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An Evaluation of Two Training Programs Designed to Enable Hostages to Cope More Effectively with Captivity Stress

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This is to certify that the dissertation prepared by Thomas Strentz entitled "An Evaluation of two Training Programs Designed to Enable Hostages to cope More Effectively with Captivity Stress" has been approved by his committee as satisfactory completion of the dissertation requirement for the degree of Doctor of Philosophy.

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An Evaluation of Two Training Programs Designed to Enable Hostages to Cope More Effectively with Captivity Stress

A dissertation submitted in partial fulfillment of the requirement for the degree of

Doctor of Philosophy

At Virginia Commonwealth University, 1986

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Table of Contents

List of Tables

List of Figures

list of abbreviations

AFA	Association of Flight Attendants
ANOVA	Analysis of Variance
DOB	Date of Birth
DOS	Department of State
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FTX	Field Training Exercise
GSI	Global Severity Index
ICBM	Instant Calming Behavior Mode
IMI	Impact Message Inventory
LCDR	Lieutenant Commander U.S. Navy
LOC	Locus of Control
LAPD	Los Angeles Police Department
LASO	Los Angeles Sheriffs Department
NYPD	New York City Police Department
PIP	Psychotic Inpatient Profile
POW	Prisoner of War
SAS	Special Air Service of the Royal Air Force
SERE	Survival Evade Resist Escape
SCL-90	Symptom Check List-90 Items
SLA	Symbionese Liberation Army
SOARS	Special Operations and Research Staff
SSN	Social Security Number

STAI	State Trait Anxiety Inventory
USMC	United States Marine Corps
USN	United States Navy
USS	United States Ship
WCCL	Ways of Coping Check List
W.W.II	World War II

Abstract

AN EVALUATION OF TWO TRAINING PROGRAMS DESIGNED TO ENABLE HOSTAGES TO COPE MORE EFFECTIVELY WITH CAPTIVITY STRESS

Thomas Strentz Ph.D.

Virginia Commonwealth University, 1986

Major Director: Dr. Stephen M. Auerbach

In the present study, airline employees undergoing highly realistic but simulated captivity as hostages were given one of three types of prestress training programs. One group of subjects was given Problem (P)-focused training, which emphasized activities which would be useful in actively manipulating the stress situation. A second group was given Emotion (E)-focused training which emphasized techniques designed to help them directly modulate fear and anxiety associated with the situation. A third (control) group was given no specific stress management training. Retrospective data from the Ways of Coping Check List indicated that subjects tended to engage in the type of coping activity for which they were trained Data from the STAI State -Anxiety scale indicated that stress levels fluctuated drama-tically over the course of the experiment, with the greatest changes observed for subjects classified as externals on the Locus of Control Scale who had received P-focused training. This group of subjects also showed the

poorest adjustment as measured by the SCL-90). Overall, subjects who received E-focused training showed the best adjustment (as measured by the SCL-90 and the PIP behavioral rating scale). Better adjusting subjects also tended to be perceived as high in Friendliness and Dominance and low in Submissiveness and Hostility by their captors, and they tended to perceive their captors as Friendly and Dominant (as measured by the Impact Message Inventory). The findings were discussed in terms of the stress and coping literature, and their implications for implementation in future stress management programs for potential hostages.

An Evaluation of Two Training Programs Designed to Enable Hostages to Cope More Effectively with Captivity Stress

In most Western democracies, in contrast with some underdeveloped nations, human life is valued well above anything else. This is an obvious outgrowth of a form of government whose structure and strength is dependent upon votes cast in a free election. This fact was clearly manifest to the world in the spring of 1980 when the Iranian Embassy in London was taken and held for six days by a group of Iraqi sponsored terrorists. At the same time this drama was being played out in Great Britain, a similar scenario was in its sixth month in the Middle East. The reactions of these embassies' mother countries, one a Western democracy and one an under-developed nation, were markedly different.

When the American Embassy in Tehran was wrested from our control and 52 American citizens became long-term prisoners, threatened with death by a domestically embattled Ayatola, the American public was shocked. For 444 days a dominant thought in our lives was the fate of 52 fellow Americans who came to be called "our hostages." Churches included them in their prayers; politicians argued strategy; and Americans of every political and religious persuasion were united in their concern for their welfare. Our attitude stands in stark contrast to the proclamations of the Ayatola when his London Embassy was taken. He told his Embassy staffers that they should welcome the

opportunity to die for their faith and flatly refused to negotiate on their behalf. Ultimately, the British Special Air Service (SAS) and Scotland Yard rescued these hostages.

The value we place on human life has left us open to victimization by those who do not share, but rather seek to exploit, our belief. A human hostage has become a valuable asset in foreign and domestic confrontations. The vulnerability of the United States, and other Western democracies, to the use of this weapon increased over the years until it achieved a crescendo in Tehran.

Problem

An increasing number of incidents, or at least an increase in the reporting of both targeted and randomly perpetrated hostage situations, has underscored the psychological as well as the physical needs of victims and potential victims of hostage situations. The studies conducted thus far have answered some questions, but have raised others (Jenkins, Johnson, & Ronfeldt, 1977; Ochberg, 1978; U.S. Congress, 1975). For instance, how should a victim behave to best protect his or her life? What psychological strategies and training might be employed before an incident to assist potential victims in their attempts to cope with the psychologically stressful and life-threatening situation should it occur?

Evidence of the value of preparation for potential victims is growing. American law enforcement agencies and banks

have learned that tellers who have been trained to cope with the trauma of a robbery or a hostage situation survive with fewer resulting problems and provide better information to investigators than their untrained peers. Employees not so trained tend to become distraught and are frequently traumatized by the experience (Moore, 1980; Turle, 1981).

The challenge for educators, and the focal problem of this study, is to implement appropriate hostage training programs and develop ways to evaluate their effectiveness. This project focuses on primary (distal prestress) intervention (Auerbach, 1986) and will deal with a variety of reactions to consider when one is abducted or taken hostage. It compares two types of preparatory training programs. A third (control) group is designed to detect any Hawthorne, or placebo effect. The effects of the two methods of preparation on adjustment to and anxiety level experienced during the hostage simulation are evaluated in conjunction with an individual difference variable, locus of control. The nature of the experimental preparations, their expected differential impacts, and the instruments chosen to evaluate these outcome variables are described in the latter parts of this section and in the Method section.

Individual Differences in Response to Stress

The study of individual differences in anxiety level as a response to various stress situations has received considerable attention in recent years. A general finding has been that, even though individual differences in trait anxiety (A-trait) success-

fully predict who will develop excess anxiety in situations involving ego threat or threat to self-esteem or loss of control, such differences are generally unsuccessful predictors in situations involving physical dangers (Auerbach, 1973; Johnson, Dabbs, & Leventhal, 1970; Katkin, 1965; Kendall, Finch, Auerbach, Hooke, & Mikulka, 1976; McAdoo, 1971).

Studies involving physical danger have largely focused on specific situational stress (Hodges & Spielberger, 1966; Martines-Urrutia, 1975). In all of its training simulations with potential prisoners of war, the United States military has not identified any individual personality factor that may predispose persons to success or failure. This is probably due to the prescreening afforded by flight training and other types of combat training required prior to qualifying for the Survival, Evasion, Resistance and Escape (SERE) training program (Derrer, 1984). Because of the paucity of data on selection for military stress training, most of the parallels for hostage training will be drawn from surgical and dental patients who have been prepared prior to stressful medical or surgical treatment. Auerbach and others have done extensive work with dental patients who, like potential hostage role players, are about to encounter stress and anxiety in a voluntary setting.

Note: (However, in each of these situations the voluntary nature of the setting can be debated. Individuals in both groups may elect to avoid or at least delay the experience.)

Relatively few studies have evaluated the impact of emotional/personality factors and pretreatment communications on adjustment in the medical or surgical setting. Janis (1958) has done some work evaluating the relationship between pretreatment fear levels and recovery from surgery. Similar work was done on POW recovery by Ford and Spaulding (1972, 1973) when they compared the adjustment during and after captivity of the USS Pueblo Crew. Similar investigations were not undertaken with the Iranian hostages who spent 444 days in the Embassy in Tehran. (Blum, 1984)

Janis (1958) found that patients with moderate preoperative fear showed better postoperative adjustment than patients with high or low preoperative anxiety. It would appear that a more reasonable appraisal of the situation in the beginning assisted in recovery. General confirmation of the role of personality factors on surgical recovery was provided by Andrew (1970), Delong (1971), and Cohen & Lazarus (1973) when they categorized surgical patients by their preferred mode of dealing with stress and identified a complex interaction between this factor and the type of information received. Auerbach, Kendall, Cuttler & Levitt (1976) found differences in adjustment during stress periods based upon locus of control differences (internal versus external) and type of information provided (specific versus general).

If there is generalization from the relatively short-

term stress of surgery, adjustment during the hostage experience should vary as a function of an interaction between locus of control orientation and information received prior to the experience. The relationship is such that "Internals," who are characterized by Rotter (1966) as perceiving themselves as having personal control over the reinforcement they obtain as a result of their behavior would be expected to adjust best when they are given specific expectancies regarding what is about to happen. "Externals," on the other hand, who are said to perceive their reinforcement as being determined by factors out-side of their personal control, would be expected to adjust best when they are given general information. As Phares (1973) noted, "..if the locus of control dimension refers to a generalized expectancy for control of one's life, then internals may be expected to be more active than externals in attempting to manipulate their environment by gaining specific information for use in this endeavor." The specific information provided to the in-ternals in the Auerbach et al. (1976) study gave them this tool. It was anticipated that they would put it to good use as they attempted to deal with anxiety in a situation over which they had little control. For externals, less specific, marginally stress-relevant information on the situation they would face did not conflict with their notion that life lies beyond their control. Phares (1973) has listed a number of other studies to support this conceptualization.

Watson (1967) found that a sense of a lack of control is strongly linked to level of anxiety. Ray and Katahan (1968) replicated his findings. These authors, and others, found a strong correlation between locus of control and anxiety, with high trait anxiety levels associated with an external locus of control orientation.

Further, it is logical to assume that a person whom Rotter (1966) would characterize as an internal would seek and use information to control his anxiety and attain a sense of control in a situation where he perceived that he might have little control. Thus, whether one is a medical or dental patient in the usual role of weakness and subservience to the doctor, or whether one is in the role of a captive and similarly subservient to the captor, the internal will try to use whatever information is available to him in an attempt to re-establish, at least cognitively, a sense of control. In contrast the externally oriented individual would reject or avoid such information as it places him in a position of having to take control. Thus, one hypothesis of this study focuses on the differences between the performance and anxiety levels of internals who are taught avoidence oriented (emotion-focused) coping skills versus those who are provided control oriented (problem-focused) instruction and a third group who will only receive general orientation information. Similar comparisons are made for those whose locus of control scores identify them as externals and are similarly trained.

POW Studies

The POW literature has emphasized the pathologic and disabling consequences of military captivity, but offers little documentation on the practice and effect of preparation on potential civilian hostages (Anderson, 1975; Beebe, 1975; Eitinger, 1961; Ford & Spaulding, 1973; Hinkle & Wolff, 1956; Kensmith, 1985; Kornay, 1969; Lifton, 1954; Nardini, 1952, 1962; Nefzger, 1970; Schein, 1956; Schein, Cooley & Singer, 1960; Segal, 1974; Segal, Hunter & Segal, 1976; Sledge, Boydstun, Walton, & Rahy, 1980; Spaulding, 1977, Spaulding & Ford, 1972).

Of the literature reviewed for this project, the work of Nardini (1952, 1962) was most impressive. Nardini served in the Philippine Islands as a member of the United States Navy Medical Corps and was taken prisoner by the Japanese when Bataan fell in May, 1942. The infamous Bataan Death march is etched in the minds of Americans who recall the glaring headlines of those early war years. Of the over 30,000 American service men and women who were taken prisoner when Bataan and Corregidor fell, only 12,000 survived the war; 60 percent of those taken died at the hands of their Japanese captors.

Nardini completed his service in the Navy as a psychiatrist and retired as a Captain. In his moving and graphic accounts he focuses on the survivors. Although he does not address the question of training programs that might enhance the odds for life under such arduous conditions, he offers some

physical, demographic, and psychological considerations that may have contributed to survival.

The experiences of the pre-Vietnam POW rarely included isolation (except for some of the U.S.S. Pueblo crew), and in this respect Vietnam is unique. The literature cited in the next few pages concerns coping with POW life in a group setting and thus is similar to the civilian setting.

Specifically, how does the prisoner of war adjust to the stresses and psychological forces of imprisonment? Nardini analyzed the qualities of the emotional stresses and physical factors associated with the survival versus death issue. It was his opinion that emotional shock and reactive depression contributed heavily to the massive death rate early in captivity. Physical disease and the shortages of food, water and medicine were at their highest during this period and exacerbated the psychological stress. Most men experienced bouts of apathy. These ranged from slight to prolonged, deep depressions where there was a loss of interest in living and lack of willingness or ability to marshal the powers of will necessary to combat disease. One of the most distressing features was the stress of an indeterminate incarceration. The future offered only visions of continued hunger, cold, disease, forced labor and continued subservience in the face of shouting, slappings, and beatings. Nardini pointed out that to continue living depended on the effectiveness of psychological defenses in preserving the strength

of the ego and feelings of self-esteem. It was important that the survivors thought of themselves as better than their environment. It was essential that they look both forward and backward in order to retain active identification with their countrymen at home, instead of with the miserable prisoner group. Successful defenses in this area included persistent recollections that one was an American, a Westerner, a soldier, an officer, a father or some other acceptable ego-supporting role. Ordinarily, the will to live in everyday circumstances seems to be sustained by the existence of a favorable balance of everyday satisfaction with the past and present and some reason-able hope for the future (Nardini, 1952). These prisoners had to overlook, repress, deny, or ignore the present and place undue emphasis on the past and the future (Wolf & Ripley, 1947). The best adjusted individuals survived by keeping busy and productive in non-threatening activities.

According to Nardini a number of additional factors influenced survival. These factors, in summary, consisted of a strong motivation for life, good general intelligence, good constitution, either emotional insensitivity or well-controlled and balanced sensitivity, a sense of humor, a strong sense of obligation to others, controlled fantasy life, courage, successful active or passive resistance to the captors, luck, opportunism and a few preceding years of military experience. Cleverness, adroitness of thinking and general cunning were also

factors contributing to survival (Nardini, 1952).

Brill (1946) reported on a very large series of repatriated POWs of the Japanese. The survivors had in common such factors as "courage," emotional detachment, belief in one's superiority over the enemy and a refusal to give up hope. These findings are in conflict with some civilian reports in that religious beliefs, social background, and education were not considered important variables (Asencio, 1983; Fly, 1973; Jackson,1973; Neihouse, 1980).

In their paper based on the psychiatric and psychological test results of American POWs repatriated by the Chinese and North Koreans in August, 1953, Strassman, Thaler and Schein (1956) attempted to determine the types of stress the POWs faced during captivity and their major psychological reactions to such stress. It was found that one defensive adjustment of POWs to stress was withdrawal. Civilians employ the same defense, however, it is usually termed "denial". If the stress was not too great the person would, if possible, withdraw physically or, in any case, would refuse to allow himself to become involved with the environment to as great an extent as possible. Certain kinds of overt behaviors were inhibited and most emotional responses were suppressed. Thus, the "apathy syndrome" served to maintain personality integration in the face of severe psychological and reality stress. If the environment was severely stressful and physically depriving as well, the POW would regress

into a more complete withdrawal and adopt a maladaptive state in which he ceased to take care of himself even to the point of death. (Civilian hostages rarely report this degree of deprivation.) According to the authors, two things seemed to save the man close to "apathy" death: getting him on his feet and doing something, no matter how trivial, and getting him interested in some current or future problem.

The largest group of prisoners in the Strassman et al. (1956) study established a compromise between the demands of the Chinese and their own value systems. This adjustment, called by the men "playing it cool," consisted primarily of a physical and emotional withdrawal from the whole environment (Schein, 1957). The men learned to suppress their feelings and to adopt an attitude of watching and waiting, rather than hoping and planning. This reaction, though passive, was not as severe as the apathy reaction.

That psychological failure, called "give-up-itis" was the prevalent source of death in Korea was denied by Anderson, Boyson, & Esensten (1954). These three physicians, who were also POWs pointed out that an erroneous impression had been created that prisoners who were in good physical health gave up and died. Instead, every POW in Korea who died had suffered from malnutrition, exposure to cold and continued harassment by the Communists. However, one cannot underestimate the debilitating impact of mental maltreatment. Contributing causes to the major-

ity of deaths were prolonged cases of respiratory infection and diarrhea. Anderson et al., stated that under such conditions, it was amazing not that there was a high death rate but that there was a reasonably good rate of survival.

On an individual basis, one defense mechanism which played a prominent role during confinement was the denial of various aspects of reality. Bettelheim (1960) gave strong indications that this defense made the intolerable conditions of the POW camp somewhat bearable. Many prisoners acted in the camp as if their life in that situation had no bearing on reality. The use of this defense mechanism in simulations is quite common and equally effective (Wesselius & Desarno 1983). Anna Freud (1974) said that when we observe such denial we know that the ego is reacting to external danger that is so threatening that to confront it could result in a psychological disaster. The sudden onset of danger traumatizes the hostage victim. He is typically an average citizen forced into a life-and-death situation for which he is usually unprepared and whose routine world is suddenly turned up-side down. Thus, extreme denial is a logical response to the situation, and would appear to be useful at least in the short-term.

Another widely employed defense of POWs was a certain deadening of their emotional life, referred to by different authors as acute depersonalization, emotional detachment or emotional anesthesia (Cohen, 1953; Friedman, 1949). This reaction as pointed out by Sarlin (1962), protects the individual against

the dangers associated with feelings of hostility toward someone who is treating himself as an inanimate object and not a person. In addition, subliminatory processes were active in many prisoners and included the persistence of some aspects of spiritual life in the form of intellectual interest, pleasant memories and conversation (Cohen, 1953).

In interviews with this author, former hostages frequently discuss their use of denial of reality. Additionally, in a recent pilot study, several role playing hostages completed a symptom check list and a stress scale. These lists and scales originally indicated a very low level of anxiety during captivity. Approximately 24 hours after the exercise, while conferring with psychologists, each hostage confessed that the stress of his captivity had been so great that he had lied when completing earlier evaluations. Each said that he had supressed the fear, denied the danger, because it was so overpowering. Twenty-four hours and one sleepless night later, in the security of a psychological debriefing and away from their role-playing captors, they could more accurately report how very frightened they had been. These findings of denial are not restricted to this sample. McClure (1978) reported; "As I continued to talk to victims of violence, I became aware that the general reactions of these victims were similar to psychological loss. Loss of any kind, particularly if sudden and unexpected, produces a certain

sequence of responses in all individuals. The first response is shock and denial (p. 281)."

Denial is a primitive, but effective, psychological defense mechanism. There are times when the mind is so overloaded with trauma that it cannot handle a situation. To survive, the mind acts as if the traumatic incident is not happening. The victims respond with a variety of individually effective methods of dealing with excessively stressful situations (Jenkins, et al., 1977). Each victim who copes effectively has a strong will to survive. One may deal with the stress by believing one is dreaming, and will soon wake up and it will be all over. Some deal with the stress by sleeping - somulent withdrawal. This author has interviewed hostages who have slept for over ninety percent of their time as a captive. Some have fainted, although this is rare.

From the standpoint of other psychological maneuvers engaged in by hostages for self-protection, it should be noted that fear of the hostage taker is frequently transferred to a fear of the police. This reaction is a logical precursor of a common survival tactic or reaction called the Stockholm Syndrome. Hostages who survive tend to develop this syndrome. It not only enables them to survive the trauma but can endure long after the incident has been resolved. One definition of the Stockholm Syndrome provides a three phase model of the experience which generally describes it as the positive feelings of the captives

toward their captor(s) that are accompanied by negative feelings toward the police. These feelings are frequently reciprocated by the captor(s). To achieve a successful resolution of a hostage situation, it has been argued that law enforcement must encourage and tolerate the first two phases to induce the third, and thus preserve the lives of all participants (Strentz, 1979). It is doubtful that the involvement is a conscious process in which the victim intends to actively manipulate the captor. In fact, reports indicate that victims who experience the Stockholm Syndrome tried to resist their feelings of compassion for their captor (Strentz, 1979).

Some scientists consider identification with a captor (i.e., identification with the aggressor) to be a primitive attachment that stems from death imagery-a force about which little is known. It may be related to an individual's anticipation of death. A hostage is extremely vulnerable and might be expected to express attachment and even affection toward other persons present. While it may be difficult to feel compassion for a captor, particularly one whose behavior has been brutal, that captor may represent to the hostage the continued existence of authority and ability to deal with the situation. However, in certain group situations where a degree of interpersonal cohesiveness exists among the hostages, the hostages may attend to one another's needs and not demonstrate reliance on the captors (Ochberg, 1979).

If the positive feeling expressed by a hostage toward a captor is reciprocated, obviously the victim will be better off. The outcome of an incident may be affected if the reciprocation occurs without manipulation; that is, if there is a subconscious genuineness to the relation. If a victim attempts to encourage a captor to feel some attachment, it would be important to allow the necessary feelings of natural warmth, empathy, and understanding to occur over time. Here again, the importance of the dictum "be yourself" is obvious (Ochberg, 1979).

A moving account of this relationship is presented by Ochberg as he recounts the experience of one hostage of the South Moluccans in December, 1975. Gerard Vaders, a newspaper editor in his 50's, in relating his experience to Ochberg, said:

> On the second night they tied me again to be a living shield and left me in that position for seven hours. The one who was most psychopathic kept telling me 'your time has come. Say your prayers.' They had selected me for the third execution. In the morning when I knew I was going to be executed, I asked to talk to Prins (another hostage) to give him a message to take to my family. I want to explain my family situation. My foster child, whose parent had been killed, did not get along too well with my wife, and I had at that time a crisis in my marriage just behind me... There were other things too. Somewhere I had the feeling that I

had failed as a human being. I explained all this and the terrorists insisted on listening (Ochberg, 1979, p.151).

When Vaders completed his conversation with Prins and announced his readiness to die, the South Moluccans said, "No, someone else goes first." (Ochberg, 1979, p. 151)

Ochberg observed that Vaders was no faceless symbol anymore. He was human. In the presence of his executioners, he made the transition from a symbol to be executed to a human being to be spared. Tragically, the Moluccans selected another passenger, Mr. Bierling, led him away and killed him before they had the opportunity to know him.

Vaders goes on to explain his experience, his Stockholm Syndrome:

> "And you had to fight a certain feeling of compassion for the Moluccans. I know this is not natural, but in some way they come over human. They gave us cigarettes. They gave us blankets. But we also realized that they were killers. You try to suppress that in your consciousness. And I knew I was suppressing that. I also knew that they were victims too. In the long run they would be as much victims as we. Even more. You saw their morale crumbling. You experienced the disintegration of their personalities. The growing of despair. Things dripping through their fingers. You couldn't help but feel a certain pity. For people at the beginning with egos like gods--

> impregnable, invincible--they end up small, desperate, feeling that all was in vain (Ochberg, 1979, p. 152).

This affection for the aggressor occasionally arises in the protracted hostage situation. Perhaps dependence is a factor. The hostage is utterly helpless. When this first occurrs in infancy, it leads to complete submission to mother. Perhaps this attraction to the hostage taker can be likened to the parent-child relationship.

Many hostages develop the idea that the police are the cause of their problems. It is common for hostages to tell themselves and each other that the siege would end if the police would go home. Other hostages who survived and endured their ordeal with dignity have been known to gain strength by exploiting a perceived weakness of their captor. Though this behavior can be dangerous, successful exploitation can improve hostage morale. The Marines in Tehran were threatened with immediate execution by their captors. The Marines soon learned that this threat was a bluff and began to tell their captors where they wanted to be shot. In brief, they harassed their captors, as they had been harassed in boot camp. They exploited weaknesses in their captors as their drill instructors had exploited weaknesses in them. This behavior enabled them to improve their morale, make their captivity more tolerable and promote survival without benefit of the Stockholm Syndrome (U.S. Marines, 1981).

According to McClure (1978) other arrogant hostages were

Dr. Fly and Sir Geoffrey Jackson, who were so proud and influential that the terrorist organization found it necessary to remove the guards who were falling under their influence. Dr. Claude Fly was an American agronomist who was held by the Tupamaros for 208 days in 1970. However, most hostages are not individuals of the strength of character of Fly, Jackson or captured Marines and as such cannot retain an aura of aloofness during their captivity.

Although there is a great deal of literature on POWs and concentration camp survivors, it must be noted that the generalizability of these reports to the hostage is qualitatively and quantitatively tenuous. The extreme amount and duration of the trauma to which concentration camp victims were subjected led to the conclusion that this was an episode fairly unique in the annals of human history (Niederland 1965). The stress of the Nazi concentration camp represented horror and brutality that is unmatched even in the most horrendous conditions of military much less civilian captivity. As Hocking (1970) pointed out, the Nazi concentration camps in Germany, Poland, and other parts of Eastern Europe probably constituted one of the most extreme and prolonged stresses to which any large group of individuals, military or civilian, has ever been subjected. Despite the unique nature of the concentration camp experience, there are similarities in any situation posing the threat of extinction in the lack of control and the shock of a suddenly altered environment.

Lifton (1963), in his studies of the survivors of Hiroshima, has reported many features similar to those identified among survivors of Nazi persecution and civilian hostage situations.

Countless similar reports were written about those who endured the torture of the North Koreans (Beebe, 1975: Hinkle et al., 1956; Netzger, 1970; Schein, 1957). Yet it was not until quite recently that thought was given to preparing persons with a high potential for victimization as a prisoner of war. Such a preparation program must begin with research on what a potential prisoner needs to know. A logical extension of this endeavor is an effort to separate the wheat from the chaff, i.e., what are the differences between those who have survived, done well, not divulged military secrets, and suffered less stress versus those who gave in to such stress? Such questions were asked after World War II. Unfortunately this early research still remains classified. It is a safe assumption however, that the results of this research have been operationalized and form the core of many allied programs to prepare military personnel with a high potential for prisoner of war status to better withstand the stress of captivity. A civilian translation of this might be that they emerge with their egos intact. In fact this means they have withstood rigorous interrogation without divulging time-sensitive information to the enemy. An early breakthrough in the professional literature was in the series of articles by Spaulding & Ford (1973; Spaulding et al., 1972; Spaulding, 1977)

concerning their efforts to debrief the crew of the USS Pueblo. These articles, particularly Spaulding & Ford (1972) discussed psychological and stress reactions of the crew and began to make available to the civilian community information on preparation for successful survival. In fact, this work set forth an actual profile of a successful survivor.

Spaulding and Ford (1972) set out to identify some of the differences between those members of the crew of the USS Pueblo who successfully endured eleven months of captivity and harassment by the North Koreans from those in this crew who had problems. The North Koreans had certain advantages over other captors in that they discovered the service records of the crew when they captured the ship. This gave them valuable background information on each of their captives which, in turn, gave them leverage when they interrogated their American prisoners. Knowledge is power, and the North Koreans had information on their prisoners that let them know when the Americans were lying to them. In those days, a primary tactic of POWs was to lie to delay intensive interrogation and thus put off the possible divulging of time-sensitive strategic intelligence. The North Koreans allowed the Americans to lie about simple matters and cleverly used the information from the personnel files to give the impression that they knew much more than they did about each crew member. Weeks later, after their interrogations, the Americans learned that those files which they had thought destroyed were in the possession of their captors, a devistating revelation.

Ford and Spaulding (1973) conducted intensive interviews with each of the 82 surviving Pueblo crew members. Their final analyses were gauged by five factors: (1) the man's opinion of how well he had done; (2) his shipmates' opinions of how well he had done; (3) the examining psychiatrist's view of how well the individual had defended against anxiety, stress and depression; (4) the examining psychiatrist's opinion of how well the man had supported group morale; and (5) the examining psychiatrists opinion of how well the man resisted cooperation with the captors.

An analysis of the interviews resulted in the development of a profile, though the authors did not call it that, of the successful survivor. Extrapolating from the authors' conclusions, this profile consists of an older, more mature, better educated, person who had an ability to rationalize and engage in fantasy and used more primitive defenses. Some subtle changes in this profile have occurred since the Vietnam War. However, these alterations are classified and bear little upon the application of this data to the civilian sector.

Civilian Programs

Civilian stress preparatin programs are limited. The U.S. Department of State (DOS) provides information to Americans traveling to foreign countries. These data include information on what countries to avoid, and suggests traveling in groups and avoidance of patterns that indicate specific routines that may open one to abduction. Another source of information is provided

by Risks International, Inc. of Alexandria, Virginia. However, these agencies provide nothing more than reading material and advice for the civilian sector.

Within this country the American Society for Industrial Security provides written material, lectures, and seminars to financiers. For a fee they will put on any one of a variety of programs that prepare businessmen for foreign travel. However, none of these programs involve role playing of survival skills taught in lecture form. The Motorola Corporation comes close to providing preparation for the potential civilian hostage with a movie entitled, "Kidnap, Executive Style." In addition, Lloyds' of London and several other insurance companies offer "kidnap insurance" to interested executives. To obtain coverage, executives are required to attend lectures on avoiding abduction and then put into use the preventative measures described in the lecture. Those who work in corrections also produced a movie entitled, "The Corrections Officer; What to Do If You Are Taken." The Corrections movie and the Motorola production are both well researched and provide solid information on hostage behavior. However, they are passive learning techniques.

It is the opinion of this author that the best way to learn a skill is to practice it and then experience a professional critique of the activity. This takes time, money, and a commitment from students and staff. Thus far few organizations have invested such time and money. Dr. Robert Blum and his

associates (Blum, 1984) in the DOS have reported that those hostages who experienced any training at all fared better than those who had none. Even those who read a book, as passive as that may be, fared better than those who did not. Blum laments, in an offhanded way, that it is unfortunate that some terrorist group has not randomly taken hostages from those people he has trained and from those he has not. Since not a single employee trained by Blum and his staff has been abducted, the proving ground for hostage behavior training programs remains within the somewhat artificial world of those who are selected as players for various exercises.

Simulation and role playing

A widely practiced teaching technique in law enforcement is role playing and/or simulations. This application of action models is a common technique in teaching skills since one cannot teach a skill through a lecture. Therefore, football teams engage in scrimmages, public speaking courses focus upon speeches and potential prisoners of war and civilian hostages are lectured and then abducted. One of the early leaders in the field of role playing was Moreno(1932) who is credited by many as being the founder of psychodrama. All action applications owe their genesis to this founder of psychodrama and sociometry, and pioneer in the fields of group psychotherapy, role playing, and role training. Moreno introduced his concepts at a conference of the National Committee on Prisons and Prison Labor at Toronto in

1931. He introduced his concepts to Americans at the Philadelphia meeting of the American Psychiatric Association in 1932. It was at this conference that William Alanson White, (1932) credited Moreno with coining the term "group psychotherapy" from a report on the Toronto conference on "The Application of the Group Method to the Classification of Prisoners."

Moreno lectured and trained extensively for the next four decades discussing his theories and techniques to all who would listen. Among those early listeners was Lewis Yablonsky. Yablonsky is especially active in psychodrama and introduced this author to this technique (Yablonsky 1965). Those who listened became convinced of the efficacy of action methods and contributed greatly to the implementation of action methods for treatment and training within the criminal justice field.

In London, Moreno's call to action was heeded by the New Scotland Yard Police Academy. Thus role playing has been a primary method of training for their law enforcement officers since before World War II. Today New Scotland Yard uses these methods in their academy at Hendon (Veness, 1983). Bahn (1972) reports that mock station houses, a small village with streets, pubs, other businesses, and a mock court are the loci of training. Similar training procedures are common in the United States.

The trend for action training within the criminal justice system accelerated during the sixties and seventies, possibly because of the trend toward hiring mental health professionals in

law enforcement agencies (Reese, 1986). Unfortunately, even with the increase in publications, it has become evident to this author in over fifteen years of traveling in this country and abroad that many of the action training programs have gone unreported in the literature.

Today in the United States the military does the most training through role playing. This training is done primarily for members of the Armed Forces who are at risk of being abducted or captured, and thus becoming prisoners of war. This training generally focuses upon aviators and those who are destined for an assignment in a capacity that will place them more at risk than their peers. The training is intense and involves the role playing of a great deal of stress and physical abuse. While roles are played, the stress and abuse are quite real. There are several such schools whose existence, much less location and training programs, is classified. A visit to two of these and a review of their programs by the author was educational. The schools' objectives are to prepare healthy, athletic, and well-conditioned adult males to deal with the most arduous physical and mental torture. The students learn how to survive, evade, resist and escape. This objective is well-suited for these schools' purposes but somewhat extreme for the civilian sector.

Corporal John H. Moore (Moore, 1980) of the Spokane Police Department is conducting a program to train potential victims of armed robberies. He has focused upon banks because of the enthu-

siastic support of the banking community in Spokane and the professional orientation of their employees. Although Moore has written about and produced a video tape on his program, written material on such programs are rare, and one must visit agencies where such activities are being conducted if one wishes to gain an understanding of the use of these models in law enforcement.

Another example of action education are the programs for training hostage negotiators. Such programs are conducted by the police in Great Britain, Australia and the United States and rely heavily on lectures, readings and role playing.

In January, 1983 and April, 1984, this author visited Spokane, Washington, and reviewed the Bank Robbery Education Program. This review included interviews with Mr. Moore, other police officers, bank tellers, robbery victims and others who have been involved in the program. The program is designed to educate employees in their current work environment which breaks away from the sterile and artificial classroom setting. It begins with an employee briefing which informs them of the program's intent, familiarizes them with the type of weapons used in holdups and instructs them in responding to commands during a robbery. After this lecture orientation and a question and answer period, a crisis experience in the form of a mock robbery is perpetrated by role players unknown to the employees. The "holdup" usually lasts less than two minutes. After the "robbers" leave, police begin their investigation. When all of

the role playing is completed, the employees engage in a critique and then are introduced to the robbers and encouraged to discuss their feelings. The results of this program are impressive. The author learned that trained employees differed significantly in their reactions from those not trained. In an actual robbery, trained employees provided more accurate descriptions, triggered alarms, gave out less money and actually felt better about themselves after a robbery. Those who were untrained were frightened, acted impulsively, provided poor descriptions and frequently cried uncontrollably after their ordeal. They also experienced feelings of recrimination, thought they should have done things that would have been impossible, had nightmares and feared that the robber was following them. They provided excellent examples of Horney's (1972) Tyranny of the Should. Those who were trained were also frightened but used the situation to produce growth. Thus, those who were trained emerged from this crisis as stronger people and exemplified the rationale behind the two Chinese characters for crisis representing danger and opportunity.

The hostage negotiators training program at the F.B.I. Academy, which stresses role playing, was developed and run by the author for several years. He has lectured to the British and Australian hostage negotiators schools. It should be noted that this method of teaching the skill of hostage negotiations was brought to the United States by the British in 1979 and then

taken to Australia by this author in 1981 and again in 1986. All three of these programs are quite successful and rely heavily upon role playing.

From one standpoint, the proposed study comes under the general heading of crisis intervention, since it examines the efficacy of different techniques designed to enhance the adjustment of ordinarily well functioning individuals about to be exposed to extreme stress (Auerbach, 1986). Thus it fits under the general category of primary prevention of psychopathology (short-circuting the pathogenic effects of stress at a very early stage), the rubric under which most crisis intervention programming has generallly been classified (Caplan, 1964).

Crisis Intervention

Current crisis theory can be seen as the merging of two main-stream trends in social psychology that have developed since World War II. One trend concerns social work practice and theory; the other psychological and sociological theory and experimentation. These trends, particularly as they merged in community psychiatry, gave birth to this a application of mental health skills. One key difference this new approach included was the practice of working with clients who were otherwise mentally healthy but faced a serious problem. Because of this confrontation these well-functioning people were, temporarily, faced with a serious dilemma that required professional help to re-establish their psycho-social equilibrium.

Many authors cite the work done by Lindemann (1944) in Boston after the Coconut Grove nightclub fire as the origin of crisis theory. He stated that the clinical picture of a person who was involved in a crisis included normal grief reactions that were acute, had an identifiable onset and generally endured for a brief period. Furthermore, Lindemann believed that this reaction could be minimized by appropriate intervention directed at helping the individual identify, understand and master the specific psychological task posed by the stressful situation.

All these characteristics identified by Lindemann in 1944 have remained important aspects of the concept of crisis by contemporary clinicians such as Caplan, (1964); Dabonne, (1967); Eastham, Coates, and Allodi,(1970); Kaplan, (1968); Kardener (1975); Pasewark, & Albers (1972); Rapoport, (1962); and certainly the writing and editing of Parad (1965), Parad and Parad (1968). Lindemann championed the concept of preventive intervention which has served as the conceptual basis for most contemporary models of crisis intervention. His work began in 1948 at the community mental health program called Human Relations Service in Wellesley, Massachusetts.

As the literature above indicates, Social Work has contribued heavily to the work and research in crisis intervention. Kilpatrick (1981) and Kilpatrick & Brunstein (1983) have done considerable work with airline crash survivors and their families.

The military has contributed heavily to crisis intervention with its many programs designed to prepare potential prisoners of war to better survive their captivity. The majority of these endeavors seek to train pilots and crews to cope with the stress of captivity. Studies of ex-hostages and POWs by Kentsmith (1982) provide us with a growing understanding of the skills necessary to survive under conditions of extreme duress.

In the Vietnam War, 332 U.S. Air Force pilots were taken prisoner and held in North Vietnam (Kentsmith, 1982). During their captivity they experienced extreme degrees of stress due to isolation, physical abuse, malnutrition, lack of adequate medical attention, and physical and psychological torture. In spite of such physical and emotional stress, virtually none became psychiatric casualties (probably because of their pre-capture training). His five-year follow-up has demonstrated that these 332 Air Force aviators have remained free of psychiatric disorders.

According to LCDR Douglas Derrer of the U.S. Navy (Derrer, 1986) these results are quite different from those of World War II and Korea, where no such programs were offered. After Korea, our military recognized the need for the training of potential prisoners of war. The soldiers who were captured had succumbed to specially designed psychological and physical torture known as Chinese thought reform, or more popularly "brainwashing." As a result, they revealed secret information and suffered subsequent emotional trauma. Today each of the

military services has its own version of survival, evasion resistance and escape (SERE) training. Derrer (1985) states that the resistance aspect of this program is of special importance with a captor who seeks to exploit POWs for propaganda value (not unlike the terrorist seeking media attention and publicity). These intense programs have proven valueable in protecting state secrets and human psyches.

According to Mayer Nudell of the U.S. Department of State Office for Combatting Terrorism (Nudell, 1983), this agency provides a series of lectures for embassy staffers to acquaint them with certain survival skills. Fortunately, with the exception of the Iranian hostage situation, the DOS has not had to deal with the problem of large numbers of American civilians being subjected to the rigors of captivity. However, this lack of experience with civilian hostage situations has also resulted in a dearth of information on the survival skills which could be needed.

Each of "our hostages" in Iran had different experiences since each one's treatment depended upon what the Iranian captors thought he knew. Many were detained in crude cells, forced to live simple lives on marginal diets and led to believe that they might be executed (Strentz, 1981). However, most were not systematically harassed or tortured. Other members of the embassy staff (those whom the Iranians thought to be spies) were abused, harassed and tortured in an attempt to obtain intel-

ligence. According to Blum (1983), the types of training experienced by these hostages ranged from sophisticated military escape and evasion to role playing, lectures, and the reading of books or pamphlets. Blum reported that training of any sort seemed to provide the hostages with something to hold on to. It gave them a guide for behavior, a model to follow, and thus provided them with some sense of security.

Needham (1977) attempted to study hostages involved in prison hostage taking situations. However, he was unsuccessful because most prisons failed to return his simple questionnaire, entitled Neutralization of Prison Hostage Situations.

Classification of Crisis Intervention Programs

Auerbach (1986; Auerbach & Kilmann, 1977) point out that programs designed to assist individuals involved in crisis are quite different from standard psychotherapeutic models of intervention. He presents an intervention model based on the temporal relationships of the individual to the crisis-inducing stressor. Since it is difficult, if not impossible, to totally prevent an individual from becoming a hostage one must train the potential victim to more effectively cope with the stress of captivity. Auerbach (1986) identifies four types of crisis intervention programs:

1. Distal prestress intervention. These programs are based on the concept of primary prevention as pioneered by Lindemann (1944) and Caplan (1966). They are designed to acquaint poten-

tial victims with knowledge of the crisis they may face so as to enable them to cope more effectively should they be victimized. Examples of distal prestress interventions include classes on rape prevention, prisoner of war training for military pilots, robbery seminars for bank employees, disaster drills for civil defense volunteers and the various exercises used by the military to prepare for combat experience.

2. Proximal prestress intervention. Immediate pre-impact intervention refers to programs that deal with individuals known to be on the verge of confrontation with a stressful life event. Again, information on what to expect or other information is delivered. For instance, in this case, the expectant mother, the patient facing surgery or an individual about to begin a dangerous assignment knows that she or he will be confronted with a stressful event within a short period of time. Crisis intervention takes place in the period between learning of occurrence and actual impact.

3. Proximal Poststress intervention. Short-term post-impact intervention is designed to assist recent crisis victims in their efforts to regain psycho-logical equilibrium. Programs of this type commonly deal with victims of rape and natural disaster, former prisoners of war, certain types of surgery patients, post shooting trauma and, most recently, victims of a hostage situation.

4. Distal poststress intervention. Long-term post-impact treatment intervention is common in the United States and deals with individuals who have not and cannot by themselves recover from the emotional trauma of a crisis. Any of the above delineated crisis victims who have not returned to a normal level of social functioning after a few months may be candidates for this type of post-crisis treatment.

Since training for potential hostages in the civilian sector is so rare, an evaluation of how effective the training would be in assisting victims to cope with the stress of being a hostage is impossible. Further, most post-situation books and papers written by, or about, victims tend to be case studies with limited generalizability. Available post-stress data have not included evaluations of the hostage's adjustment to the stress of the ordeal and his subsequent re-adjustment to society. Yet, it has been noted that the data that are available on hostages tend to parallel the reports written about military prisoner of war experiences.

Unfortunately, for the purpose of this study, the majority of literature that does exist about civilian hostages is centered on the experiences of those held by the Nazis before and during World War II. Eitinger (1961, 1962, 1963, 1966, 1969, 1971, 1972, 1974, 1975, 1980), and Eitinger & Strom (1973) have written at length about these experiences. However, Eitinger's extensive writings are of limited application because of the

nature of the stress endured by concentration camp inmates. The brutality and duration of their incarceration exceeds any hostage situation known to this author or found in the literature.

Most reports on civilian hostage experiences are first-person accounts. These publications include an analysis of the Carrasco Tragedy by House (1975). She discusses at length the specifics of the two-week hostage situation in the Texas State Penitentiary during the summer of 1975. This incident is the longest hostage situation within the United States. House was one of the hostages released early in the siege. Others were not so fortunate; two hostages and two subjects died in the final moments of the ordeal. Other books that use the autobiographical approach are Surviving the Long Night by Sir Geoffrey Jackson (1973), and No Hope But God by Dr. Claude Fly (1973). In addition, William Niehous (1980), an Owens-Illinois executive, has written Prisoner of the Jungle about his four-year imprisonment by terrorists in Argentina. The American Ambassador to Chile, Diego Asensio (1983), has written an excellent account of his ordeal. Additional first person accounts may be found in Guideposts. (Bitterman, 1982; Dozier, 1983; Richardson, 1983).

The Rand Corporation, which has written many case studies for the United States government, has also written the first, and so far only, statistical review of international hostage situations. In this report,"Numbered Lives" Brian Jenkins (Jenkins, et al., 1977) discusses the statistical advantages of

assault versus negotiations when dealing with terrorists who have taken hostages. They studied 77 inter-national hostage episodes that occurred between August, 1968 and June, 1975. Twenty-eight of the incidents were hostage situations and 49 were kidnappings.

A hostage situation is not a kidnapping, although kidnapping incidents, too, may include some negotiations. However, the major difference is that the location of the kidnap victim is usually not known. Some of the more famous kidnappings in the United States are those of Charles A. Lindbergh, Jr., in 1932, and Patricia Campbell Hearst in 1974. Both are famous, yet exceptional, occurrences. In most kidnapping cases, contrary to common belief, the violation remains unknown until the victim is free and reports the abduction (Graves and Strentz, 1977).

Anne Chandler Howell (1975), in her book Kidnapping, The Hidden Crime, writes about federal prisoners and their methods of, and motivations for, taking hostages. Her findings include the fact that people who abduct for criminal purposes are people with felony records and, therefore, had some experience with the criminal Justice system. These results were replicated in an unpublished F.B.I. study (Graves and Strentz, 1977).

Dr. Murray Miron of Syracuse University has written a text which is designed to teach negotiators the principles of hostage negotiation using actual cases (Miron & Goldstein, 1978). This book, Hostage, is the only text book on the market that attempts

to teach negotiating techniques by using statistical findings. A problem encountered in reviewing the literature on hostage negotiations is that, like the literature on hostage situations, the case study method predominates.

The Los Angeles Police Department (LAPD, 1974) has contributed to the case study literature with their publication of the 138 page report on the Symbionese Liberation Army [SLA] shoot-out. Their account includes biographies of the subjects, as well as a cost accounting of the bullets, man hours and moneys expended by the police to resolve the incident. Although this incident began as a hostage situation, the non-SLA residents were released, and it ended as barricade problem. It is mentioned here because of the insight into the amount of money, $67,000, that the operation cost the taxpayers of Los Angeles. This expenditure of funds to resolve a hostage situation could affect the judgement, thinking, and planning of a police official who decides to assault during a hostage situation rather than wait for the subject to surrender.

One of the most recent discussions of the mechanics of resolving hostage situations has been written by Captain Frank Bolz of the New York City Police Department (NYPD) (Bolz & Hershey, 1979). In this book Hostage Cop, they touch on the many ways in which one may resolve a hostage "job", as he calls it, without the loss of life. While it is an interesting narrative, it is strictly anecdotal and presents neither a statis-

tical analyses nor case studies of the hundreds of situations resolved by the NYPD.

Dr. Frank Ochberg, formerly the Director of the Department of Mental Health for the State of Michigan, is the editor and primary author of Victims of Terrorism (Ochberg & Soskis, 1982). This work focuses on the effect being a hostage has upon the mental health of the victim and includes suggested treatment methods for these individuals.

After an exhaustive search, it becomes clear that there is no literature in public source publications that deals with the training of potential civilian hostages. Military journals such as Military Medicine and civilian periodicals like the American Journal of Psychiatry discuss the problems faced by pri-soners of war and certain civilian hostages. However, the exper-ence of prisoners of war as discussed by Kentsmith (1982) focuses upon the military experience. Some of his findings, such as the stress and denial factors discussed earlier, relate to civilian situations, but not to the training of potential hostages.

The civilian sector is treated by the case study method as exemplified by Hillman's (1981) article. In reading the above, and other related articles, by Nardini (1962), Rahe & Genender (1985), and Spaulding & Ford, (1972), one can begin to develop an understanding of what a training program should include. However, none of the articles treat the theme of civilian hostage training. Therefore, this project attempts to correct this

vital void by evaluating two techniques for preparing potential civilian victims of hostage situations.

Emotion-Focused vs. Problem-Focused Prestress Preparation

A review of the retrospective studies discussed over the last several pages reflects that a wide range of approaches were effective in dealing with the stress of captivity. This was true of POWs who used problem-focused coping and more conventional hostage situations where largely emotion-focused tactics were employed. For the purpose of this study these two types of hostage preparations, emotion-focused and problem-focused will be compared. A third group of trainees will be given general information on past F.B.I. training programs.

Emotion-focused training involves the teaching of subtle coping tactics oriented toward directly controlling anxiety and stress. Focus is on controlling the stress response with minimal attention paid to the nature of the stimulus that is producing the stress. Activities include deep breathing, instant calm behavior maneuvers, and dealing with boredom by mental activity such as directed fantasy and thought stopping. Problem-focused training on the other hand, focuses on ways to actively manipulate, change or terminate the stressor. It includes teaching communication methods, group activities, intelligence gathering, captor relations and manipulations, along with physical exercise and pain control (Martelli, Auerbach, Alexander, & Mercuri, in press).

The literature has shown that some successful prisoners of war have used emotion focused coping skills. Nardini (1952) discusses the use of this type of defense in World War II camps when he lists such activities as repression, denial, ignoring the present and focusing upon the past and future. Brill (1946) speaks of this type of coping when he discusses such factors as emotional detachment, belief in one's superiority over the enemy and refusal to give up hope. Similar findings were obtained in studies of prisoners in Korea done by Shassman, Thaler and Schein (1956) when they discussed the defense of withdrawal. Schein (1956) also mentions the physical as well as the emotional withdrawal involved in "playing it cool" and thus adjusting to the hostile environment of the POW camp. Bettleheim (1960) also discussed the common practice of psychological withdrawal used by inmates in the Nazi concentration camps.

While the use of emotion directed defense mechanisms are commonly described in the literature, many of these same authors also discuss an equally common practice of prisoners and hostages coping with the adverse conditions of captivity by engaging in specific problem-focused activities. Nardini (1952) describes prisoners who were more cunning than their captors, some who survived by keeping busy or remaining productive in non-threatening activities. He also discussed the enjoyment prisoners derived from completing acts of successful active or passive-aggressive resistance to their captors. Asencio (1983)

talks at length about how he successfully engaged in problem-focused activities which enabled him to survive his months of captivity. Some who prepare potential hostages emphasize the importance of making constructive use of time by gathering intelligence and talking to other captives, adopting and cultivating insects who inhabited their cells and communicating with other captives and physical exercise (Derrer, 1985).

Most hostage and prisoner of war preparation programs tend to focus upon emotion-focused training because it is more adaptable to a variety of circumstances. Problem focused coping skills tend to be more situation specific and thus are more limited in their application. In fact such coping skills are usually developed by the captive while he is detained.

There can be little doubt that a variety of preparations will assist in assuring survival in a prisoner of war or hostage situation. This study moves beyond the many retrospective and anecdotal works available and uses an experimental design with a control group to systematically evaluate specific preparation programs for persons with a higher than usual probability of being taken hostage. By assessing the interaction between an individual difference variable (locus of control) and preparation techniques, it attempts to contribute to the growing literature establishing links between personality dispositions and coping styles and response to various procedures designed to prepare persons for medically related and experimentally induced

stressors (Auerbach et al, 1976; Auerbach, Martelli & Mercuri, 1983; Martelli, et al., in press; Suls & Fletcher; 1985).

A variety of literature has been reviewed for this study. The articles and books cited ranged from prisoner of war studies and concentration camp experiences, to more mild hostage situations and the more circumscribed less dramatic experience of a dental patient awaiting surgery. As far ranging as these experiences may be there is a common element of concern over control. In each of these settings the subject, prisoner, hostage or patient has lost or given up some measure of control. As Watson (1967) noted, loss of control is associated with anxiety. The hypotheses of this study deal with the general theme of anxiety and control in a hostage situation. Individuals who have different generalized expectancies for personal control are given emotion-focused or problem-focused training for how to deal with a situation where they are experiencing a lack of control. An attempt is made to demonstrate that different types of preparation are particularly useful for different types of individuals in minimizing their anxiety and enhancing their adaptation to the stressor.

From a more subjective standpoint, it is anticipated that regardless of the type of preparation the prospective hostages of this study receive, they will be taught that it isn't what the hostage takers do to you, but what you do about what they do to you (Rahe, 1986) that is the crucial factor in managing and adjusting to the stress of captivity.

Hypotheses

1. It was expected that overall (irrespective of subject differences in locus of control) subjects receiving problem focused training would show better adjustment to the stress of captivity and lower anxiety levels than subjects who received emotion focused training. This hypothesis was based on the fact that a majority of studies using preparatory procedures with health related stressors (e.g. Auerbach et al., 1983) have found that persons receiving problem focused preparations generally do better than those receiving emotion focused procedures. In addition, this preparation has proven more effective in Prisoner of War training programs (Derrer, 1986).

2. Subjects identified as internals who received problem focused preparation and those identified as externals who received an emotion-focused preparation were expected to show the best over-all adjustment and lowest anxiety levels as hostages. This was based on the rationale that their preparations were most congruent with their personality style as defined by the LOC scale and is consistent with previous findings (Auerbach et al. 1976).

3. If the experimental interventions process have their intended effect subjects receiving emotion focused training should report on the Ways of Coping Checklist that they used emotion focused coping to a greater degree than problem-focused

coping techniques, and the reverse should be true of subjects receiving problem focused training. The control group should produce intermediate results in this regard.

4. As noted above, the Stockholm Syndrome is a frequently observed phenomenon in hostage situations. This reaction is a positive reciprocal bond which has been observed to develop between the hostages and the hostage taker with a common antagonism toward those on the outside of the siege site (Strentz, 1979). Assuming that this is a reliable phenomenon which is likely to occur even in a simulated situation, it is hypothesized that overall, subjects will report a relatively more positive versus negative reactions to the lead terrorist and him toward them as measured on the IMI. Further, based on observations that the presence of the Stockholm Syndrome is associated with better coping among hostages, it is expected that a positive response s toward the lead terrorist will be correlated with a better adjustment among the hostages.

Method

Introduction

As part of its continuous training program, members of the Special Operations and Research Staff (SOARS) at the Federal Bureau of Investigation (FBI) Academy regularly engage in field training exercises (FTX). There are a great variety of FTX scenarios. The crisis management FTX is designed to evaluate the application of field office resources available to successfully resolve these situations. A successful resolution includes the capture of criminal subjects without the loss of life. A common scenario, conducted several times each year for the past ten years, has been for members of SOARS who play terrorists to abduct a number of people, hold them as hostages, and attempt to extort certain demands from the federal government. Each FTX usually lasts for three to five days, and runs 24 hours each day, to test mastery of material that has been taught and to evaluate the resources employed by the FBI field office.

During the early scenarios, which served as pilot studies and involved the rescue of hostages,military volunteers who had received limited training at one time in their career were used. Gradually, police cadets were also included as hostages as were some members of various state national guard units. Since typical civilian hostages would probably act differently from those who had military and weapons training and had been trained to follow orders and endure considerable discomfort, it was decided to select a more likely group of hostages. A search

of the civilian sector was begun and a group of role players was identified.

Since the dramatic Labor Day Weekend of 1970, when five commercial aircraft were diverted to Dawson Field in Jordan by the Popular Front for the Liberation of Palestine and the homesick Cubans began diverting Eastern Airline flights to Havana, the FBI began a close working relationship with the airline industry. This included many aspects of hijack intervention. The airlines expressed specific interest in sharing training and trainers. Special Agents of the FBI began to instruct at various airline conferences and annual safety update training programs, and reported the industries interest in hostage survival instruction. Therefore, when it became clear in the late 1970s' that civilian hostages, who were more likely to be actually involved as victims in a hostage crisis were required for the FTX scenarios, the airline industry was contacted and they enthusiastically provided volunteers to serve as hostage role players.

Because of the psychological deterioration observed in highly stable college students incarcerated in a simulated prison (Haney, Banks & Zimbardo, 1973) the FBI developed and implemented a civilian hostage preparation program that was a modification of the U.S. Navy's Survival-Evade-Resist-Escape (SERE) training program. A three to four hour preparation lecture was provided to each hostage prior to their involvement in the FTX. (See Appendix I)

Further, to insure the safety of each role player, they were advised that escape was not an option. (Most civilian hostage preparation programs currently in use stress the futility of escape for the untrained and poorly conditioned hostage). Observers regularly monitored each role player to insure that the training objectives were met and that no one exceeded or defaulted his role. Those who monitor hostage behavior are specifically trained psychologists and psychiatrists who, like those at the U.S. Navy SERE resistance training laboratory, are observing and recording hostage stress levels.

Subjects

The subjects were 57 domestic (U.S.A.) airline employees randomly selected from among volunteers. They were randomly assigned to each of the six FTXs (two FTX's per experimental condition). They were cleared by their respective employers to insure that they would be available during the specified time for their FTX. Each of the six groups had the same number of males vs females, pilots (one or two), training staff (one or two), ticket/reservation agents (one or two), and flight attendants (who were the greatest number of each group). The levels of education, age, years of work/military experience, marital status and race were balanced as closely as possible among the six groups

FTX	Location	Treatment	Number
1 and 4	Los Angeles/San Diego	Problem Focused	9 & 9
2 and 5	Los Angeles/San Francisco	Emotion Focused	9 & 9
3 and 6	New Orleans/Knoxville	Control Group	10 & 11

Subjects who played terrorists/abductors, were 3 male and 2 female Supervisory Special Agents of the F.B.I. who had at least five years of field experience handling prisoners and peers in stressful situations. Since civilian hostages were introduced into these FTX's, those Agents playing terrorists had participated in over a dozen exercises without incident or hostage injury.

Overview of Field Training Exercise

The usual scenario includes an abduction of those playing hostages who are then detained in a previously designated location. They are guarded and cared for by the terrorists as the terrorists negotiate with the authorities in their extortion endeavors. One or two of the hostages are released (based on performing cooperative behavior) during each FTX in exchange for food and other demands. These releases take place just prior to the "rescue." Eventually, when the script dictates, negotiations break down and the remaining hostages are rescued by the authorities. Once the scenario is complete, a debriefing is held and all the participants have an opportunity to critique the FTX.

The research for this dissertation involved slight modifications of this overall scenario. These included;

1. Completion of questionnaires by hostages at designated periods (as specified below) before, during and after the FTX, and completion of observational rating forms by terrorists during the FTX.

2. Implementation of one of three specially designed prestress training programs for hostages rather than one a general training

session using a variety of preparations.

Measures

Internal External Locus of Control Scale (LOC; Rotter, 1966). The LOC is a 29-item self-report scale (5 of the items are fillers) which measures LOC orientation. LOC refers to a generalzed expectancy for control over one's life. "Internals" are characterized as perceiving themselves as having personal control over the reinforcement they obtain, whereas "Externals" perceive their reinforcement as being determined by factors outside of their personal control and thus due to luck or chance.

Social Readjustment Rating Scale (Holmes & Rahe, 1967). The Holmes-Rahe scale is a 42 item self-report check list of stressful life changes over the past year.

U.S. Navy SERE Medical Screening Form. This self-report medical screening form consists of items the U.S. Navy SERE program has found necessary to know prior to participation in a stressful physical and psychological field training exercise. It also asks for any current medication and allergies to medications. (A copy of this form is in Appendix II).

SCL-90 (Derogatis, Lipman and Covi, 1973). The SCL-90 is a 90 item, self report clinical rating scale that asks people to rate how much certain problems currently bother them. It measures psychological symptoms in the following areas: Somatization, Obsessive-Compulsive, Inter-Personal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism.

State Anxiety Scale of the State-Trait Anxiety Inventory (STAI); (Spielberger, Grosuch & Lushene, 1969). This scale consists of 20 self-report items and measures the current level of transitory anxiety.

Psychotic Inpatient Profile (PIP; Lorr & Vestre, 1968). This behavioral rating scale consists of 96 items that measure dysfunctional behavior. Twenty two items pertaining to blatant psychotic behavior were deleted resulting in 74 items. These items were numbers 4, 13, 17, 22, 30, 33, 36, 38, 75, 76, 77, 79, 81, 83, 87, 89, 90, 92, 93, 94, 95, 96. Additionally, the term terrorist was substituted for doctor and the term hostage for patient in the wording of the questions.

Impact Message Inventory (IMI; Kiesler, 1986). The IMI is a 90 item self-report inventory designed to assess the momentary emotional, cognitive, and behavioral covert engagements of one person by another during ongoing face-to-face transactions.

Ways of Coping Check List (WCCL; Folkman and Lazarus, 1980). This is a 64 item check list designed to evaluate strategies a person uses to deal with a specific stressful encounter in his/her life. In this study 42 items of the WCCL were scored based on psychometric refinements made by Vitolino, Russo, Carr, Maiuro and Becker (195). Scores for Problem (P) focused coping and Emotion (E) focused coping were obtained. In addition, the E-focused score was broken down into four subscores (Seeks Social Support, Blames Self, Wishful Thinking, Avoidance).

Procedure

Approximately 10 months prior to the start of the experiment potential subjects (hostages) were given the opportunity to volunter to participate in a simulated hijacking in which they would be hostages. They were informed of this opportunity via personal contacts with FBI personnel in group settings (i.e. talks and training programs about crimes aboard aircraft such as assaulting a crew member or hijacking of a commercial aircraft). All were volunteer employees who were considered at risk of being involved as victims in a hijacking of a commercial aircraft. They were reminded of this risk and told of the FBI training program. They were told that they could volunteer and were shown a consent form which contained the dates, location and hotel of contact for the FTX. The airlines then advised the F.B.I. of the of names their volunteers. (See Appendix III).

Three to six months later, volunteers were recontacted to verify their interest in participating and availability for a specific FTX. Approximately 90% of those who had originally volunteered expressed continued interest and were scheduled for a specific exercise. They were then instructed to report to a specific hotel in the city of the FTX (Los Angeles, San Francisco, New Orleans, Knoxville, or San Diego) and to meet in the hotel lobby at 1300 on that date. They were met at 1300 by an FBI agent who verified their identities and told them that he would pick them up the next day for transport to the FBI office conference room to begin the FTX training and role playing.

The following afternoon, as scheduled, they were transported to the FBI office in a windowed van for the scheduled training.

Upon arrival at the training site the trainees identity was verified by use of airline photo identifications, drivers licenses, and credit cards. They were photographed to make the FTX more realistic for the assaulting force and other FBI resources participating in the exercise.

When this was completed they returned to the conference room and in a group setting signed a consent form, filled out the medical screening form and responded to the Social Readjustment Rating Scale, the SCL-90, and the A-State scale of the STAI. (Testing Period I).

After these administrative matters were handled each group was given instruction in one of three hostage stress coping strategies. One strategy emphasized problem focused tactics, another emotion focused tactics. A third group of subjects was used as a control and was provided with a briefing on the FTX and their roles. The contents of these three instructional packages are outlined in Appendix II. These instructions were given in a group setting. Audio-visual aids included slides, video-tape and a chalk board. However, most of the material was presented in lecture format. Each session lasted three hours and included the statement that escape was not an option. This proviso was necessary for safe completion of the scenario. It is consistent with actual hostage preparation procedures, and prevented physical confrontations which could have resulted in physical injury to hostages. (Appendix IV).

After the completion of the preparation procedures, subject's valuables (watches, rings, money, wallets) and all of their identification was collected and placed in a bag with their name affixed. They were told that this was done to insure the safety of such items, as the scenario included moving at odd hours which could result in their loss. Each subject was then given a "false identification" consisting of a 3 x 5 card with their first name and a false last name corresponding in nationality to their role in the FTX. They retained their age and date of birth. Prior to leaving the building each subject was encouraged to use the rest room as they faced a long ride to the training site.

Subjects were then transported, as a group in the same van which brought them to the federal building, with the same driver who now had an assistant with a map and flashlight.

After approximately one hour of driving the van always "had" to stop for a contrived reason (e.g., ask directions or consult a map), and at that point a group of five terrorists (Special Agents of the FBI) took quick and complete control of the subjects with sufficient force and noise to assure complete cooperation. Automatic weapons (blanks) were fired; blank firing adapters were not used adding to the realism for a hostage who might be familiar with these weapons. Terrorists faces were covered with ski masks or a kaffiyeh (a Middle Eastern headpiece). Flash bangs, (tactical hand grenades) were exploded

(creating noise and a bright light, but no fragmentation). The van's driver and his assistant were both wearing concealed blood bags. During the shooting they broke the bags by hand and allowed the blood to soak into their clothing as they turned to face the hostages and fell to the floor. (It should be noted anecdotally that a number of hostages said during the post-FTX debriefing that they thought they had been abducted by real terrorists enroute to the exercise).

Hostages were commanded to place their hands on the top of their heads and make no other moves until so ordered. They were told that a violation of this order would result in their death. While some terrorists provided cover, two terrorists removed the hostages, one at a time, from the van and placed them on the ground spread-eagled face down. They were immediately searched, handcuffed with their hands behind them, and their heads were covered with pillow cases. During three separate searches for weapons a loaded pistol and two knives were recovered from three hostages.

Once all hostages were processed they were moved by the terrorists to a windowless truck for transport to the previously prepared site, and detained for the remainder of the exercise.

In three of the cases hostages were detained on a large vessel in a harbor; the other three locations were isolated buildings in controlled areas. For each treatment condition one group of subjects was in each of these settings.

After arrival at the site, each subject was removed from the group by one of the controllers from the training session, without the knowledge of the others, and interviewed in a neutral room. They were reminded that this was an exercise, and asked to complete the STAI (Test Period II). This interview and movement of each subject usually lasted about twenty minutes and took two to three hours to complete (for the entire group of 9 to 11 subjects in each FTX). After the interview the subject was instructed to go to sleep.

On the first morning of the FTX the subjects were allowed to sleep late and were taken to the bathroom by a terrorist as they awakened. After this they were fed and told in a group setting that they were the hostages of the ...in keeping with the scenario and the roles on which they had been briefed.[1] During the morning each hostage was interviewed by the lead terrorist who told them of his cause and warned them against attempting to escape, or communicating with anyone, and that failure to comply with his orders would mean death. The hostages were all detained in the same room but were isolated from each other visually by the use of the pillow cases placed over their heads. Those who followed his orders were given more freedom in that they could remove their hoods, face the wall and read magazines or eat a candy bar. As the scenario progressed subjects were allowed more freedom if they demonstrated trustworthiness (i.e. if they were not caught communicating, gathering intelligence, or committing any other violation of the rules). This freedom included doing housekeeping chores, reading a terrorist prepared press release

or negotiating for the terrorists' cause with the authorities. As noted above, one or two "cooperative" hostages in each FTX were released just prior to the rescue.

Throughout each scenario the observers watched for signs of stress among the participants. During the third day (Test Period III) the controllers completed a PIP on each subject. The lead terrorist and each subject completed the IMI on each other.

As the training objectives were met and the script for the scenario developed, decisions were made by the tactical controllers on a time to conclude the FTX. Typical training objectives include good intelligence gathering by the snipers, rapport developed by the negotiators, and a host of tactical and administrative considerations which had no bearing on the subjects. The terrorists were advised of this anticipated concluding time and told how to conduct their negotiations to meet these training needs. This usually included a carefully orchestrated breakdown of negotiations, and threats to kill a hostage at a specific time and thus force an assault by the authorities. When the assault window opened (a three to four hour time period during which the the rescuing forces may attack), the subjects were dressed in nomex fire proof suits and had simulated wounds attached to them (another training objective for the assaulting force).

The rescue was completed with a level of noise, force, and violence similar to that used in the abduction of the subjects. They were handcuffed and removed from the site for identification and an interview by the authorities.

After this processing was completed subjects were turned over to the controllers, one at a time, for the completion of another SCL-90 and STAI, (Test Period IV). Once this process was completed they were allowed to go to their rooms, clean up, and return for a debriefing which was conducted in a group setting. This last session was informal and usually lasted for two hours. It consisted of a free flowing, excited discussion of each subject's experience and his or her unrecorded reflections on the FTX. By the time this session was finished it was 0400 or 0500. At this point the subjects had been "hostages" for approximately four days. The former hostages were then released to rest prior to a social gathering the following day.

Prior to getting together in a social setting, and in the privacy of their hotel room (the same hotel they used when they arrived), subjects completed The Ways of Coping Checklist (in terms of how they coped with the stress of captivity), another STAI, and an SCL-90 (Test Period V).

Thirty days after the FTX each hostage received a follow-up contact letter. This thank you letter included a fifth STAI and another SCL-90 to assess current feelings (Test period VI) and an FBI "T" shirt.

The procedure is summarized sequentially in Table 1. Measures obtained at each testing period are summarized in Table 2.

Summary of Experimental Design

The independent variable was the nature of the training given to the hostages (subjects).

A. Problem Focused Training

B. Emotion Focused Training

C. Control Group

The Subject variable was Locus of Control orientation as defined by scores on Rotter's Locus of Control Scale. The major dependent variables were hostages state anxiety level, (obtained at five separate periods over the course of the experiment), hostages emotional adjustment to the stress of captivity as measured by self-report on SCL-90 (obtained at 4 separate periods) and by the PIP observational rating scale (observed at a single period). As an independent check on the effectiveness of the experimental manipulation, a self-report measure of coping style was obtained by use of the Ways of Coping Checklist. A second auxiliary measure, the Impact Message Inventory, was used to evaluate the interpersonal impact of the lead terrorist on the subjects and the impact of the subjects on him. The Holmes-Rahe (1967) Social Readjustment Rating Scale was used to identify subjects who brought a high stress level to the experiment and a self-report medical screening form was used to identify medical problems prior to the exercise.[2]

Table 1

Summary of Procedure

Time	Activity
Prior to FTX	
3-6 months	Field office requests FTX. Hostage list is prepared. Agencies are advised of the FTX date, and place.
3-5 months	FTX time and location is agreeded upon. Script and Scenario are agreed upon and outlined. Hostages (when needed) are contacted.
3 months	Hostages are identified by name. The date and city of the FTX are forwarded to them by phone.
3 months to day 1	Scenario outline is scripted by the FBI to meet FBI field office training needs.
2 months	Hostages are advised of the date, place, and the hotel of contact. Terrorists make multiple trips to the site to supply, photograph, plan, rehearse and logistics.
1 day	Hostages depart residence and arrive at hotel.
1500 hrs	Hostages depart hotel for briefing site.
1600 hrs	Hostages arrive at briefing site.
1615-1730	Hostages are identified and processed.
1800-1930	Test Period I

1930-2230 Hostages are given either emotion focused, problem focused or control preparation.

2230 2245 Personal effects are secured by FBI staff.

2300 Hostages are transported to site in FBI vehicle.

2345 Hostages are abducted by terrorists and secured.

2400 Hostages are sequestered at site for FTX.

0100-0230 Test Period II.

First full day in FTX for hostages

0900-1000 Hostages are fed and taken to bathroom just after awakening.

1100 Hostages are addressed by lead terrorist.

1145-1500 Hostages are left alone while negotiations begin (they are in a group setting, but are hooded and face the wall.)

1600-1700 Hostages are fed and taken to the lavatory.

Balance of day 1 and most of day 2 are involved with housekeeping chores, security, and engagement in occasional negotiations. Hostages have some contact with the lead terrorist and limited interaction with each other.

Day 3 Test Period III. Lead terrorist completes an IMI on each hostage as hostages complete one on him. (Hostages do not have knowledge that the terrorist is evaluating them in this way.)

Controllers complete PIP on each hostage.

Nomex suits are fitted as are simulated wounds.

Day 4	Hostages are rescued.
0100-0400	Test Period IV Hostages are transported to hotel. Hostages are then individually debriefed; a group debriefing follows.
0400-1000	Hostages are released to sleep.
Day V	Test Period V. Upon awakening measures of this period are completed.
After FTX	
30 Days	Test Period VI. Each hostage is sent a thank you letter, an STAI. and an SCL-90.
35 Days	Data are collected and analyzed as information is returned in the mail. Data analysis begins.

Table 2

Summary of Instruments Administered at each Evaluation Period

Name	Test Periods of FTX					
	I.	II.	III.	IV.	V.	VI.
1. Consent letter	X					
2. Medical Screening	X					
3. Locus of Control	X					
4. Holmes-Rahe Scale	X					
5. Symptom Check List-90	X			X	X	X
6. State Trait Anxiety Inventory	X	X		X	X	X
7. Psychotic Inpatient Profile			X			
8. Impact Message Inventory			X			
9. Ways of Coping Checklist					X	

Test period I was conducted in the FBI office conference room

Test period II was just after abduction at the site

Test period III was during the FTX

Test period IV was shortly after rescue and official debriefing

Test period V was after a nights sleep in their hotel room

Test period VI was 30 days later at their home

Results

The results chapter will be presented in the following fashion. First, descriptive demographic data on the entire sample and for each of the three treatment groups separately will be presented. Next, data evaluating the degree to which hostage captivity was perceived as stressful and the differential effectiveness of the preparatory procedures in reducing stress (state anxiety) levels will be evaluated. Then data on the Ways of Coping Check List (WCCL) will be considered, focusing on the extent to which the E-focused and P-focused preparatory procedures actually resulted in the use of stress coping strategies consistent with those procedures. The next section will deal with an evaluation of the effects of type of preparation (E-focused, P-focused, Control) in conjunction with individual differences in locus of control orientation (internal,external) on self-reported state anxiety and adjustment as measured by the SCL-90 and behavioral observations of hostage adjustment to captivity (as recorded on the (PIP). Finally, data on hostage perceptions of terrorists and terrorists perceptions of hostages (as evaluated by the Impact Message Inventory) will be considered.

In data analyses in which the effects of treatment conditions on state anxiety and on adjustment to captivity (as measured by the SCL-90 and the PIP) are evaluated, subjects were classified as internal or external based on a median split of the distribution of LOC scores for the entire sample. Twenty-six subjects with scores between 2 and 8 were classified as internals.

Of these, 10 received P-focused treatment, 8 received E-focused treatment and 8 received the Control treatment. Twenty-eight subjects with scores between 10 and 19 were classified as externals. Of these, 6 received P-focused treatment, 10 received E-focused treatment and 12 received the Control treatment. In order to form more extreme groups, three subjects who scored at the median (9) were excluded from these analyses. The median of nine obtained with this sample was comparable to the median LOC score obtained with other samples of "normal" subjects. (Auerbach and Kendall, 1978: Auerbach et al., 1976).

Descriptive Data

The breakdown of the sample by sex, race, marital status, military experience, prior hostage training and occupation is presented in Table 3. The sample consisted of airline personnel about two-thirds of whom were flight attendants, predominantly female, Caucasian and unmarried. Most had no military experience or prior training or actual hostage experience as a victim. About 25% were cockpit crew members, (pilot/co-pilot/flight engineer), as is the case with most flight crews. The cockpit crew members were entirely male and college educated while the flight attendants were all female with some having college credits. Most of the sample members were in their early thirties. It should be noted that this sample was largely representative of airline crews in terms of race, sex and age. (Cone, 1984; Reed, Glaser & Kaldor, 1980)

Table 3. Composition of Sample by Sex, Race, Marital Status, Military experience, Prior hostage training and Occupation.

	Frequency	Percent
Sex		
Male	18	31.6
Female	39	68.4
Nationality/Race		
Caucasian	37	64.9
Negro	17	29.8
Oriental	2	3.5
Mexican/Am	1	1.7
Marital Status		
Married	25	43.9
Never Married	22	36.6
Divorced	9	15.8
Separated	1	1.7
Military Experience		
No	36	63.2
Yes	20	35.1
Unknown	1	1.7
Prior Hostage Trng.		
No	39	68.0
Yes	18	32.0
Occupation		
Flight Attendant	36	63.0
Pilot	8	14.0
Co-Pilot	6	10.5
Ticket Agent	3	5.3
Training	2	3.5
Flight Engineer	1	1.7
Other	1	1.7

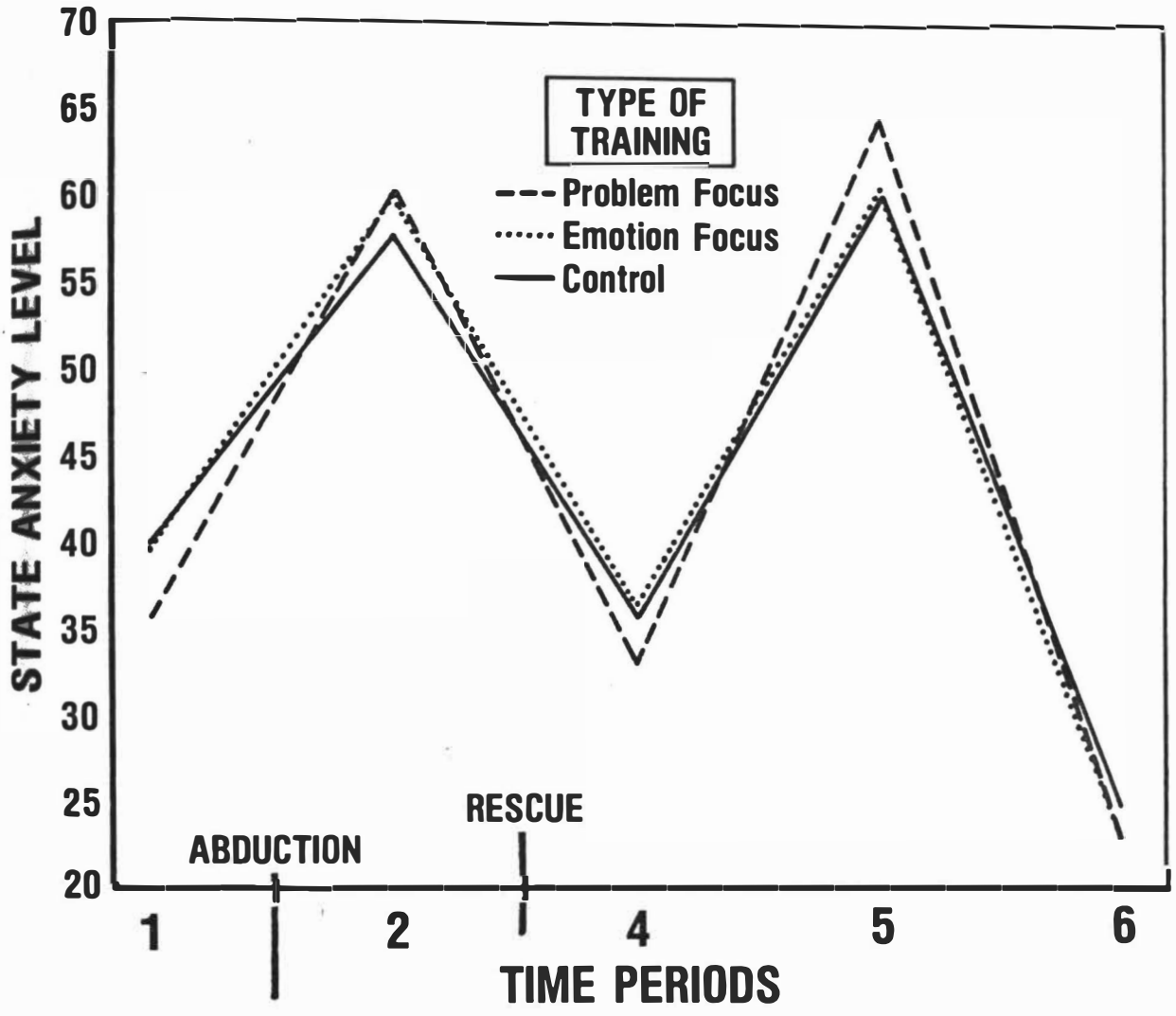
The three treatment groups were comparable in terms of sex, race, military experience, prior hostage experience, occupation, age and educational levels. The control group had a proportionately greater number of persons who were never married than the two treatment groups, but the three treatment groups were, in sum, overall quite comparable on major demographic variables.

Stress

Stress levels over the course of the experiment were evaluated via the state anxiety scale of the STAI which was administered on five occasions: Period 1 (Prestress), Period 2 (Immediate Postabduction), Period 4 (Immediately Postrescue), Period 5, (10 hours Postrescue), and Period 6 (30 days Postrescue). State anxiety changes across periods were evaluated with a 3 X 2 X 5 repeated measures ANOVA in which treatment conditions and locus of control (LOC) orientation were between Ss variables and periods was the within Ss variable.

A very strong main effect obtained for Periods, $F(4,192) = 1270.47$, $p < .00001$, indicated that the major portion of the variance in state anxiety was accounted for by highly reliable fluctuations obtained across testing periods, independent of Treatments and LOC level. It may be noted in Figure 1 that state anxiety scores reached their highest levels at Periods 2 and 5 and were lowest at period 6.

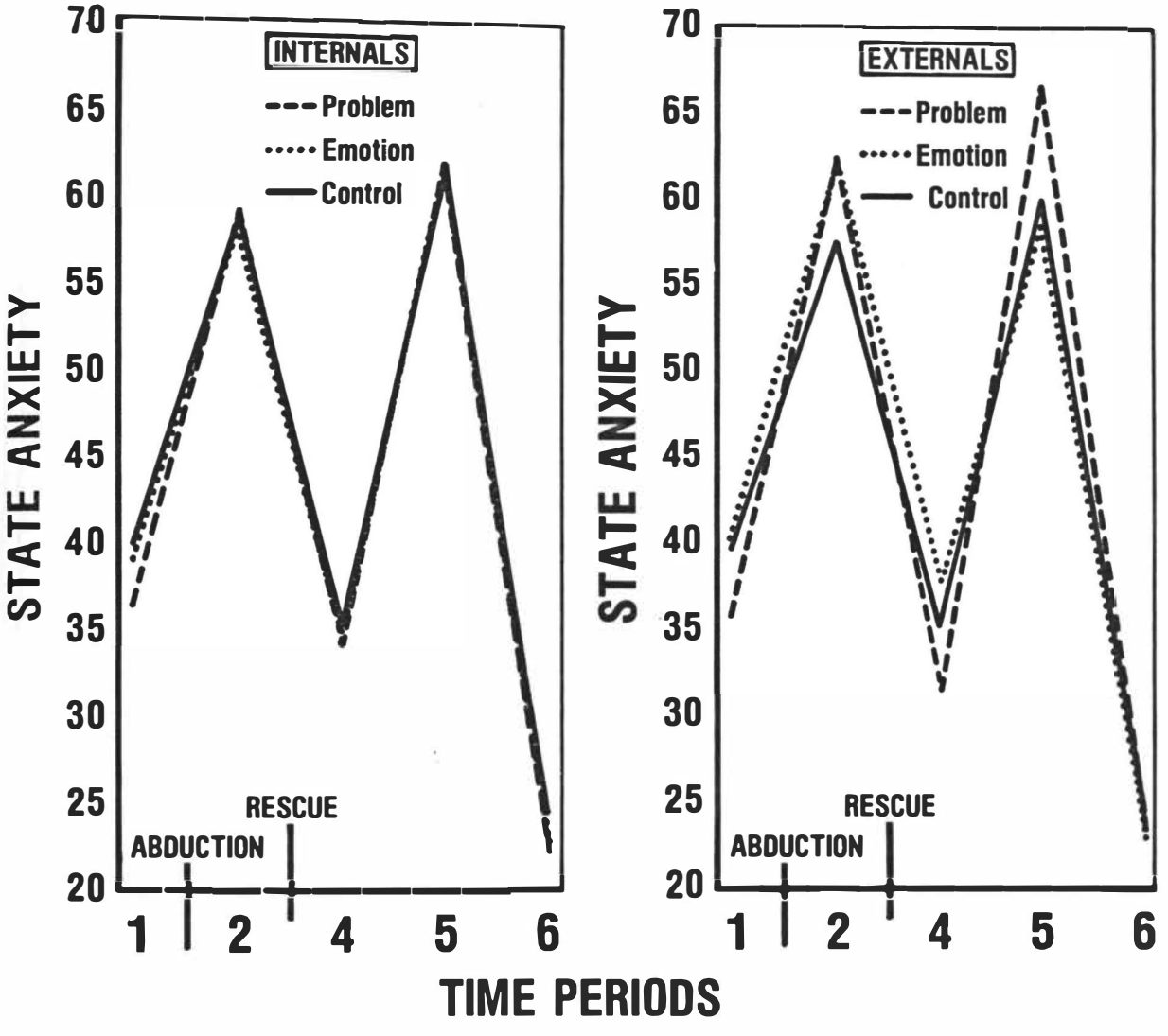
FIGURE I



State Anxiety Scores Across Points for Subjects Receiving Problem-Focused, Emotion-Focused or Control Training

Significant Periods X Treatments [F (8, 192) = 5.25, $p < .0001$] and Periods X Treatment X LOC [F (8, 192) = 2.86, $p<.02$] interaction effects, though much less powerful than the Periods main effect, indicated that nature of treatment and LOC orientation were both important in affecting state anxiety scores across periods. It may be noted in Figure 1 that the Treatment X Periods interaction was primarily accounted for by the fact that, of the three treatment groups, subjects receiving P-focused intervention showed the largest increments and decrements in state-anxiety across periods. The 3-way interaction was accounted for by the fact that this treatment group effect is carried largely by external subjects. As may be noted in Figure 2, internals receiving P-focused treatment showed state anxiety changes across periods almost identical to those exhibited by internals receiving E-focused or Control treatment, whereas among externals, subjects receiving P-focused treatment tended to show larger increments and decrements in state anxiety across periods than subjects in the other two groups. Duncan Multiple Range post-hoc comparisons on each cell mean are presented in Table 5.

FIGURE II



State Anxiety Scores Across Periods for Internal and External Subjects Receiving Problem-Focused, Emotion-Focused or Control Training

STATE ANXIETY SCORES
Training and Locus of Control by Period

Training	LOC	Periods				
		1.	2.	4.	5.	6.
Control	Internal	40.13	58.00	35.38	61.25	24.13
	External	39.83	57.50	35.42	59.58	24.33
Emotion	Internal	38.75	57.88	35.13	62.00	22.75
	External	40.40	62.20	37.20	58.00	22.80
Problem	Internal	36.80	58.50	34.10	62.00	22.60
	External	36.33	62.00	32.00	66.83	23.50

Table 4 to Accompany Figure 2

Grouping	Mean	Number per cell	Period	LOC	Treat
A.	66.833333	6	4	E	P
A.B	62.200000	10	2	E	E
A.B.	62.000000	6	2	E	P
A.B.	62.000000	10	4	I	P
A.B.	62.000000	8	4	I	E
A.B.C.	61,250000	8	4	I	C
B.C.	58.500000	10	2	I	P
B.C.	58.000000	8	2	I	C
B.C.	58.000000	10	4	E	E
B.C.	57.875000	8	2	I	E
B.C.	57.500000	12	2	E	C
D.E.	40.400000	10	1	E	E
D.E.	40.125000	8	1	I	C
D.E.F.	39.833333	12	1	E	C
D.E.F.	38.750000	8	1	I	E
D.E.F.G.	37.200000	10	3	E	E
D.E.F.G.	36.800000	10	1	I	P
D.E.F.G.	36.333333	6	1	E	P
E.F.G.	35.416667	12	3	E	C
E.F.G.	35.375000	8	3	I	C
E.F.G.	35.125000	8	3	I	E
F.G.	34.100000	10	3	I	P
G.	32.000000	6	3	E	P
H.	24.333333	12	5	E	C
H.	24.125000	8	5	I	C
H.	23.500000	6	5	E	P
H.	22.800000	10	5	E	E
H.	22.750000	8	5	I	E
H.	22.600000	10	5	I	P

Table 5. Duncan Multiple Range Test comparisons of state anxiety scores for each point (defined in terms of LOC, Treatment Conditions, and Test Periods) in Figure 2.

Note: Cell means which do not share a common letter are significantly different at $p<.05$.

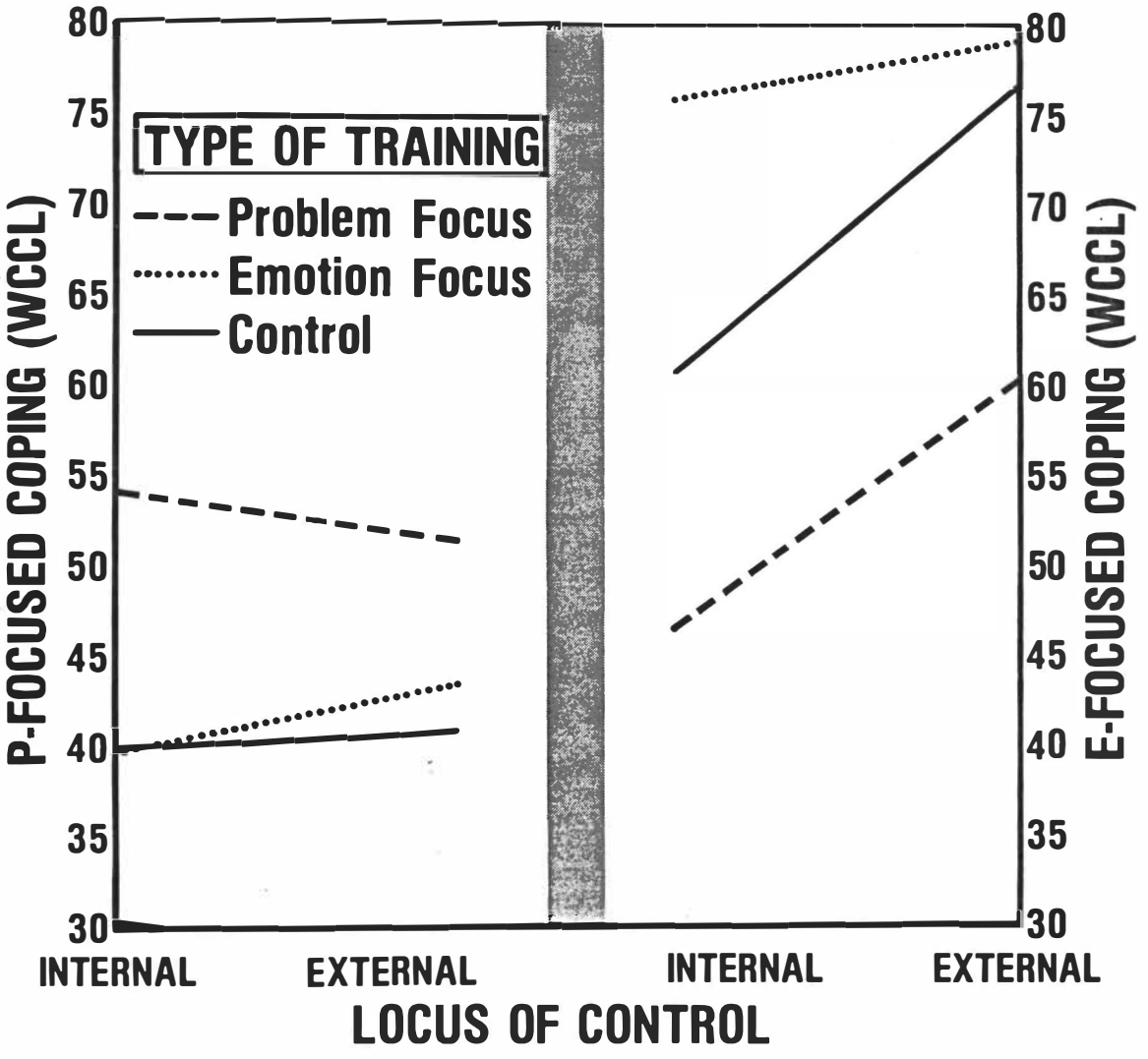
Coping Styles and Experimental Conditions

The extent to which subjects actually used P-focused or E-focused coping mechanisms was evaluated in separate 3 (Treatment groups) X 2 (LOC) ANOVAs. It may be noted in Figure 3 that subjects given P-focused intervention used P-focused coping mechanisms to a much greater degree than subjects in the other two groups, $F(2,48) = 8.95$, $p < .0005$, who did not differ from each other (Duncan Multiple Range Test). LOC differences accounted for negligible amounts of variance in P-focused coping as a main effect, $F(1,48) = .13$, and in interaction with treatment groups, $F(2,48) = .32$.

For E-focused coping, as may be noted in Figure 3, there was an overall Groups effect, $F(2,48) = 14.15$, $p < .0001$, with the E-focused treatment producing the greatest amount of E-focused coping, followed by the Control group (these were not significantly different from each other). Both groups used more E-focused coping than subjects who received P-focused training ($p < .05$). In addition there was a main effect for LOC, $F(1,48) = 8.75$, $p < .005$, with externals using more E-focused coping than internals.

Treatment group x LOC cell means for each of the four subscales that compromise the E-focused scale are presented in Table 6. Significant treatments groups differences were obtained for

FIGURE III



P-Focused and E Focused WCCL Scale Scores for Internal and External Subjects Receiving P-Focused, E-Focused, or Control Training

		Treatment Group			
LOC	Scale	P-Focused	E-Focused	Control	Marginal/Means
I	SSS	13.60	21.63	15.13	16.7
E		18.33	21.40	20.75	20.19
I	SB	3.00	3.38	5.13	3.91
E		4.67	5.60	6.08	5.43
I	WT	19.10	19.63	17.38	18.63
E		17.00	20.00	21.58	19.64
I	AVOID	18.90	31.63	24.25	24.89
E		20.50	31.80	28.25	26.92

SSS=Seeks Social Support SB=Blames Self

WT=Wishful Thinking AVOID=Avoidance

Table 6. Emotion-Focused Coping Subscale Scores as a Function of Treatment Group and Locus of Control Orientation

Seeks Social Support (SSS), F (2,48) = 8.71, p <.0001, Blames Self (SB), F (2,48) = 3.12, p < .05, and Avoidance (Avoid), F (2,48) = 22.88, p <.0001. For each variable, Ss in the E-focused group scored highest and Ss in the Control group scored lowest. Significant LOC differences were obtained for SSS, F (1,48) = 9.75, p <.005, and SB, F (1,48) = 7.56, p <.01. In both cases externals obtained higher scores than internals. There were no

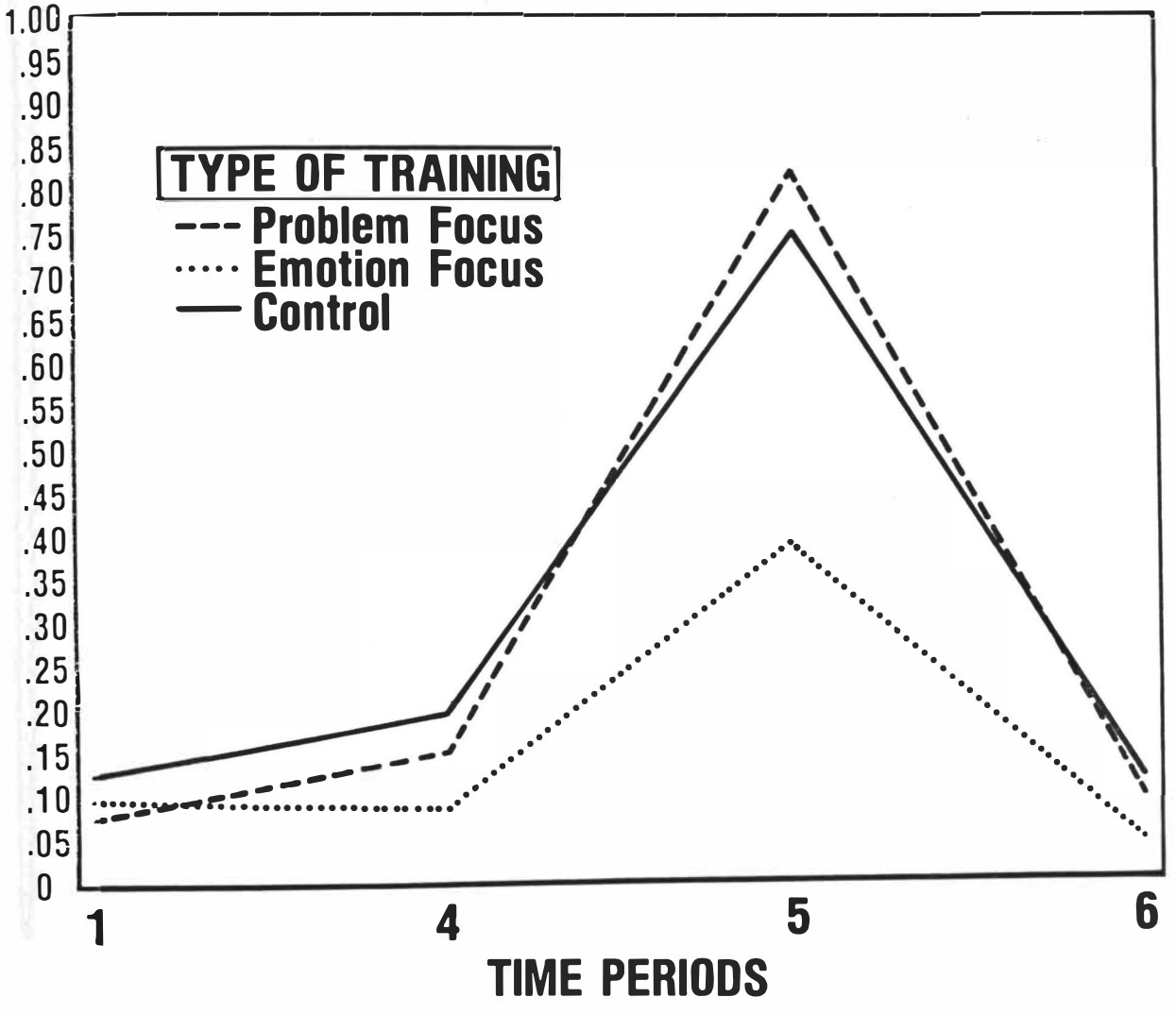
treatment group x I-E interactions for any variables.

Effects of Type of Preparation and Differences in Locus of Control on Hostage Adjustment

SCL-90 Scores. The SCL-90 was administered on four occasions, at Periods 1,4,5, and 6. The SCL-90 consists of nine clinical scales designed to evaluate different aspects of psychopathology. The Global Severity Index (GSI) consists of the mean item score across the 90 items of the scale, and accordingly represents "the best single indicator of the current level of depth of the disorder, and should be utilized in most instances where a single summary measure is required (Derogatis, 1977, p.27)." Changes in GSI scores across periods were evaluated with a 3 x 2 x 4 repeated measures ANOVA in which Treatment Groups and Locus of Control orientation were between-subjects variables and Periods was the within-Ss variable. A very strong main effect for Periods, F (3, 144) = 229.68, $p < .00001$, indicated reliable changes in GSI scores over time, with symptomatology peaking at Period 5 and then declining to prestress levels at Period 6 (see Figure 4). It should be noted that GSI scores were moderately correlated with state-anxiety levels during this period, $r(55) = .39$, $p < .005$. Duncan Multiple Range comparisons indicated that Period 5 GSI scores were significantly higher than those obtained at the other three periods ($p < .05$); period 4 scores were higher than those obtained at period 6 ($p < .05$).

SCL-90 GSI SCORES

FIGURE IV



SCL-90 GSI Scores Across Periods for Subjects Receiving P-Focused, E-Focused or Control Training

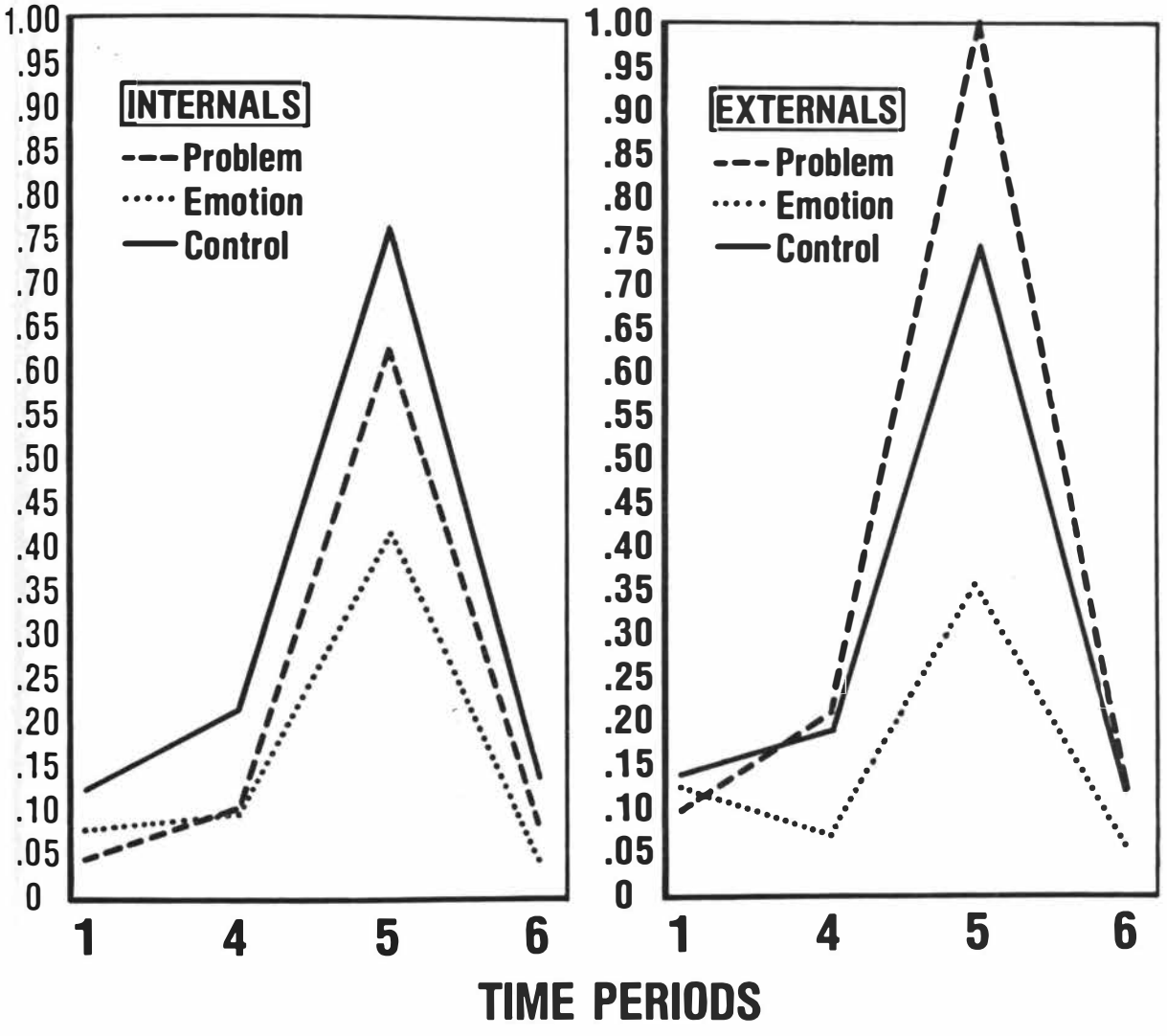
A Periods x Treatment Conditions interaction effect was also obtained, F (6, 144) = 11.04, p <.0001. It may be observed in Figure 4 that this effect was largely due to the fact that subjects in the P-focused and Control groups showed much greater increments (between Periods 4 and 5) and subsequent decrements (between Periods 5 and 6) in GSI scores than subjects in the E-focused group, who tended to experience lower levels of symptomatology across periods, F (2,48) = 8.34, p <.001.

Finally, there was a Periods X Treatments X LOC interaction, F (6, 144) = 2.80, p<.01. As illustrated in Figure 5, this effect was largely due to the fact that whereas the E-focused and Control conditions produced similar patterns of change in GSI scores across periods in Internals and Externals. Externals who received P-focused intervention showed a much sharper increment in GSI scores between periods 4 and 5 and, subsequently a much sharper decrement, than Internals who received P-focused treatment.

Data presented in table 8 allows for assessment of the relative magnitude of the mean GSI scores obtained at each testing period. For each mean raw GSI score the standard (T-score) associated with that score is presented for the normative sample of nonpatients (normals) who were administered the test under standardized (nonstressful) conditions (Derogatis, 1977).

SCL-90 GSI SCORES

FIGURE V



SCL-90 GSI Scores Across Periods for Internal and External Subjects Receiving P-Focused, E-Focused or Control Training

SCL-90 GSI SCORES

Training, Locus of Control and Periods

Training	LOC	Periods			
		1.	4.	5.	6.
Control	Internal	.122	.210	.760	.132
	External	.130	.180	.738	.121
Emotion	Internal	.074	.100	.416	.038
	External	.120	.067	.362	.052
Problem	Internal	.045	.099	.622	.084
	External	.098	.210	1.010	.124

Table 7 to Accompany Figure 5

Since the present sample was mixed with regard to gender (approximately 2/3 female) both female and male norms are shown. T-scores have a mean of 50 and a standard deviation of 10.

	Raw Score	Derogatis' Normed T-Scores	
		Female	Male
Period	Mean	Nonpatients	Nonpatients
1	.10	41	45
4	.14	44	48
5	.63	60	64
6	.09	40	44

Table 8. T-score Equivalents of Mean GSI Raw Scores

It may be noted that at periods 1,4, and 6 mean GSI scores were below the mean of the normative sample, but within one standard deviation of the mean. At Period 5, the overall GSI mean was a full standard deviation above the mean for the normative sample. For the group experiencing the highest level of psychological disturbance at Period 5 (Externals given P-focused treatment; see Figure 5), their GSI mean of 1.01 corresponded to a T-score of 65 among females and 72 among males. Table 10 provides a more delineated breakdown of the SCL-90 scores for each clinical scale separately, as a function of conditions and LOC across periods. It may be noted that the primary

contributors to the GSI score were Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression and Anxiety. More than half of the cell means on Hostility and Phobic Anxiety are zero. For the remaining two clinical scales (Paranoid Ideation and Psychoticism) all cells entries were zero and thus are not presented in table 10.

PIP Scores. Hostage behavior during captivity was evaluated (during Period 3) by two independent raters using the Psychotic Inpatient Profile (PIP). Interobserver agreement was very high, $\underline{r}$ (55) = .97, p<.0001. Given the high level of rater agreement, the mean PIP rating across observers was used in subsequent analyses. PIP scores were not significantly correlated with state anxiety scores obtained during the most stressful Period (5), $\underline{r}$ = .17, but were significantly correlated with SCL-90 GSI scores obtained at this time, $\underline{r}$ (55) = .47, p<.0005.

Mean PIP scores as a function of treatment conditions and LOC orientation are presented in Table 9. A 3(Conditions) X 2(LOC) ANOVA indicated that the differences between the treatment group means were significant, $\underline{F}$ (2,48) = 30.19, p<.0001. While

LOC	Problem Focused	Emotion Focused	Control
Internals	15.3	13.8	26.3
Externals	21.2	12.7	26.6

Table 9. Mean PIP scores by Treatment condition and LOC

	Raw Score Equivilants			Conditions											
	Norm Female	Sample Norm		P-Focused Periods				E-Focused Periods				Control Periods			
Scale	Mean	T/S	LOC	1	4	5	6	1	4	5	6	1	4	5	6
Somatazation	.30	.76	Internal	.11	.16	.58	.19	.19	.14	.47	.09	.31	.41	.73	.19
			External	.25	.49	1.25	.24	.33	.15	.29	.15	.28	.34	.71	.17
Obsess-Comp.	.30	.78	Internal	.09	.15	.63	.13	.18	.15	.41	.03	.30	.45	.85	.29
			External	.35	.42	1.42	.32	.32	.16	.60	.02	.36	.42	.78	.26
Inter-Sens	.22	.66	Internal	.09	.28	1.36	.16	.11	.13	1.24	.08	.22	.42	1.24	.28
			External	.13	.37	1.83	.20	.13	.13	1.16	.07	.20	.34	1.31	.25
Depression	.30	.83	Internal	.15	.15	.72	0	.12	.08	.41	0	.21	.33	.49	0
			External	.12	.28	.76	0	.18	.11	.95	0	.20	.29	.58	0
Anxiety	.20	.74	Internal	0	.01	1.14	.06	0	0	.96	.13	.08	.14	1.73	.05
			External	0	0	2.25	.02	0	0	1.07	.14	.03	.09	1.61	.08
Hostility	.19	.66	Internal	0	0	.60	.05	0	0	.25	0	0	0	.69	.29
			External	0	0	.72	.03	0	0	1.68	.07	0	0	.65	.21
Phobic Anx.	.05	.36	Internal	0	0	.33	.21	.02	.02	0	0	0	0	.25	.31
			External	0	0	.25	.25	.02	0	.02	0	0	0	.16	.14

Table 10. Mean SCL-90 Clinical Scale Scores Across Periods in the Three Experimental Conditions for Subjects Differing in LOC Orientation

this is clearly due to the high level of disturbance exhibited by the control group, the Duncan Multiple Range test indicates that the difference between P and E treatment groups was also signif-cant ($p<.05$). There was a tendency for differential response to treatment conditions for externals vs. internals, $F(2,48) = 2.35$, $p = .10$, such that externals tended to respond more poorly to P-focused Treatment and slightly better to E-focused treatment.

Hostages' Perception of Terrorists and Terrorists' Perception of Hostages

Hostages and terrorists' perceptions of each other from an interpersonal standpoint was evaluated by using the Impact Message Inventory (IMI). The IMI generates four "cluster" scores: Dominance, Submissiveness, Friendliness, and Hostility. Mean IMI scores for Internal and External subjects in the three treatment conditions are presented in Table 11. Data on these scales cannot be compared to each other statistically since each scale has a different hypothetical distribution and normative data are not available. Given this caveat, it should be noted however that hostages seemed to primarily perceive the terrorists as dominant and friendly, and terrorists seemed to primarily perceive the hostages as submissive and friendly.

The data in Table 11 were evaluated with separate 3 (Conditions) X 2 (Internal-External) ANOVAs for each of the four cluster scores in which the hostages were evaluated, and for each of the four cluster scores in which the terrorists were

evaluated. In all eight analyses, a significant treatment effect was obtained. Significant effects were followed up by Duncan Multiple Range Tests (alpha = .05). It may be noted in Table 11 that: a) hostages given P-focused treatment were viewed as less Dominant than subjects in the E-focused or control groups, who did not differ from each other, F (2,48) = 3.78, $p < .05$; b) hostages given P-focused treatment and control subjects (who did not differ from each other) were both viewed as more Submissive than subjects who had received E-focused treatment, F (2, 48) = 15.16, $p < .0001$: c) subjects given E-focused treatment were viewed as more Friendly than Control group subjects who were seen as more Friendly than subjects given P-focused treatment, F(2,48) = 9.33, $p < .0005$; and d) subjects in the P-focused group were viewed as more Hostile than Control group subjects who were viewed as more Hostile than subjects who had received E-focused treatment, F (2,48) = 13.08, $p < .0001$.

It may be noted in Table 11 that the treatment effects for the terrorists were due to the fact that: a) hostages receiving E-focused treatment perceived the lead terrorists as less Dominant than hostages in either the Control group or those in the P-focused group (who did not differ from each other), F(2,48) = 8.28, $p < .001$; b) hostages receiving E-focused treatment perceived the lead terrorist as more Friendly than Control group subjects who perceived the lead terrorist as more Friendly than subjects who had received P-focused treatment, F(2,48) = 13.78, $p < .0001$; and c) subjects in the P-focused group viewed the lead

Descriptor	LOC	Perceptions of Terrorists Conditions P-Focused	E-Focused	Control
Dominance	Internal	2.86	2.55	3.04
	External	3.12	2.46	2.85
Submissive	Internal	2.04	2.17	1.93
	External	1.80	1.98	1.96
Friendly	Internal	2.57	3.29	2.77
	External	2.26	3.32	2.83
Hostility	Internal	1.42	1.12	1.24
	External	1.65	1.36	1.28
		Perceptions of Hostages		
Dominance	Internal	1.41	1.80	1.69
	External	1.34	1.64	1.65
Submissive	Internal	3.44	2.80	3.22
	External	3.48	2.38	3.21
Friendly	Internal	2.63	3.15	2.85
	External	2.19	3.42	2.30
Hostility	Internal	1.80	1.19	1.49
	External	1.89	1.06	1.51

1. Not at all
2. Somewhat
3. Moderately so
4. Very much so

Table 11. Mean IMI Cluster Item Scores as a Function of Experimental Conditions and Locus of Control

terrorist as more Hostile than those in the E-focused group (Control group Ss reported an intermediate level of perceived Hostility which did not differ from the P-focused or E-focused groups), $F(2,48) = 2.87$, $p<.07$.

All main effects for LOC and for the LOC X treatment interaction for both hostage and terrorist IMI cluster scores were nonsignificant (all Fs <1.5).

In order to better understand the factors covarying with the interpersonal impact scores, each of these scores were intercorrelated with state-anxiety and GSI scores obtained during the most stressful stage of the experiment for which data were obtained (Period 5) and with PIP scores, and also with each other. It may be noted in Table 12 that as one might expect, to the degree to which terrorists and hostages were viewed as Dominant they tended to be seen as relatively Hostile and low in Submissiveness and Friendliness. Pertinent to the Stockholm Syndrome hypothesis, hostages who viewed the lead terrorist as relatively Friendly tended to be those who were themselves perceived as relatively high in Dominance and Friendliness, low in Submissiveness and Hostility, and who adjusted better to the stress of captivity (had relatively lower PIP, A-State, and GSI Scores). In general, hostages perceived as Dominant and Friendly showed better adjustment and hostages perceived as Hostile and Submissive showed poorer adjustment across the three measures.

	TDOM	T SUB	TFR	THOS	HDOM	HSUB	HFR	HHOS	GSI 5	PIP
AST 5	.42[c]	-.23[a]	-.38[c]	.27[b]	-.32[b]	.36[c]	-.41[c]	.37[c]	.45[c]	.17
PIP	.58[c]	-.32[b]	-.42[c]	.16	-.10	.47[c]	-.35[c]	.44[c]	.47[c]	
GSI 5	.78[c]	-.37[c]	-.83[c]	.52[c]	-.60[c]	.66[c]	-.86[c]	.78[c]		
TDOM		-.41[c]	-.81[c]	.50[c]	-.49[c]	.71[c]	-.78[c]	.77[c]		
TSUB			.18[c]	-.77[c]	.69[c]	.08	.20	-.19		
TFR				-.40[c]	.54[c]	-.88[c]	.96[c]	-.95[c]		
THOS					-.89[c]	.07	-.41[c]	.41[c]		
HDOM						-.23[c]	.58[c]	-.57[c]		
HSUB							-.83[c]	.89[c]		
HFR								-.93[c]		

Table 12. Intercorrelations among IMI Measures and Between IMI Measures and Measures of Hostage Response to Captivity

Probability

a<.10
b<.05
c<.01

Discussion

The purpose of this study was to examine two different hostage training programs as they covaried with two personality types as identified by Rotter's (1966) Locus of Control (LOC) scale. Airline employees underwent a simulated, but very realistic, abduction and were held as hostages for a period of five days prior to rescue. The use of airline personnel by the FBI for such programs was prompted by the lack of availability of data on civilian hostage training programs.

Before being abducted, hostages were prepared for the abduction with a series of lectures and materials stressing either problem-focused stress management techniques or one focusing on emotion-focused stress reduction procedures. Problem-focused training included instrumental activities such as communication methods, intelligence gathering, captor relations and other techniques to actively manipulate the stress situation. Emotion-focused training taught techniques useful for directly modulating fear and anxiety. It included deep breathing exercises, and mental activities such as directed fantasy and thought stopping. A third (control) group was given no stress management training, but was instead exposed to a series of orientation procedures. Six FBI field training exercises (FTXs) were conducted. Two were preceded by P-focused, two by E-focused, and two by "control" training. Within each group, one FTX occurred aboard ship and one occurred on land. Each group consisted of approximately equal numbers of subjects who were comparable in makeup from a

demographic standpoint. Additional consistency was maintained by using the same Supervisory Special Agents of the FBI as terrorists in each FTX.

Retrospective data obtained from the WCCL confirmed that subjects actually engaged in the types of coping activity that each intervention was designed to stimulate. Subjects who received P-focused intervention used much more P-focused coping in dealing with the stress of captivity than either subjects in the E-focused intervention group or the control group. Subjects who had received E-focused intervention used the greatest amount of E-focused coping, followed by control group subjects and subjects who had received P-focused intervention. The difference between subjects and in the E-focused group and controls was not statistically significant. The relatively high level of E-focused coping used by control group subjects was likely due to the fact that given no particular coping preparation, they tended to use coping processes which were most adaptable given that they were in a largely uncontrollable situation. In fact, the study indicated that E-focused coping tactics overall were the most effective in dealing with the short term stress of hostage captivity.

Data obtained from the state anxiety scale, which was administered five times over the course of the experiment, confirmed that the subjects had indeed experienced high stress levels at different points, and that their stress levels fluctuated dramatically depending upon the stage of the

experiment. The nature of these fluctuations, in some respects, corresponded with expectations in that the lowest state anxiety scores were obtained at the final follow-up testing period (30 days after the rescue and the experiment had ended), relatively low scores were obtained at the first period (prior to the abduction), and relatively high scores were obtained immediately after the abduction. However, the relatively low state anxiety scores obtained immediately after the rescue (period 4) in contrast to the very high scores obtained 15 hours after the rescue (period 5) were something of a surprise. Subjective data obtained during the debriefing explained this discrepancy. Many subjects stated that they were "too scared" at this point to report how frightened they really were. Thus the low anxiety scores obtained at this apparently very stressful point in the experiment seemed to represent massive denial of intense fear. It is suggestive of an immediate poststress "shock stage," a phenomenon which has been observed to occur in response to a variety of traumatic stressors (Auerbach, 1986). These reactions are also similar to those the author has observed on numerous occasions in other simulations and when debriefing actual hostages (e.g., the American Embassy staff held hostage in Tehran, the TWA hijacking hostages held by Croation "freedom fighters" after release; Strentz, 1979).

The state anxiety changes observed across periods as a function of psychological impact of the abduction and subsequent rescue were powerful and reliable. Significant, though much

smaller amounts of variance in state anxiety, were accounted for by treatment groups x locus of control differences in conjunction with periods. Subjects who had received P-focused treatment tended to show greater fluctuations (elevations and decrements) in state anxiety scores across periods, and this was particularly pronounced for external subjects who had received P-focused intervention. This latter finding is consistent with that of a study with oral surgery patients (Auerbach et al., 1976) in which externals who had received P-focused preparation in the form of specific information about the impending procedure tended to show the sharpest increases in state anxiety during the anticipation period.

Regarding determinants of adjustment to the stress of captivity, two major hypotheses were made. First it was expected that internals would respond relatively well to the P focused intervention, and relatively poorly to the E-focused intervention. Externals were expected to respond in just the opposite fashion to the two interventions. From this standpoint, the finding that externals showed relatively poor adjustment when given the P-focused intervention was consistent with expectation, and with the findings of the Auerbach et al. (1976) study. In general it is in accord with the idea that under stress externals respond best when they are able to withdraw psychologically from the stressor, and relinquish control of the contingencies in the situation to others rather than actively manipulate the situation themselves.

Contrary to expectation, however, internals and externals did not respond differentially to the emotion-focused intervention. The majority of subjects, regardless of locus of control orientation, responded well to the E-focused intervention, which overall was the most effective training procedure. This finding was contrary to the hypothesis that the P-focused procedure would likely be the most effective overall, independent of personality style differences.

In retrospect, this finding is not surprising given the stressor. Previous studies which showed overall superiority of P-focused interventions (e.g., Auerbach et.al., 1983) or which showed that success in reducing stress response levels varied as a function of whether or not the interventions matched the subjects' personality dispositions (e.g., Auerbach et.al., 1976; Averill, O'Brien, & DeWitt, 1977; Speisman, Lazarus, Mordkoff, & Davison, 1964) involved more clearly delineated stressors which evoked lower levels of stress (tooth extraction, threat of electric shock in a college experiment, films depicting threatening situations). The stressor in the present study, in contrast, evoked extremely high state anxiety levels and was presented as being largely uncontrollable. Comparable to the message given by captors in actual hostage situations, subjects were told at the outset that escape was not an option. The overriding message was that they would have to "grin and bear it." As noted above, subjects carrying weapons were relieved of them at the outset of the exercise. Thus there was a strong pull

for avoidant E-focused coping, and it not surprising that subjects who received explicit training in E-focused procedures (and who actually used these procedures, as indicated by WCCL data) tended to have the lowest anxiety levels and adjusted best of the three groups of subjects. In this respect, the current findings are consistent with other recent investigations demonstrating the utility of emotion-focused processes, in contrast to the relative ineffectiveness of problem-focused coping, in high stress low control situations (Collins, Baum, & Singer, 1983; Kaloupek & Stoupakis, 1985; Kaloupek, Wong, & White, 1984; Mills & Krantz, 1979).

The present findings are also consistent with anecdotal accounts of the role of controlled use of denial and fantasy in adjusting to intense stressors which offered little hope of actual instrumental control. Fantasy, denial, emotional detachment, and belief in God were used effectively by inmates to reduce stress in the concentration camps, at least temporarily, until problem-focused strategies could be brought into play (Schmolling, 1984). Similarly, as noted above, Nardini (1952), Brill (1946), and Strassman et al. (1956) noted that various forms of emotional detachment seemed to be effective stress management devices which allowed maintenance of personality integration for American POW's in World War II and the Korean War. Also first hand accounts of former hostages attest to the importance of emotional detachment in dealing with the early high stress stages of captivity. U.S. Navy Captain (ret.) Gerald

Coffee, in recounting his initial reaction to the stress of POW status states that he was so scared that he was on an emotional automatic pilot for the first few days (Coffee, 1986).

Patricia Campbell Hearst recounts a similar reaction, as does Diego Asensio (Asensio, 1984; Hearst, 1985). Similarly, several authors state that the initial phase, the first few hours or days of captivity is the most traumatic and requires strong emotional coping tactics (Derrer, 1985; Ochberg, 1979; Rahe, 1986; Rahe and Genender, 1983; Wesselius and Desarno, 1983). Of all these authorities, Dr. Rahe most graphically states that the mental move from freedom to fetters exceeds the ability of the mind to cope with this change as rapidly as it is taking place (Rahe, 1986). One cannot cope with the speed, much less the emotional strain of this traumatic transition. Thus, for a varying amount of time, but certainly a significant number of hours, hostages are caught in an emotional deep freeze. They are "scared stiff" or on a mental automatic pilot until things, events, and they, gain some semblance of control and settle down. Certainly, the emotionless replies of the hostages in Beverly Hills, at the Van Cleef and Arpels jewelry store reflected this totally bland affect. Their affect was so bland, so controlled, so on automatic pilot that they could not tell the Los Angeles Sheriffs Office (LASO) negotiator that their friends were being murdered. This trauma induced fear (the sensation of being literally "scared stiff,") is the emotional reaction which is of the greatest concern to those who work with civilian hostages

(Symonds, 1980). The relative brevity of civilian hostage situations is such that most victims do not have the time to progress on to problem-focused stress relieving activity. Thus, the relevance of the findings of this study are to this shorter term, but equally traumatic encounter. This is the initial trauma, which for civilian hostages, deserves the greatest attention.

As noted in the Introduction, a phenomenon that has frequently been observed in short-term civilian hostage situations is the Stockholm Syndrome. This refers to mutual positive feelings that seem to occur between some hostages and their captors, and which seems to contribute in a positive way to the survival and adjustment of these hostages. Findings obtained with the Impact Message Inventory in the present study in general support these observations. Hostages who tended to adjust better to the stress of captivity, and to experience lower anxiety levels, were perceived as relatively high in Friendliness and they tended to perceive the lead terrorist as relatively Friendly. Significantly, relatively well-adjusted hostages also tended to be perceived as high in Dominance and low in Submissiveness and Hostility. This suggests that in future preparation programs hostages should be encouraged to be cooperative with their captors and to project dignity, but not subservience or passive-aggressive hostility. Such activity as challenging the subjects with their eyes by staring at them should be avoided. It should be noted, however, that in long-term captivity (e.g., POW internment) passive aggressive P-focused activities have been associated with good adjustment.

Military programs address the long term captivity problems. An argument can be made that at least some civilian programs should be similarly structured. However, the evidence seems pretty clear that the majority of Americans who are abducted in the United States, are held for less than eight hours (Strentz, 1985). Those hijacked overseas, with the notable exception of TWA 847, can expect release within 20 hours. Others, like those taken in the fall of 1976 on TWA 355, were told from the start that the captivity would be brief (Strentz, 1979). Most, like Particia Campbell Hearst, have no idea what the length, conditions, or termination of their captivity will involve (Hearst 1985).

To complicate matters further, the greatest opportunity for escape for most hostages is during the first phase of their abduction. Yet, this is the time at which they are least able, mentally, to make rational choices of viable alternatives. Further, like advice to potential victims of rape, there are too many variables during the abduction phase to honestly tell a potential victim what to do in advance (Harpold, 1986). However, within the limits of the personality and potential of the hostage, the unknowns of the political/criminal situation, the idiosyncrasies of the hostage taker(s) and the physical setting of the abduction, certain recommendations for civilian training have emerged from this study.

An initial policy decision must be made by industry that it will spend money for training, but none for tribute. This decision was made by most governments many years ago and has been reflected in the activity of terrorist groups as they now target American business rather than government employees. Once this policy decision is made the training can proceed.

The present data indicate that those with some form of training do better (at least in terms of behavioral ratings of emotional adjustment). Further, the Stanford Prison studies and subsequent legal suits, would seem to indicate that if one reasonably expects a person in his charge to be subject to the trauma of victimization as a hostage, one would do well to use some form of preparation, either in the form of reading or actual training programs (Haney, et al. 1973). In this simulation the subjects responded to a news paper advertisement asking for volunteers for a psychological study. They were offered a small salary. Those selected were asked to report to Stanford University where they completed a series of tests, were paid fifty dollars and were told they would be contacted later. At a later date they were contacted by the local police who placed them in custody on phony charges, photographed and fingerprinted them as if they had been arrested. They were then transported to a "prison" at Stanford University where they were guarded and controlled by college students who played the role of guards. During their week long incarceration they were ordered to engage in various physical exercises as a form of punishment for various

violations of the rules. In summary, the guards over-played their role, the subjects were harassed and psychologically abused. Several law suits were successfully brought against the university and some of the participants experienced long term psychological problems as a result of this traumatic experience. This study is one of the reasons for informed consent forms when human subjects are used in psychological studies today.

Certainly, the Spokane Bank Robbery Training Program demonstrates some of the advantages to employers and employees of preincident training (Moore 1980). In this recent and ongoing program Corporal John Moore of the Spokane Police Department, with the cooperation of many local banks, conducts a series of training programs and fake robberies in local banks to train bank staff as well as responding law enforcement officers. This includes an informed consent form signed by each participant. A lecture from Cpl. Moore on proper bank robbery victim behavior is given and then a robbery staged by police while Moore and his training staff look on. Some of the bank employees choose to participate in the lecture, but only to watch the robbery while most participate in both. After the robbery a critique of the experience is held and each participant, including the robbers, is called upon to discuss his or her observations. The results of this program are most promising. Several of the trained as well as untrained tellers were subsequently robbed by criminals. Among those robbed, trained persons, as a group have done much better. They have sounded the alarm more quickly, given out less

money, tended to give the robber bait money and provided police with a much more accurate description of the robber. Additionally, those robbed experience fewer post traumatic stress disorder symptoms. They do not engage in excessive self criticism, have fewer nightmares, do not experience the fear of retribution from the robber, and generally remain with the bank. In short, they view the robbery as a test of what they had been taught and consider themselves as having passed. Those untrained tend to leave the employ of the bank soon after the robbery with a sense of failure, frustration, and fear of further failures (Moore, 1985).

A case study exemplifying the success of this program involves a teller who was robbed after being trained. When he left her counter without the bait money, she called him back saying, "Wait a minute, you forgot some of the money." The inclusion of this package in his bag was instrumental in his arrest and subsequent conviction for this robbery (Moore, 1986).

In sharp contrast to the Spokane trainees, no trained employee of the U.S. Departments of State, Defense or Justice, much less the airline employees trained in this study have been taken hostage. Fortunately, the airlines industry is taking advantage of similar programs offered by the Federal Aviation Administration (FAA) and the FBI, as well as programs in the private sector, to protect their employees from similar trauma.

Though this paper has singled out the banking and airline

industries, other international corporations would do well to train those who face a reasonable expectation of victimization as a hostage. Some do. But, the targeting by terrorists of these industries would indicate that many of them do not prepare their employees and would prefer to give millions for ransom . Perhaps they consider this one cost of doing business in politically unstable but economically profitable foreign countries. Though the ransom typically is paid and the employee is returned, the emotional damage to the victim remains and the personal tragedy continues to haunt the psychic life of the employee and his family.

The most important practical finding of the present study was the significance of teaching E-focused coping procedures to potential hostages. It must be recognized, however, that though very realistic, the present study was a simulation and thus generalization to actual abduction and captivity is limited. First, the comparability of the effects of the "no-escape" injunction in the present simulation to similar prohibitions in actual hostage situations is unclear. Also, in the present study, the four days of captivity were largely treated as a single global situation. Obviously, however, it consisted of a series of events which had differential psychological impact on hostages, and which likely engendered different degrees of E-focused and P-focused coping at different times. In future research, the demands of different components of the hostage situation will be evaluated. The potential efficacy of targeted

P-focused coping to some of these components will be examined, as will the efficacy of combining targeted P-focused intervention with E-focused training. Within this context, training in attending to high probability escape cues and execution of escape behaviors at the appropriate time will be investigated. It is hoped that as research programs with simulations becomes more sophisticated and realistic, their applicability to actual hostage situations will increase as will their utility as preparation programs for persons with high probability of actually being abducted and held captive.

Reference Notes

1. Each scenario involved different fictitious terrorist groups. As noted above, each hostage was given a particular identity. All identities were apolitical and were associated in some way with the Olympic Games.

2. The Holmes-Rahe scale was administered as a screening device for exploratory purposes unrelated to the hypothesis of this study and thus data pertaining to this measure are not presented in this report.

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Appendix I

Outline of Hostage Training Protocols

Emotion Focused Training

This training was designed to teach more subtle coping tactics which were oriented toward directly controlling anxiety and stress. The activities included deep breathing, instant calm behavior maneuvers, dealing with boredom by mental activity such as directed fantasy, creating totemic names for the guards and thought stopping.

Overview and outline of training

1. Stages of captivity stress are outlined (Strentz, 1984).
2. Group reactions and coping strategies(Derrer, 1985).
3. Individual reactions and coping strategies

I. STAGES OF CAPTIVITY(adapted from Rahe and Genender, 1983).

Time Line

Moments	A. Startle/panic perceived threat = GAR (fight/flight) reaction; optimized physically but impaired mentally.
Hours	B. Disbelief/denial, dislocation
Days	C. Hypervigilence acute awareness of details
Weeks	D. Resistance/compliance isolation
Months	E. Depression/despair, avoid catastrophizing
Years	F. Acceptance hallucinations, fantasy memory

II. Group Activity

A. Under stress there is a tendency to criticize others, lack of trust, divisiveness, divide and conquer.

B. Man is a social animal

III. Individual Captivity and Isolation

A. Fear-Initial reaction and periodic re-occurrence

1. Anxiety and fear of unknown or unpredictability of captor behavior may result in:

a. action paralysis

b. inappropriate reaction

c. impulsive reactions

2. Coping strategies

a. Instant calming behavior modification

b. Deep breathing

c. Thought stopping

d. Talk down perceptual restructuring

e. Hypervigilance

B. Boredom and despair are the worst enemies

1. Imagination friend or foe/mental escape vs worry

2. Catastrophizing and depression

3. Guilt-feelings of failure John Wayne/Calamity Jane

C. Emotional Coping Strategies

1. Directed fantasy, relaxation training, self-hypnosis

2. Storehouse of memories past and future (Hostages were encouraged to review past use of emotion focused strategies.)

3. Sense of humor absurd little victories

4. Beliefs

a. positive attitude, dignity, and the importance of the appearance of self control.

Problem Focused Hostage Training

This type of training included case specific training. It included physical activities such as communication methods, group activities, intelligence gathering, captor relations and manipulations. Physical exercises and pain control were also covered.

I. Group Dynamics
   A. Co-operation is necessary for survival through unity
      1. No exceptional performances
         a. Over-compliance vs hostility
         b. Unity toward captors
      2. Watch out for and assist others
      3. Group bond
         a. smiles/looks of support

   B. Communication
      1. POW tap code

II. Individual Activities
   A. Intelligence gathering
      1. Forget route of travel to site
      2. Clandestine collection of intelligence
         a. smell, hear, feel don't look
   B. Physical fitness
      1. Isometric, yoga, stretching, progressive relaxation
   C. Pain control
      1. Pain-anxiety spiral

a. energy follows attention

D. Personal appearance and space

1. look good and fool a lot of people

E. Non-threatening physical activity

1. Captor compliance pace

2. Insect identification

F. Nutrition and relaxation

1. Save self

G. Captor relations

1. personalize self without jeopardizing peers

2. Interest in captor/boredom

3. Converse without compromise

4. Maintaining dignity

5. Cunning captor working to manipulate

a. Don't get mad get even

b. Group efforts at revenge

Control Group Preparation

This activity did not include any specific training. It included general information on the exercise and served as a placebo.

I. Discussion of the purpose of the Field Training Exercise
   A. Roles to be played: Assigned and discussed
   B. Political setting of the FTX: Discussion of the political setting

II. General discussion of the history of FTX as run by the FBI
   A. Questions on other FTX
   B. Discussion on rules of umpires, controllers

III. This preparation included no direct instruction in anxiety management or stress coping tactics.

Appendix II

FBI FIELD TRAINING EXERCISE
MEDICAL SCREENING FORM

NAME: DOB: SSN:

BIRTHPLACE: ALLERGIES:

A. Have you ever had a history of:
1. Broken back or neck? NO. YES, DESCRIBE
2. Heart disease or cardiac problems? NO. YES, DESCRIBE
3. Shortness of breath on exertion? NO. YES, DESCRIBE
4. Transient or recurrent chest pain? NO. YES, DESCRIBE
5. Kidney disease or problems? NO. YES, DESCRIBE
6. Injury to knee/ NO. YES, DESCRIBE
7. Head trauma or loss of consciousness? NO YES, DESCRIBE

B. WITHIN THE LAST SIX MONTHS, HAVE YOU:
1. Been under the care of a physician? NO. YES, DESCRIBE
2. Had any broken bones? NO. YES, DESCRIBE
3. Sprains or dislocations? NO. YES, DESCRIBE
4. Perforated eardrum? NO. YES, DESCRIBE
5. Operations? NO. YES, DESCRIBE
6. Hernia? NO. YES, DESCRIBE
7. Jaundice or Hepatitis? NO. YES, DESCRIBE

C. DO YOU NOW HAVE:
1. Hypertension (high blood pressure)? NO. YES, DESCRIBE
2. Diabetes? NO. YES, DESCRIBE
3. Cold or sore throat? NO. YES, DESCRIBE
4. Back trouble or pain? NO. YES, DESCRIBE
5. Medication you are taking? NO. YES, DESCRIBE

D. SYSTEMS REVIEW:
Height: Weight:
BP
COMMENTS:

Appendix III.

Virginia Commonwealth University
Committee on the Conduct of Human Research
Research Protocol

An Evaluation of Training Programs Designed to Enable Hostages to Cope more Effectively with Captivity Stress

Thomas Strentz

Background Information

As part of its continuous training program, members of the Special Operations and Research Staff (SOARS) at the Federal Bureau of Investigation (FBI) Academy regularly engage in field training exercises (FTX). These FTX are designed to evaluate the application of crisis management resources available to the field offices of the FBI. A common FTX scenario, conducted several times each year for the past ten years, is for members of SOARS, who play the role of political terrorists to abduct a number of people, hold them as hostages and attempt to extort certain demands from the federal government. Each FTX usually lasts for three to five days and runs 24 hours each day to effectively test the material that has been taught and the resources designed for evaluation.

The usual scenario has included volunteer subjects who are abducted by the terrorists. Once they have been secured they are interviewed for background information. They are reminded that this is an exercise and given the key phrase, "real life" to utter in the event of an emergency. In fact, the only emergency in over ten years was resolved when the subject said help. After this initial processing is completed the subjects are detained in a previously designated and stocked location, guarded and cared for by the terrorists as they negotiate with the authorities in their extortion endeavors. Some of the subjects are released during the FTX in exchange for food and other demands. Eventually, when the script dictates and the umpires agree, negotiations break down and the remaining subjects are rescued by the authorities. Once the FTX is completed, a debriefing is held and all participants have an opportunity to critique the FTX.

The safety of those playing the role of subjects (hostages) is insured by several considerations. These include, but are not limited to:

1. The pre-incident training of the subjects in hostage stress tolerance skills.
2. Those playing terrorists are experienced and trained Supervisory Special Agents of the FBI who participate in at least six such exercises each year.

3. The inclusion of the interview to remind the subjects of the key word to withdraw from the FTX.
4. Trained observers and umpires who patrol the FTX and evaluate the performance of each player.
5. Psychiatrists and psychologists whose role in each FTX is that of a stress evaluator and monitor with the power to remove players.
6. The preincident training of those playing terrorists.
7. The ten years of experience of the FBI in conducting these FTX without injury to any subject.

This research project being submitted to the Committee on the Conduct of Human Research is designed to modify the usual FTX by adding an evaluation of the subject training program. Prior to the beginning of each FTX, volunteer subject hostages will be randomly assigned to one of three pre-training groups where they will receive instruction on hostage stress management. (attached is a time line and training summary) Before, during and after each FTX subjects will be interviewed and asked to complete a total of eight questionnaires. These data will be used to evaluate the relative effectiveness of the three types of stress management training. Please note that no control group will be used, every subject will be given some form of stress management training. The specific difference between the usual FBI FTX and those FTX involved in this research project are systematically set out below. The test instruments used for evaluation will also be listed, described and included for examination. It is anticipated that once the committee approves this project the necessary data will be collected in less than six months and will involve approximately fifty subjects.

Scenario as usually run	VCU variation
A. Randomization of volunteers	A. No change
B. Informed consent completed	B. No change
C. Briefing on FTX	C. No change
D. One hour general stress training	D. Three three hour training sessions 1. Emotion focus 2. Problem focus 3. General stress
E. Abduction	E. No change
F. Real life explanation	F. No change
G.	G. Stress questions
H. Professional observations	H. No change
I. Rescue	I. No change
J. Debriefing	J. No change
K.	K. Stress questions and interview
L. General Debriefing	L. No change
M.	M. Follow-up questions

Confidentiality of the data is insured by each subject being told to use a key word or letter for identity when completing various forms. The only specific request is that they use the same designator for each form. The write-up of this data will focus upon and evaluation of the difference between groups of subjects identified by the questionnaires as having differences that other research has shown to be discriminatory in similar circumstances.

Appendix IV

Research Design

T1	T2	T3	Pre-test	Treatment	Observe	Evaluation	Post	Follow-up
x			o	x	o	o	o	o
	x		o	x	o	o	o	o
		x	o	x	o	o	o	o
Initial hours				Days I-IV		Day IV		30days

T1 Problem focused training

T2 Emotion focused training

T3 Control group

U.S. Department of Justice

Federal Bureau of Investigation

Dear:

As a volunteer hostage for the four-day training exercise scheduled for next week, you are aware that the scenario includes an abduction and subsequent incarceration by FBI Agents who are playing the role of political terrorists. In addition to this usual scenario, some research will be conducted. I am a Ph.D. student at the Virginia Commonwealth University and now in the process of completing my dissertation research. This research is designed to evaluate the effectiveness of training programs for people, like yourself, who are at risk as potential hostages for foreign terrorists.

The research program is entirely voluntary and you may withdraw at anytime without jeopardizing your participation in the scenario. Your voluntary participation will include attendance at one of three three-hour seminars on captivity coping strategies, the completion of questionnaires and a post-exercise interview with follow-up questionnaires after you return home. These questionnaires and interviews will be conducted in such a way as to guarantee you complete confidentiality. They are designed to provide you with the opportunity to help me evaluate the effectiveness of this training program.

Be assured that in all field training exercises the element of safety is paramount and all reasonable steps will be taken to minimize the risk of physical or psychological injury. In fact this training exercise will be an educational experience.

Thank you for your assistance. If you have any questions, please contact me at [redacted]. Please sign and return one copy of this consent form on which you have designated your interest in participating in this research program or desire to abstain by signing on the lines that are appropriate.

1. I wish to participate in the training program. _____and
   a. I will not hold the U.S. government responsible for injuries I may sustain during the course of this exercise; _____and
   b. I understand that in the event of any physical and/or mental injury resulting from my participation in this research project Virginia Commonwealth University will not offer compensation or medical treatment_____.

2. I will participate in the field training exercise but not the hostage training program designed to help me cope with the stress of this experience. _____

Sincerely yours,

Thomas Strentz
Special Agent Supervisor

Vita

[redacted]