violence would be classified as such otherwise every person involved in these situations would have to be considered as injured because they had been frightened or alarmed during the incident. This would serve no purpose and defeat any attempt at serious research. Therefore, since there was no injury or violence prior to the arrival of the police, and since the only confrontation with the police when they arrived was verbal, the Context for this incident is favorable.

Containment was established shortly after the police arrived on the scene and after the initial attempt by the first officers to gain entry was rebuffed no further attempt was made by the police. The subject also didn't attempt to leave the apartment after he encountered the police office watching the fire escape from an adjacent apartment. Hence, this incident can be considered contained from the onset and it remained that way until the final resolution.

Conversation Phase

Shortly after they arrived on the scene, precinct officers called the telephone number listed for the elderly woman who lived alone in the apartment. Juan, the hostage-taker, answered the phone and refused to come out, or to let Rona leave the apartment. The first officer to speak to Juan was replaced by the patrol supervisor who was the initial on-scene commander. This commander sincerely wanted this incident to be resolved safely, but his actions actually did more to keep the hostage-taker on edge. When he took over the conversation he said that he was the officer in charge. He later told the HNT members that he felt he had to agree to the demands of the hostage-taker to prevent any harm to the hostage. When the hostage taker demanded a million dollars and an airplane to leave the country the supervisor agreed to provide them without any hesitation. Juan later told investigators that he really didn't want his "demands" but rather, he was testing the Lieutenant to see if he was being truthful with him. When his "demands" were agreed to without any discussion, he felt the supervisor was just trying to get him to come out so they could shoot him. The Lieutenant remained on the phone for the next 30 minutes until approximately 7AM when the HNT relieved him and took over the conversation with the subject. A trained police negotiator replaced the patrol supervisor on the telephone but Juan was reluctant to engage in any meaningful discussion or answer any questions because he felt the police were trying to develop a psychological profile on him. The Primary Negotiator replied that he wasn't doing that -- furthermore, he said he couldn't even spell those big words. Juan laughed when he said that, and it soon became apparent to the other HNT members monitoring the conversation that the entire tone and subject matter of the dialogue had changed for the better. The plain-spoken and calming manner of the Negotiator appeared to have put the Juan at ease. As the conversation continued, the Negotiator told the subject that right from the start he was going to be truthful with him. "Do you want me to lie to you?" asked the Negotiator. "Of course not" answered Juan. So, if he didn't want to be lied to,

he would have to understand that some of the things the Negotiator was going to tell him might not be what he wants to hear. If Juan didn't like what he was being told, he would have to promise not to get angry and hurt anybody. Since he said he could handle the truth, Jose agreed not to get angry or to hurt Rona. Juan told the Negotiator that the Lieutenant he was talking to had promised to deliver a million dollars and an airplane to fly out of the country. The Negotiator, who had been briefed on this previous conversation, responded to this statement he simply said, "you know that's not going to happen." There was silence for a moment then Juan said, "I didn't think so, but I just thought I would ask." The request for the money and airplane was not brought up again once it became apparent that a climate of trust was established.

When the Negotiator asked if Rona was okay, Juan he said she was fine. He then asked the Negotiator to hold on and he would have her answer for herself. Rona came to the phone and said that she had been nervous when the man first appeared in her apartment but she was calm now. She also said that the young man was very worried that the police would break down the door to try to get him. The Negotiator assured Rona that the police would not do anything hasty as long as she was not in danger. She went on to say that Juan seemed nice and polite and he was sorry if he had frightened her. When asked whether she had to take any medication, she said she did and that Juan had brought her a glass of water to take with her pills. After being reassured that everything was being done to end the situation peacefully, the Negotiator asked to speak again with Juan. When he came back on the telephone, the Negotiator thanked him for letting him speak with Rona and it was good that he was treating her well. He went on to say that he should be aware that because of her advanced age and previous health problems her captivity should not go on too long. He pointed out that if anything happened to Rona while she was being held against her will, Juan would be responsible. Juan said he was aware of this, but he was afraid that once Rona left the apartment the police would rush in and shoot him. As time passed, it became clear that

Juan wanted to release Rona but he had to be confident that the police would live up to their promises.

For the next two and a half hours, Juan and the Negotiator carried on an almost continuous dialogue. Finally, at about 10 A.M., Juan said he would release Rona if the police would give him two cigarettes. At approximately 10:30 A.M., after five hours of negotiations, Juan moved the furniture away from the front door and allowed the frail, elderly grandmother to leave her apartment. Rona was examined by EMS personnel at the scene, but she refused further medical attention and was reunited with her family. When Rona talked with members of the HNT, she told them that Juan had treated her with respect. At one point, she had even offered to make him some breakfast, and although he declined the offer, he did accept some orange juice. She went on to say that after she got over her initial fright, she felt that Juan was probably more afraid then she was and that it would serve no purpose for both of them to act emotionally. She wanted to help him out of the predicament he had gotten himself into, and she did so by giving him “grand-motherly” advice. She tried not to belittle him, but she felt that with her age and life experience she could offer him some encouragement about turning his life around.

Now alone in the apartment, Juan was still fearful of how he would be treated when he came out. At one point he even threatened to turn on the gas in the apartment to prevent the police from assaulting it. But after being reassured that the police would not storm the apartment, the dialogue, which lasted another 2 hours, became a matter of working out the details of his surrender. At 12:30 P.M. Juan opened the apartment door and was taken into custody. During this prolonged siege neither the hostage nor the hostage-taker had been injured.

Aftermath

This incident had a favorable context, good containment and a conversation controlled by the HNT. Based on these favorable variables our Context, Containment

and Conversation Model would predict a non-violent resolution and the actual resolution was non-violent. The hostage in this incident was able to overcome her fear and anxiety, and to actively assist the Negotiator in calming the hostage-taker and getting him to think and act more rationally. Rona took an active part in the Conversation phase and helped to bring about a nonviolent resolution (Whalen, 1990). The handgun that Juan was armed with turned out to be a starter's pistol, which was not capable of firing a bullet. However, a later investigation revealed that Juan was wanted for a series of "push-in" robberies that involved serious assaults on many elderly people in the area. The County Grand Jury handed down more than seventy criminal indictments and after a plea bargain agreement, Juan was sentenced to a long prison term.

CASE NUMBER TWO

This case involves one of the most bizarre and violent individuals that I encountered during my time with the Hostage Negotiation Team. The violent behavior was ongoing during this episode and this elevated state of danger applied to the police on the scene and residents of the community. The subject was armed with a rifle and he repeatedly fired from an upstairs window. The field of fire available to the hostage-taker was from all sides of the house he was holed up in. Many of the residents of this community were quite elderly and in poor health and were unable to be evacuated. The only option available to the police was to move residents to areas of their homes where they would not be in a direct line of fire. The dialogue between the negotiators and the subject was problematic at best. Two separate jurisdictions were involved, requiring ad hoc arrangements that were modified as the situation developed.

Context and Containment Phase

In the very early hours on a Sunday morning a group of young people was leaving a wedding reception when they heard a young man calling for help because he had been shot. They immediately notified 911 and shortly thereafter NYPD officers arrived on the scene. They found a 25-year-old male lying on the pavement, conscious

but suffering from gunshot wounds to the back and leg. The victim told the officers that he had been shot at a nearby residence and had crawled out to get help. He further stated that other people had also been shot by the same person, a 47-year-old male named Adam. The officers immediately notified their supervisor and, after the wounded male was removed to the hospital, they responded to the scene of the shooting.

When the police supervisor, accompanied by ESU officers, arrived at the single family house, they heard calls for help from inside. ESU entered the location and discovered a 22-year-old male suffering from gunshot wounds. He was immediately taken by ambulance to a local hospital. Also found in the house were two other males in their twenties who were pronounced dead at the scene. ESU continued to search the scene and in a storage shed in the rear yard the bodies of two other males, ages 30 and 75, were discovered. The 75-year-old deceased male was identified as Adam, Senior, the father of the suspected shooter. However, Marsha, the 73-year-old mother was not immediately found. The police were unable to locate the son so an intensive search of the surrounding neighborhoods was started.

At approximately 10AM officers at the crime scene were notified of a hostage situation a few blocks away from their location which might be related to their homicide investigation. Once at the location where it was determined that the hostage-taker in the ongoing incident was, in fact Adam, the subject wanted for the homicides and assaults. The police officers at the hostage incident said they had been called to a private home at 9AM by a gardener who made weekly visits to take care of the grounds of a retired couple, 71 year-old Peter G. and his 61 year-old wife Ellen. When the gardener arrived at their house and knocked at the rear door, a shot was fired at him from an upstairs bedroom windows and a man at the window yelled, "Get away or I'll kill you." The gardener, who was unhurt, ran to a nearby house and called the police. When the first officers arrived, they questioned the gardener and then promptly began to evacuate the surrounding homes. Because most of the residents were still sleeping, it took some time

to complete the evacuation. Many residents had to be moved to safety through side and back entrances that were out of the line of fire. Eventually the entire neighborhood was cordoned off and officers were stationed at the perimeters to keep spectators and the media at a safe distance. When the NYPD ESU officers arrived on the scene, they took over the containment of the residence where the elderly couple was being held.

At this point in the incident the Context phase would be considered extremely unfavorable. There was violence and serious injury immediately preceding the arrival of the police both at the subject's residence and at the site of the hostage situation. The police were fired upon after they arrived on the scene so a violent confrontation can also be added to the Context phase. Containment was obtained after some had time elapsed but the subject was still free to roam throughout the house. Containment would also be considered unsatisfactory but while the hostages were still in the house the police were unable to improve the situation.

Conversation Phase

After the evacuation was accomplished, one of the initial officers at the scene made a telephone call to the home of Peter and Ellen. Ellen answered the telephone and said that a man with a rifle was in the house and would not allow them to leave. Mrs. G. only spoke to the officers for less than a minute before the call was ended. After she was freed, Ellen told the police that Adam broke into the house, apparently chosen at random, around 5AM. He told them that he was wanted by the police but he wasn't going to surrender to them because he had done a bad thing.

The police made a second call and this time the hostage-taker Adam answered the telephone. He said that he would not allow the occupants to leave but he did not intend to harm them. However, at approximately 10:30AM Adam agreed to release the husband. Peter G. was a retired psychiatrist with a history of heart disease, and had started to suffer chest pains during the incident. Ellen pleaded with Adam to let her husband get medical attention and she would stay with him. Peter, still in his robe and

pajamas and clutching his chest, came out the front door of the house and he was rushed by ambulance to a nearby hospital.

Any hopes that the hostage-taker would follow up with the release of Ellen were short-lived. Conversations between the HNT, who had taken over from the patrol officers, and Adam continued but they were of short duration and not successful. Some time during the afternoon, the situation worsened when Adam, erroneously, became convinced that the police had entered the house. He became frantic, running from room to room, holding Mrs. G. in front of him as a human shield and firing out the window at the police who surrounded the house. The situation remained deadlocked throughout the afternoon. Eventually Adam, reassured that the police were not in the house, calmed down and agreed to speak once again with negotiators. Hopeful that fatigue would eventually overtake Adam, HNT members tied to keep the dialogue going by telephone as long as possible to deny him the opportunity to rest.

Ellen, now the sole hostage, was also watching for the same signs of weariness in Adam. At about 6PM, she noticed that Adam's head was nodding while he was talking on the telephone with the negotiators. On more than one occasion, he actually dropped the phone and dozed off for a minute or two. She had started planning her escape when she noticed this behavior and started backing toward the bedroom door while still facing her captor. When he dropped the telephone handset once again and started to doze while sitting on the bed, she opened the door as quietly as possible and walked down the staircase and went directly to the front door. She paused in the open doorway until she was spotted by one of the police officers assigned to the front perimeter of the house. She made a dash toward him and was brought into a nearby home that was being used as a Command Post. When Adam awoke from his short nap, he picked up the fallen telephone and told the police negotiator that he knew that Mrs. G. had gotten away but he didn't seem upset by her escape. The dialogue with the negotiators continued on and off for the rest of the afternoon into the evening. Adam

continued to state that he wouldn't come out, despite repeated assurances that nobody would hurt him. The Conversation phase during this incident would be considered unfavorable since the dialogue was never ongoing or meaningful.

At approximately 11PM, a police robot, operated by remote control from the Command Post, was sent into the residence. This robot is capable of climbing steps and is equipped with video cameras, spotlights and a speaker system with an audio capability. The robot entered the house through the side entrance and a search was conducted using the cameras. It was determined that Adam was not on the ground floor of the house so the robot then moved to the staircase leading to the second floor of the residence. The robot ascended the stairs and when it arrived on the upper landing, Adam was seen on the video monitor pointing his rifle at the robot. The robot operator, using the speaker system, told him to drop his weapon. Instead, he began to fire repeatedly at the robot. He shot the spotlights out but the camera and speaker system continued to work. Eventually, one of the shots severed the power cable and the robot ceased to function. When this happened, Adam went back into the upstairs bedroom and called the negotiators on the phone to say that “...the score was now Adam 1 and the Robot 0."

The robot, even though it was put out of service, was actually blocking the narrow upper hallway, so it served as a barrier to confine Adam to the front upstairs bedroom. This enabled ESU officers to take up positions in the downstairs part of the house where they would be in position to prevent his escape. From approximately 3AM to about 9AM the standoff continued. When the negotiators tried to call Adam to ask if he wanted anything or wished to talk to anybody, he refused to answer the telephone.

At about 9AM, officers on the ground floor level reported hearing a shot fired in the bedroom. Negotiators continued to try to get Adam to answer the telephone. Shortly after noon ESU officers entered the upstairs bedroom and found Adams’ dead body on the floor with a self-inflicted gunshot wound to the head.

Aftermath

It should be noted that as in the previous case, the hostage, was also able to overcome her fear and anxiety, and to actively assist the HNT in calming the hostage-taker. She was able to convince the hostage-taker to release her sick husband early in the situation. Later on, she realized that trying to get her captor to think and act more rationally was not possible. However, she was a careful observer and when she saw an opportunity to escape she acted decisively and removed herself from danger. Mrs. G. was commended for her courage and clear thinking under extreme pressure.

The hostage-taker's suicide did not come as a complete surprise to the HNT members involved in this situation. The failure to establish any meaningful dialogue, especially after the second hostage escaped, made this outcome a strong possibility. Adam seemed to be acting out a suicide ritual that involved killing off family and friends and engaging in behavior that would force the police to kill him. Shortly before this situation occurred, Adam became convinced that he didn't have long to live and he even told the HNT more than once that he was going to die. There is no medical evidence to support his belief and there also is no record of his ever having received psychiatric care. One acquaintance said that "Crazy Adam" as he was known to his few friends and neighbors was a "walking time bomb" and he didn't want to be around when he went off. After a more thorough search of Adam's home his mother's corpse was found in a hole in the basement covered over by a metal plate. Adam did not leave a suicide note so it will never be known what drove him to kill his parents and four friends, seriously wound two other pals and finally take his own life. Many questioned why this individual had never been hospitalized or psychologically evaluated during his lifetime since he was obviously mentally ill (McFadden, 1991). In spite of displaying threatening or actual violent behavior on many occasions, he was allowed to freely roam about his neighborhood. Why did he murder his parents and his few friends? What set him off and why would he break into the home of complete strangers and yet not harm them? These

questions remain unanswered.

Conclusion

One of the goals of this research was to provide a prediction model that was simple, precise, and reliable and I believe this has been achieved. This model was tested using accepted statistical methodology with a sufficient data sample. The ability to accurately predict the resolution of a hostage or barricade situation has been a dilemma for negotiation/crisis team leaders, tactical/swat supervisors and on-scene incident commanders for some time and will continue to be a problem. This model, although not perfect, will help in resolving that problem. In a recent article in the FBI Law Enforcement Bulletin, the use of “negotiation position papers (NPP)” was recommended to provide the incident commander with periodic written briefings that give the status of a hostage/barricade incident with an assessment or analysis of the situation and recommendations as to strategy that should be pursued (Dalfonzo & Romano, 2003). This prediction model that we proposed will assist negotiators and tactical officers in formatting an accurate NPP and could prove invaluable both during an incident, and afterwards of post-incident critiques and in the course of criminal and civil litigation proceedings. One final note is that the motivational model and the contextual model offered here can co-exist and complement each other when used properly to explain and resolve these dynamic situations.

REFERENCES

Allen, M.P. (1997). Understanding regression analysis. New York: Plenum Press.

Bohl, N.K.(1992, Aug.).Hostage negotiation stress. FBI Law Enforcement Bulletin, (61)8, 23-26.

Bolz. F.A. (1987). How to be a hostage and live. Secaucus, NJ; Lyle Stuart.

Clinard, M.B. & Quinney, R. (Ed.) (1973). Criminal behavior systems: A typology, 2Ed. New York: Holt, Rinehart & Winston.

Crelinstein, R.D. & Szabo, D. (1979). Hostage taking. Lexington, MA.: Lexington Books.

Culley, J.A. (1974, Oct.). Defusing human bombs: Hostage negotiations. FBI Law Enforcement Bulletin,43(10)1-5.

Dalfonzo, V.A. & Romano, S.J. (2003, Oct.) Negotiation position papers: A tool for crisis negotiators. FBI Law Enforcement Bulletin, 72 (10) 27-31.

Deaver, J. (1995). A maiden's grave. New York: Penguin Books.

DeMille, N. (1990). Cathedral. New York: Warner Books.

Douglas, J. & Olshaker, M. (1995). Mindhunter: Inside the FBI's elite serial crime unit. New York: Schribner.

FBI Academy TRAMS Unit (1975, Sept.). The hostage situation: Exploring the motivation and cause. Police Chief Magazine,1-17.

Fuselier, G.D. (1981, June/July). A practical overview of hostage negotiation, FBI Law Enforcement Bulletin,50(6),1-10.

Fuselier, G.D. (1986, Mar.).What every negotiator would like his chief to know. FBI Law Enforcement Bulletin,55(3),1-4.

Fuselier, G.D. (1999, Jul.). Placing the stockholm syndrome in perspective. FBI Law Enforcement Bulletin, 68(7),22-25.

Grossman, D.A. (1995). On killing: The psychological cost of learning to kill in war and society. Boston: Little, Brown, 159-160.

Hacker, F.J. (1976). Crusaders, criminals, crazies: Terror and terrorism in our time. New York: W.W. Norton.

Hassel, C.V. (1987). Terrorism and hostage negotiation. In D.J.D. Sandole & I. Sandole-Staroste (Eds.) Conflict management and problem solving: Interpersonal to international applications (pp.184-198). New York: New York University Press.

Lancely, F.J. (1979). The antisocial personality as a hostage-taker. Quantico, VA.:FBI Academy.

Logan, M.H. (2001). What hinders or facilitates successful negotiation. Unpublished doctoral dissertation, University of British Columbia, Canada.

McFadden R.D. (1991, Oct. 14). 4 killed and 2 wounded in Queens rampage. New YorkTimes,1.

McGowan, H.M. (2004). Context, containment and conversation: a study of the NYPD's hostage and barricade resolution strategies. Unpublished doctoral dissertation, The City University of New York. American Bar Association, 24-28.

Police psychologist, in conducting hostage seminars, says time is on our side. (1977, May 3).Law Enforcement News,3(4):1-8.

Powell, J.O. (1989). Negotiation processes in hostage and barricade incidents. Unpublished doctoral dissertation, The University of Iowa.

Reiser, M. & Sloane, M. (1981, Apr.). The use of suggestibility techniques in hostage negotiation. Paper presented at the annual meeting of the Western Psychological Association, Los Angeles, CA.

Rosenhan, D.L. (1988). On being sane in insane places. In C. Clark & H. Robboy (Ed.) Social Interaction: Readings in Sociology,(pp.304-322). New York: St. Martin Press,.

Ross, L. & Nisbett, R.E. (1991). The Person and the Situation: Perspectives of Social Psychology. New York: McGraw Hill.

Rusk, T. & Miller, D.P. (1993). The power of ethical persuasion: Winning through understanding at work and at home. New York: Penguin Books.

Rubinstein, J. (1973). City Police. New York: Farrar, Straus and Giroux.

Schlossberg, H. (1979). Police response to hostage situations. In T.J. O'Brien (Ed.) Crime & Justice in America,(pp.209-220). New York: Pergamon Press.

Schlossberg, H. (1996, Spring) Psychiatric principles of negotiation. The U.S. Negotiator: Montgomery, AL,5-6.

Strentz, T. (1979, Apr.). Law enforcement policy and ego defenses of the hostage. FBI Law Enforcement Bulletin,48(4)2-12.

Strentz, T. (1979, Apr.). The inadequate personality as a hostage taker. FBI Law Enforcement Bulletin,48(4)14-19.

Strentz, T. (1991). Crisis intervention and survival strategies for victims of hostage situations. In A.R. Roberts (Ed.)Contemporary Perspectives in Crisis Intervention and Prevention, (pp.127-147). Englewood Cliffs: Prentice Hall,

Van Zandt, C.R. (1991, May). Hostage situations: Separating negotiation and command duties. FBI Law Enforcement Bulletin, 60(5)18-19.

Violanti, J.M. (1996). Police suicide: Epidemic in blue. Springfield: Charles C. Thomas.

Whalen, P.(1990, Aug. 13). Grandmother held hostage in Bronx. Newsday, 23.