A NEW LAW ENFORCEMENT CHALLENGE: LIMITING USE OF FORCE TO SOLELY NONLETHAL WEAPONS

TECHNICAL REPORT

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This Command College Independent Study Project is a FUTURES study of a particular emerging issue in law enforcement. Its purpose is NOT to predict the future, but rather to project a number of possible scenarios for strategic planning consideration.

Defining the future differs from analyzing the past because the future has not yet happened. In this project, useful alternatives have been formulated systematically so that the planner can respond to a range of possible future environments.

Managing the future means influencing the future--creating it, constraining it, adapting to it. A futures study points the way.

The views and conclusions expressed in the Command College project are those of the author and are not necessarily those of the Commission on Peace Officer Standards and Training (POST).

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Standards and Training

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INTRODUCTION

Six years ago, the author began research into nonlethal weapon technologies for law enforcement as a result of a previous college project. For the purposes of this paper, a nonlethal weapon is a weapon that can be used to replace a firearm for police officers. This weapon must work 100% of the time in stopping a suspect from any type of physical attack, when the weapon is accurately applied to the suspect. It must also not cause any lasting medical or physiological damage to suspects or officers. That project created a personal drive within the author to explore and become intimately involved in the development of future nonlethal technology for law enforcement. The author has kept this personal commitment in spite of government bureaucracies and red tape in the military that has made access to data and available research next to impossible. The author formed a committee of some the top scientists in the aerospace and military development fields to begin a dialogue about collective and unclassified knowledge in the area of potential or existing nonlethal technologies for law enforcement. Those meetings and dialogues continue and were given greater emphasis by the Los Angeles Police Department as part of the author's regular responsibilities as a result the infamous March 3, 1991 incident involving the videotaped use of force by Los Angeles Police Officers on Rodney King, after a vehicular pursuit. The Rodney King arrest changed the future focus of law enforcement in the United States forever.

Early research into nonlethal and less-than-lethal technologies was disappointing. Since the United States was formed in 1776, over two hundred years of the development of this nation has left police, for the most part, equipped with same basic tools: some form of striking instrument and a gun.1 The only true research efforts in the area of law enforcement use of force has been on the development of various use of force scales. These have been academic efforts to depict reasonable use of force by officers. That debate continues today, and focuses almost exclusively on guns, striking devices and physical contact.2 The only notable exceptions in two hundred years are various forms of chemical agents and electrical stunning devices.3

Throughout the research efforts about nonlethal technology, the movie Star Trek and the Star Trek fazer weapon has been the most discussed in literature and general conversations with scientists in the field of weapons. It is difficult to actually identify those working on any such weapon.

> ...technology is a big part of the television show's allure...where science and engineering have greatly improved the human condition. But, do we really have to wait until the 24th century...? Surprisingly, much of the futuristic equipment...might arrive in our lifetime.4

As the author explored the writings about "Star Trek" technology, not a single article touched on the "Star Trek" fazer. With the world's focus for so many decades on weapons of destruction, in seems that the best one can hope for immediately is sprays, stun devices and electronic "screaming devices" in the field of self defense.5

On April 1, 1991, the author was assigned by former Chief of Police Daryl F. Gates to search the world for a better way to train and develop officers in self defense. That charge included the search for current technologies that could be applied to use of

force situations and reduce injuries to suspects and officers. The author was not alone in this search. Federal, state and most local agencies were also stung by the public backlash to the King incident. Many people were looking for new answers to the old question of how police officers can humanely take the momentarily "insane" into custody.

The current state of technology is difficult to accurately access because most of what is written on weapon technology is classified. The literature research, from the accounts of scientists in the field, is dramatically limited by the processes that moves information from the realm of classified material.6 The common estimates are that available literature is at least ten years behind technology. It is so limited, no one could accurately access state of the art in any weapons field.7 Most weapons research is in "black projects". Nonlethal technology is also hidden in this area. Scientists explain that if nonlethal data was available, information could easily be applied to new lethal technologies that most governments will not release. Thus, the "catch 22" makes research for broad based information clearly impossible for those without proper clearances.8 The next obstacle for those with proper clearance is the "need to know" theory of access to classified information. This layer further blurs the picture of other technologies that might apply to a field of research.9 The current systems make the possibility of immediate development of a nonlethal weapon through unclassified research difficult. However, according to most experts in the field of aerospace and military technology, through personal interviews and group dialogue, such weapons may already exist or will be developed in the next five to ten years.

The author had lengthy discussions with scientists of Motorola Corporation and with the biomedical research teams of General Motors Corporation during the past two years. Within the discussions, it was painfully clear that some technologies may

already exist. However, no one was able or willing to discuss or provide information that could lead to obtaining these technologies. Each of these scientists encouraged the author to continue the search; particularly in the area of electromagnetics. Research indicates current technologies with potential for nonlethal applications in law enforcement include manipulative mechanical devices, electromagnetic devices, various gases, chemical injections, and optical devices. Manipulative mechanical devices include certain types of projectiles that are less-than-lethal and mechanical devices for immobilizing a suspect. Electromagnetic devices include such things as the current tazers and stunguns used today.10 Moreover, many experiments continue with electromagnetic devices that interrupt brain wave patterns. These devices alter one's state of mind and may render humans unconscious without long term damage to the human body. New tear gases are being developed that are more effective on persons under the influence of drugs and alcohol, as well as people with mental problems. Experiments continue at the national level, through the National Institute of Justice, with chemical injections from dart guns. Finally, many experiments continue with various optical devices that can alter moods and control behavior of violent individuals. The research is difficult to obtain, but many discuss some progress and success.

The purpose of this futures article is to look into the future and to see how law enforcement can prepare for the future application of these technologies, not just from routine operation considerations. The implications of truly nonlethal technologies are staggering.

Socially, human beings have lived in conflict since the beginning of time. The murders during war are classified as a necessity of future peace. Yet, the aftermath of every war of human history is replete with the continued destruction of the participants. Through suicide and psychological responses to the

moral realities of taking human, life regardless of its noble cause, thousands still suffer. Truly nonlethal devices could reverse this wanton destruction forever. The use of deadly force in law enforcement creates no less a dilemma and today is far less acceptable in the minds of the public.

Technologically, weapons of destruction could become obsolete, regardless how difficult that goal may become. Most human beings would celebrate the day of obsolescence, and technology would be changed forever.

Economically, truly nonlethal devices would dramatically change the focus of economies and provide money to address many of the world's greater needs. In police work alone, billions of dollars will be saved in lawsuits, medical costs, and pension benefits throughout the United States.

Environmentally, the change from lethal to nonlethal technologies would greatly impact pollution caused by the use and waste of our many different types explosive devices used today. The basic handgun and all types of deadly weapons create pollution that is still mostly uncontrolled. Disposal of nuclear waste is a current crisis by most standards today. The nonlethal technologies discussed to date do not seem to have the long range environmental implications.

Politically, nonlethal weapons could potentially change the course of human events in law enforcement today, but not without dilemma and struggles. Nonlethal weapons and their development are the moral responsibility of police leaders today. Without that focus, another two hundred years will pass in law enforcement and officers will still be carrying a stick and a gun. Yet, as law enforcement develops the nonlethal weapons of tomorrow, a greater challenge will arise. As nonlethal technology is introduced, police officers will begin to use it. As success of the devices become routine, the community will call for the removal of lethal weapons. Simultaneously, as police struggle with this community demand, the

criminal element will remain armed with the latest in deadly weapons. Law enforcement, as it begins the process of taking away lethal weapons, will be requiring officers to face deadly force with nonlethal force. The moral outrage for police will become a major issue for police administrators. The backlash of many police officers could be monumental.

This futures study is intended to be limited in scope to address the affect of nonlethal technology on law enforcement in a major city. The City of Los Angeles was selected for this study. The study projects that in the next ten years, some form of nonlethal technology will be developed. Finally, the impact of the new technology is limited to its impact on Los Angeles Police Department hiring, training and retention of personnel.

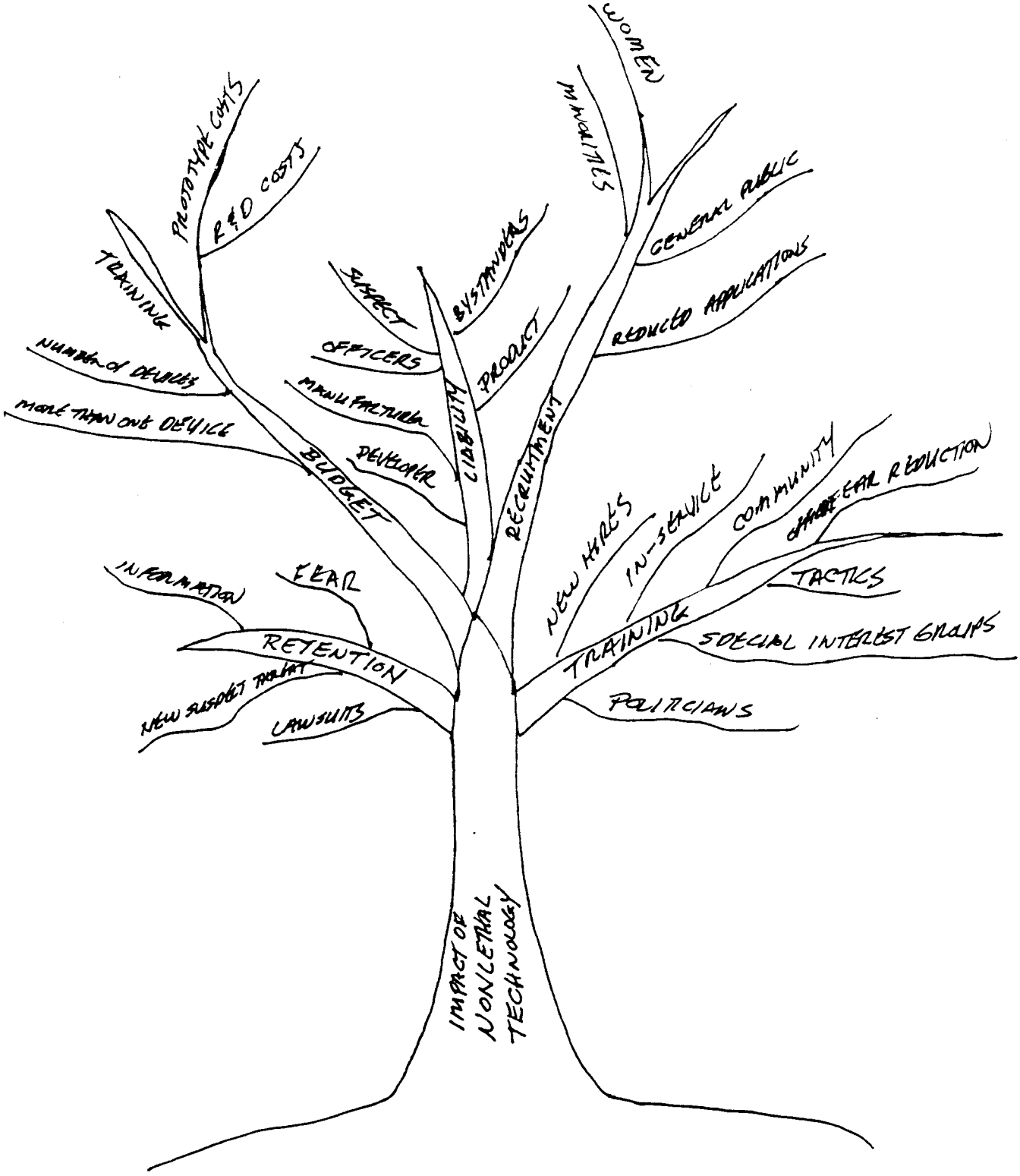
Nonlethal technology is coming. One can choose to ignore it and wait for it to be forced upon police officers without adequate preparation and research. Visionary police administrators can pioneer the change.

FUTURES STUDY

As research began, an issue evolved regarding how law enforcement will prepare for such a change. Regardless of the form that nonlethal technology takes, the greater challenge will be preparing for its future. Therefore, the following question for a futures study: WHAT IMPACT WILL LIMITING USE OF FORCE TO SOLELY NONLETHAL WEAPONS HAVE ON MAJOR CITY LAW ENFORCEMENT BY 2002 A.D.?

After formulating the issue question for the future study, a group of six law enforcement managers, attending the California Peace Officers Standards and Training Command College, assisted the author, by group discussion, in the development of sub-issues derived directly from the issue question. Using the Model for Applied Futures Research, the sub-issues are extensions of the issue question that are framed as questions for the future. The sub-issues were developed with this group using a relevance tree (next page) in an attempt to examine all the potential first level issues associated with the issue question. As the diagram suggests, the relevance tree places the issue at the base of the tree. The branches depict the spread of relationships to the issue in the various levels. The trunk branches are primary issues and as the branches move outward from the trunk, hierarchy of relationship is described. The relevancy tree helped the group and author check the validity of sub-issues as being directly related to the issue. The tree also provides sufficient definition within the context of the target organization that will be used for strategic planning. The author then selected the three sub-issues, with the assistance of the group, to focus the futures study effort to a manageable size. The sub-issues selected were:

WHAT WILL BE THE IMPACT ON POLICE OFFICER RETENTION?



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WHAT WILL BE THE IMPACT ON POLICE OFFICER RECRUITMENT?
WHAT WILL BE THE IMPACT ON POLICE OFFICER TRAINING?

MAJOR FINDINGS

As one looks at this topic from the standpoint of futures research, one technique used to study potential futures is the nominal group technique. The author chose the following individuals for the nominal group technique:

Commander Dan Watson, LAPD
Captain John Desmond, LAPD
Captain Mark Leap, LAPD
Lieutenant Charlie Beck, LAPD
Lieutenant Earl Paysinger, LAPD
Joan Williams, Aide To former L.A. City Councilmember Gloria Molina
Tom LaBonge, Aide to L.A. Mayor Richard Riordan
Dr. John Eliason, Motorola Corporation
Peter Wilton, Hughes Aircraft Corporation
Officer John Romero, LAPD
Officer Steve Moore, LAPD
Officer Saila Adams, LAPD

A variety of interests and backgrounds within Los Angeles, were selected to prevent a one-sided view of the issue, thus limiting the scope of the research.

For the purposes of the future study, a nominal group technique was used. The group spent an entire day together, working independently first and then collectively to forecast what they believed were the most significant events and trends that will impact the future application of nonlethal weapons in law enforcement by the year 2002.

The group was given a twenty minute introduction of topic similar to the information given in the introduction to this paper. The futures research question was introduced and each participant was asked to brainstorm independently for ten minutes about all possible future trends that would impact the issue. Next the group shared their trends in a "round robin" fashion. Moreover, new trends were identified in the group discussion process. Next, the group independently rank the trends to identify their top ten choices and again the votes for top ten were tallied. A general discussion of the results was held and once again the group was asked to rank the top ten based upon any new information gained as a result of the group discussion. Finally, the votes were tallied and the top ten in this case remained the same with only the vote distribution changing.

The group then began the process in the same manner for identifying the top ten events regarding the issue. The results of the groups efforts are captured in the graphs and discussions to follow.

The second half of the day, the same group conducted a Modified Conventional Delphi process to forecast the future of the trends and events (see pages 11-13). The group was given a sheet that identified each trend and event. The group was asked to numerically forecast the future of each trend and event based on a scale that aided in providing uniformity in the interpretive results. The forecasts included five year and ten year projections. The group also projected, numerically, where they believed the trend or event was five years ago.

The group came together and discussed the results and each persons' position on a trend or event projection. Finally, the group went back to private analysis and was given the opportunity to give new numerical values to each forecast for the trends and events. The graphs that follow include a depiction of the final results. The three lines on each graph depict the upper and lower

1-15mean deviations and the median for each trend and event forecast. The upper and lower mean deviations were calculated by averaging the numerical values above and below the median. This shows the distance the upper and lower mean deviation groups moved from the median over the ten year period.

Note: The top ten trends and events are numerically assigned in rank order as identified by the groups' voting. In the list that follows, the rest of the trends and events were not ranked.

TRENDS

1. Pressure on local government to purchase and use nonlethal weapons regardless of fiscal impact.
2. Efforts to convince officers of their personal safety while using nonlethal weapons.
3. Improved field tactics training of officers and daily use impact on use of force.
4. Movement toward hiring and training officers with human empathy and the "gunfighter" mold.
5. Number of people from the community applying for law enforcement jobs.
6. Criminal Justice System efforts to rehabilitate as opposed to jail and house convicts.
7. Movement towards "problem oriented policing" and away from "arrest and jail" mode.
8. The patrol function becomes more automated for quicker response and greater efficiency in daily tasks.
9. Level of protection of body armor.
10. Number of crimes of violence on persons in ratio to population.

TRENDS (not ranked by the group)

Number of women seeking police jobs.
Number of minorities seeking police jobs.
Paramedic and medical treatment improves to save more lives from lethal weapons use.
Secrecy of military weapons.
Cold war efforts worldwide.
Political leadership in the White House.
Impact of civil unrest nationwide.
Impact of terrorism in the US.
Civil suits and criminal cases against police use of force.
Educational requirements for police hiring.
Research money available.
Shift from defense industries to civilian industries.
Police hiring practices and freezes.
Property tax crisis.
Size of officers hired.
Physical training of police.
American Disabilities Act impact on police hiring.

TREND ONE

Pressure on local government to purchase and use nonlethal weapons regardless of fiscal impact.

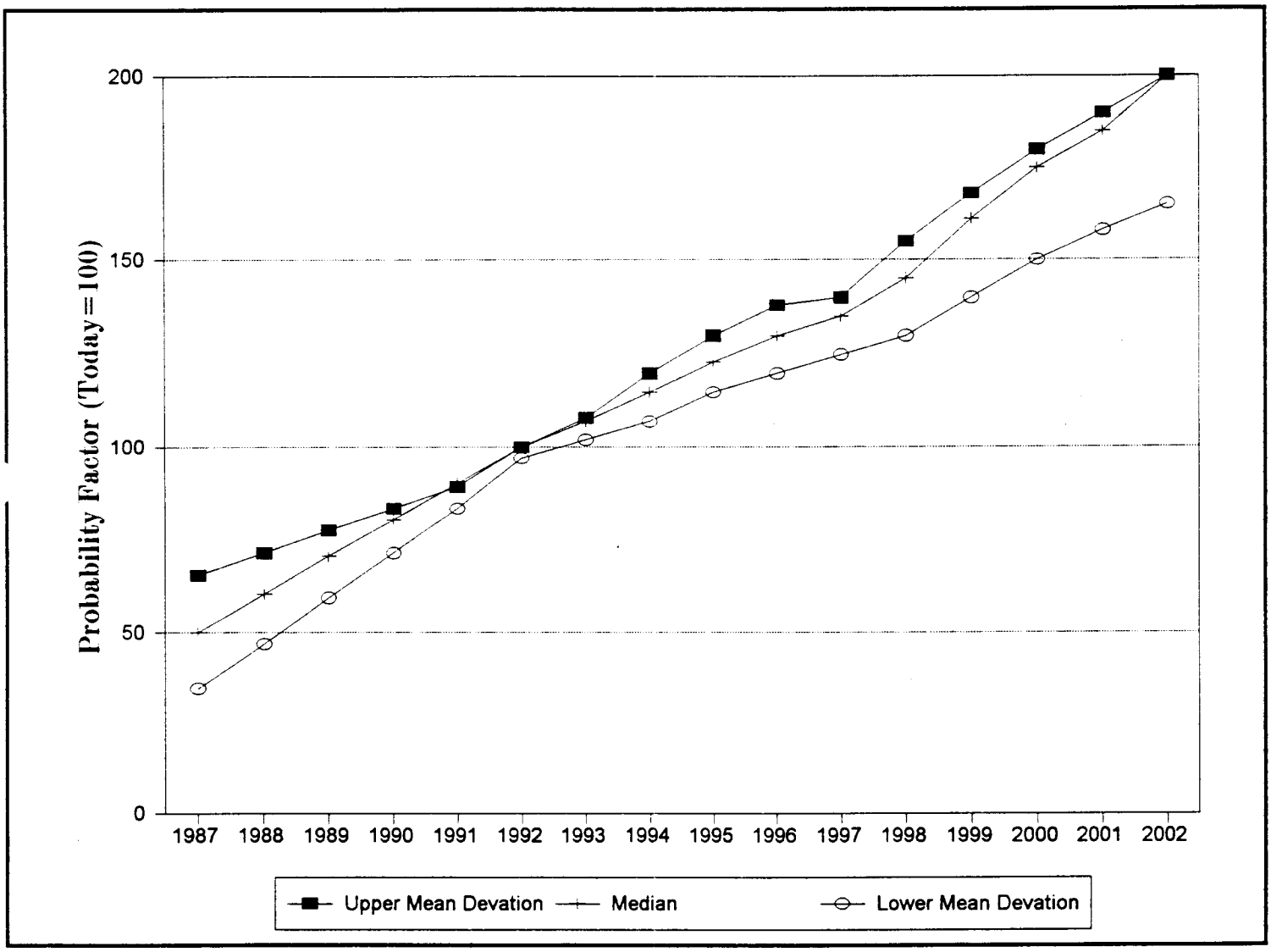
The Modified Conventional Delphi (MCD) group defined this trend as a direct result of mounting litigation for police use of force cases. The group believes that this trend will continue to grow as the litigation and focus on use of force also grows. The group believes the police agencies and the local governments will receive continual pressure to obtain nonlethal weapons for law enforcement.

As can be seen on the graph, the MCD group clearly felt that

tremendous pressure will be brought to local government to buy nonlethal technology. Most in the group felt the pressure would be great regardless of the cost to local government and that the spiralling costs of law suits for use of force situations will only speed the pressures on all governing bodies and police agencies. There is very little deviation above or below the median in the direction and intensity of the pressure on local governments. As one group member put it, "This is the age of human rights and nothing will stop progress of the ages."

TREND: 1

PRESSURE ON LOCAL GOVERNMENT TO PURCHASE AND USE NON-LETHAL WEAPONS REGARDLESS OF FISCAL IMPACT



TREND TWO

Efforts to convince officers of their personal safety while using nonlethal weapons.

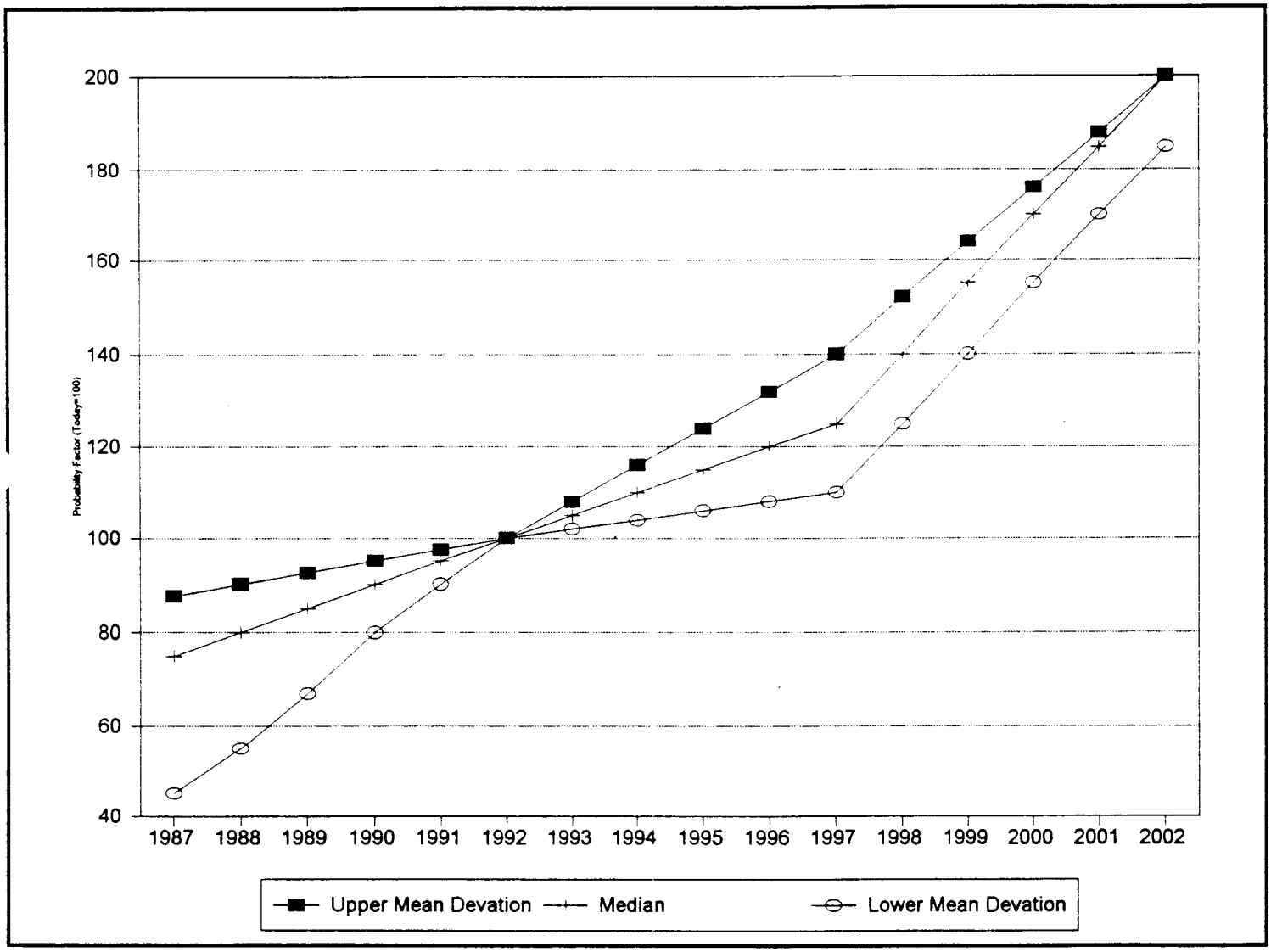
The MCD group defined this trend as police management training and analysis of various weapons in preparation for implementation. The group indicated that any group or individual may begin to impact on the future of nonlethal weapons technology and the preparation of police officers for the application of the technology. However, the group focused mainly on law enforcement efforts in this trend.

This trend was seen as a significant hurdle for law enforcement to accomplish in the field of nonlethal technology. The natural human experience of machine failure and product malfunctions will cause police soul searching moments when new technology is tested and implemented. Firearms have several centuries of testing and improvement and reliability is built into that which has become a symbol of democracy.

The difference between the group above and below the median is simply each groups differing beliefs on how long it will take to convince law enforcement about the new weapons. The group below the median also felt it may be ten years before the weapon or the problem becomes an issue.

TREND: 2

EFFORTS TO CONVINCE OFFICERS OF THEIR PERSONAL SAFETY WHILE USING NON-LETHAL WEAPONS



TREND THREE

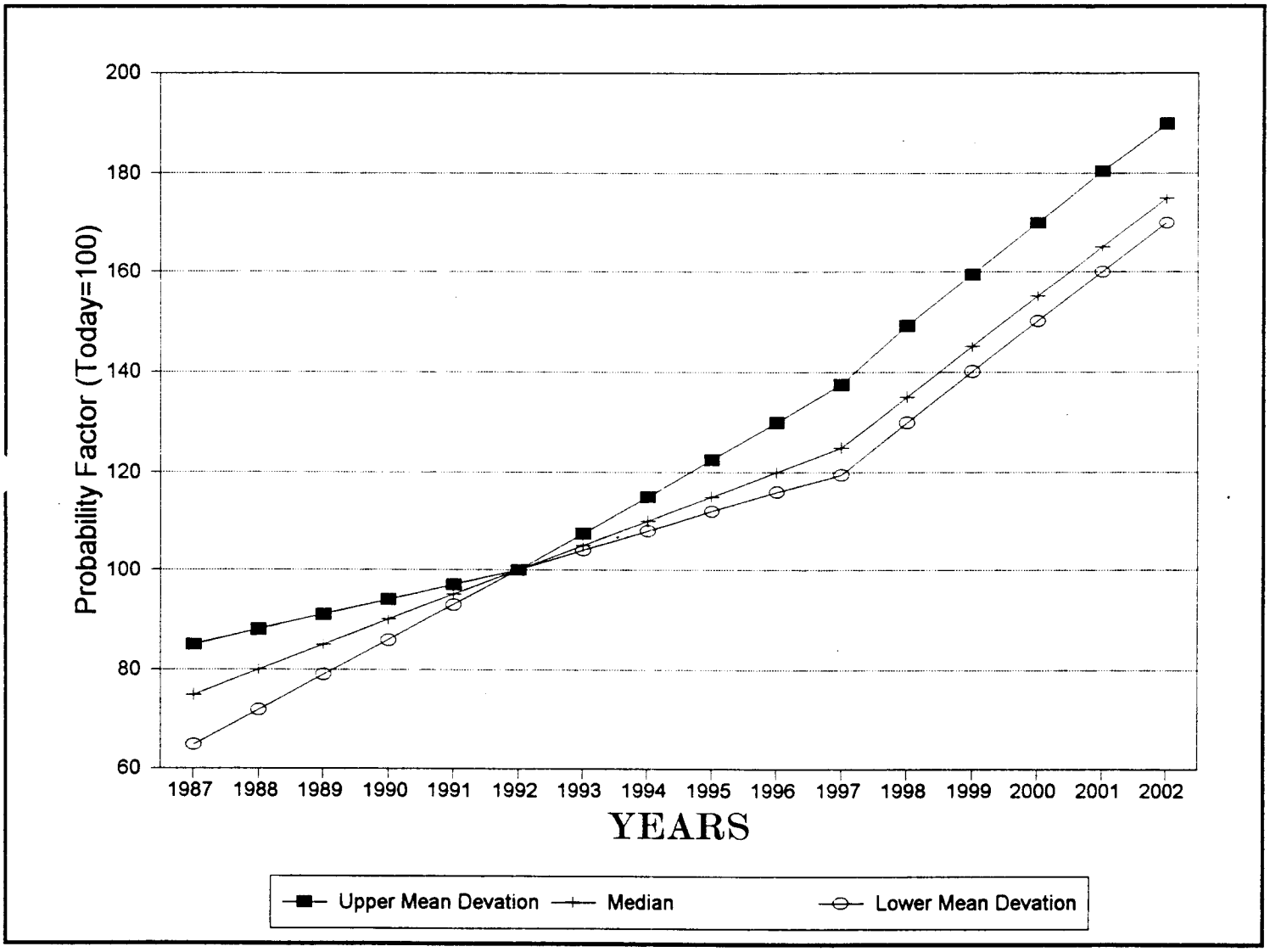
Field tactics training of officers improve, creating less situations requiring use of force.

The MCD group described this trend as clearly as it is written. They believed that the training of police in field tactics improves everyday and that this emphasis on training will continue to decrease the number of situations that require officers to use force.

The group believed that field tactics of officers would greatly improve over the next ten years. The opinions were consistent with the median and the group believed that governments had not made the commitment to training necessary to provide officers with the tactics that could help them prevent use of force situations altogether.

TREND: 3

DAILY FIELD TACTICS OF OFFIERS IMPROVE, CREATING LESS SITUATIONS REQUIRING THE USE OF FORCE



TREND FOUR

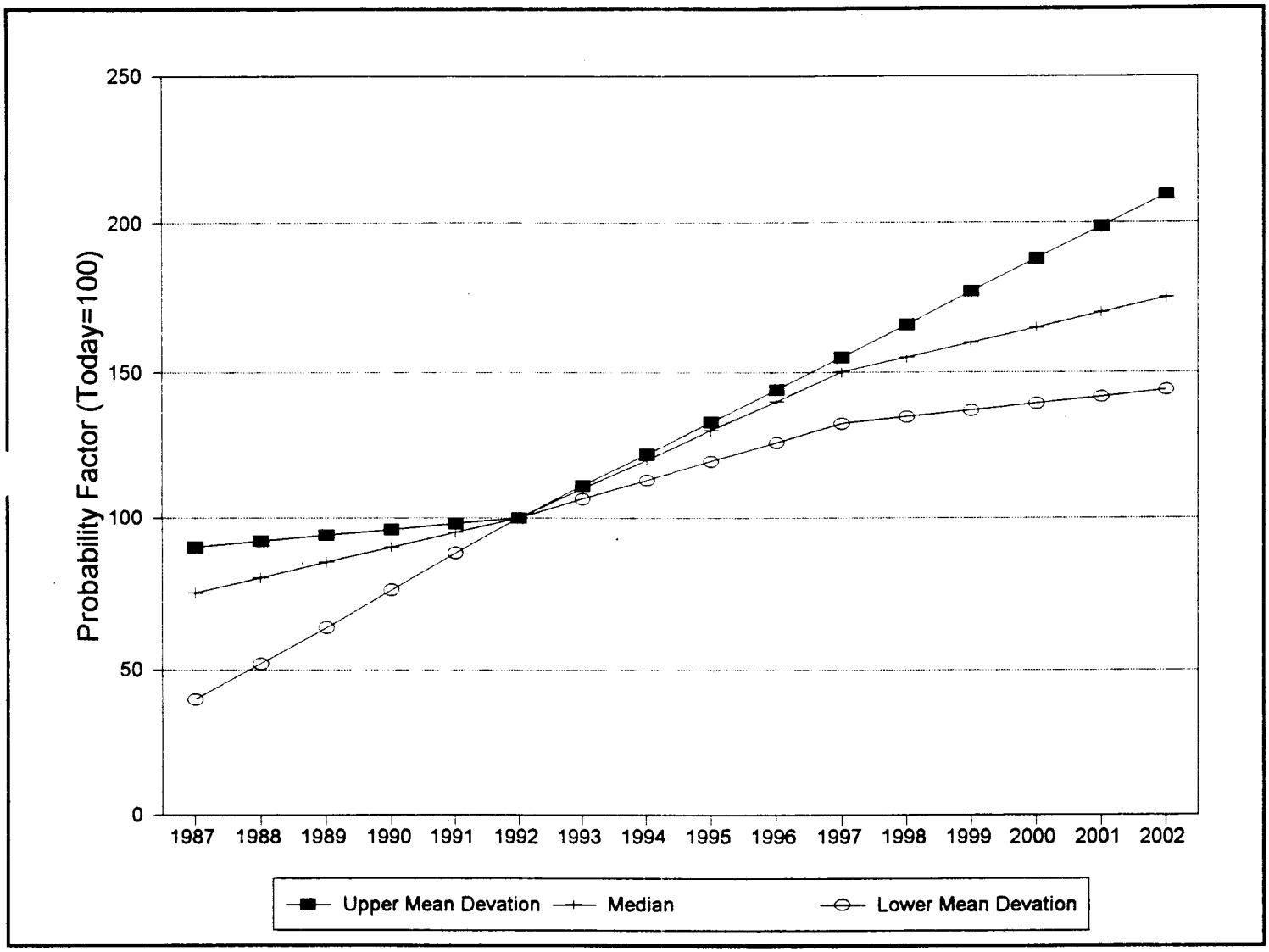
Movement towards hiring and training officers with human empathy and away from the "gun fighter" mold.

The MCD group defined this trend as follows. They believe that for decades the police have hired former military personnel to a great degree. Many of these officers became leaders in a paramilitary organization and greatly influenced those without military background. Thus in many large cities, hiring for several decades has focused on people with a propensity for "hard nosed" physical police work. As times have changed, with less recruiting and those recruited with less military experience, the new trend is toward college educated people with human interaction skills and a true empathy for people.

The group believed that the hiring of police will move away from the traditional military person to people with better social and personal skills which the job demands today. The group-below the median felt cities were unwilling to do this as is indicative of the political policies that give military bonus points for civil service exams. The group above the median felt the military was changing in the direction necessary for law enforcement and they would mutual support the needs of each other. The split in the group appears to be perspective.

TREND: 4

MOVEMENT TOWARDS HIRING AND TRAINING OFFICERS WITH HUMAN EMPATHY AND AWAY FROM THE "GUNFIGHTER" MOLD

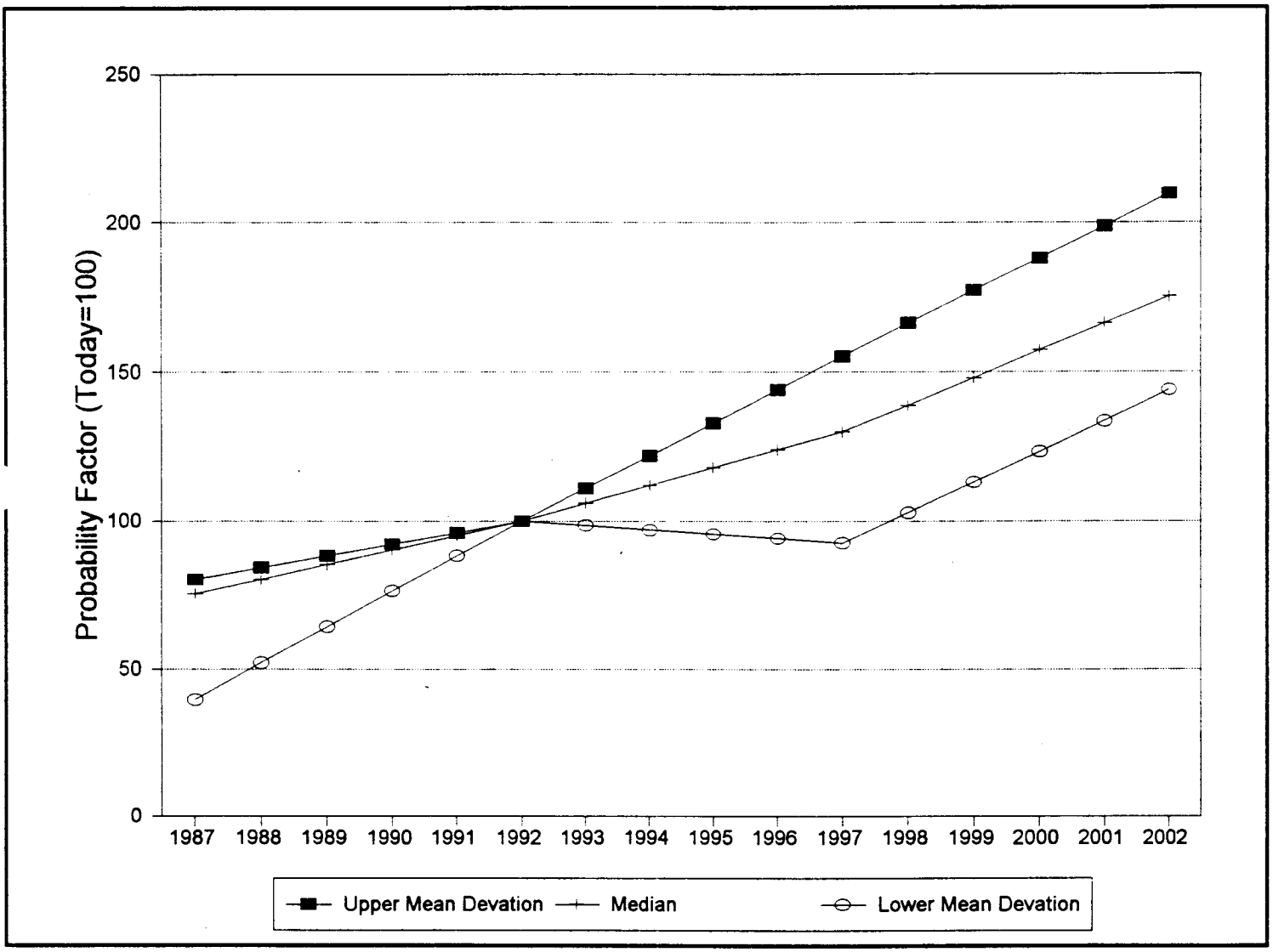


TREND FIVE

Number of people applying for law enforcement jobs. The MCD group defines this trend as how many people are actually applying for law enforcement jobs in the local community. The group has experienced a trend away from police careers for several years and recent events have caused a dramatic shift for major cities away from law enforcement. The group above the median said law enforcement as a profession is appealing to more educated people and the numbers are down because the less educated are not applying. The group below the median felt that the nonlethal force issue and the moral dilemma will force more people away from what will be seen as a no win situation.

TREND: 5

LESS PEOPLE FROM THE COMMUNITY APPLYING FOR LAW ENFORCEMENT JOBS



TREND SIX

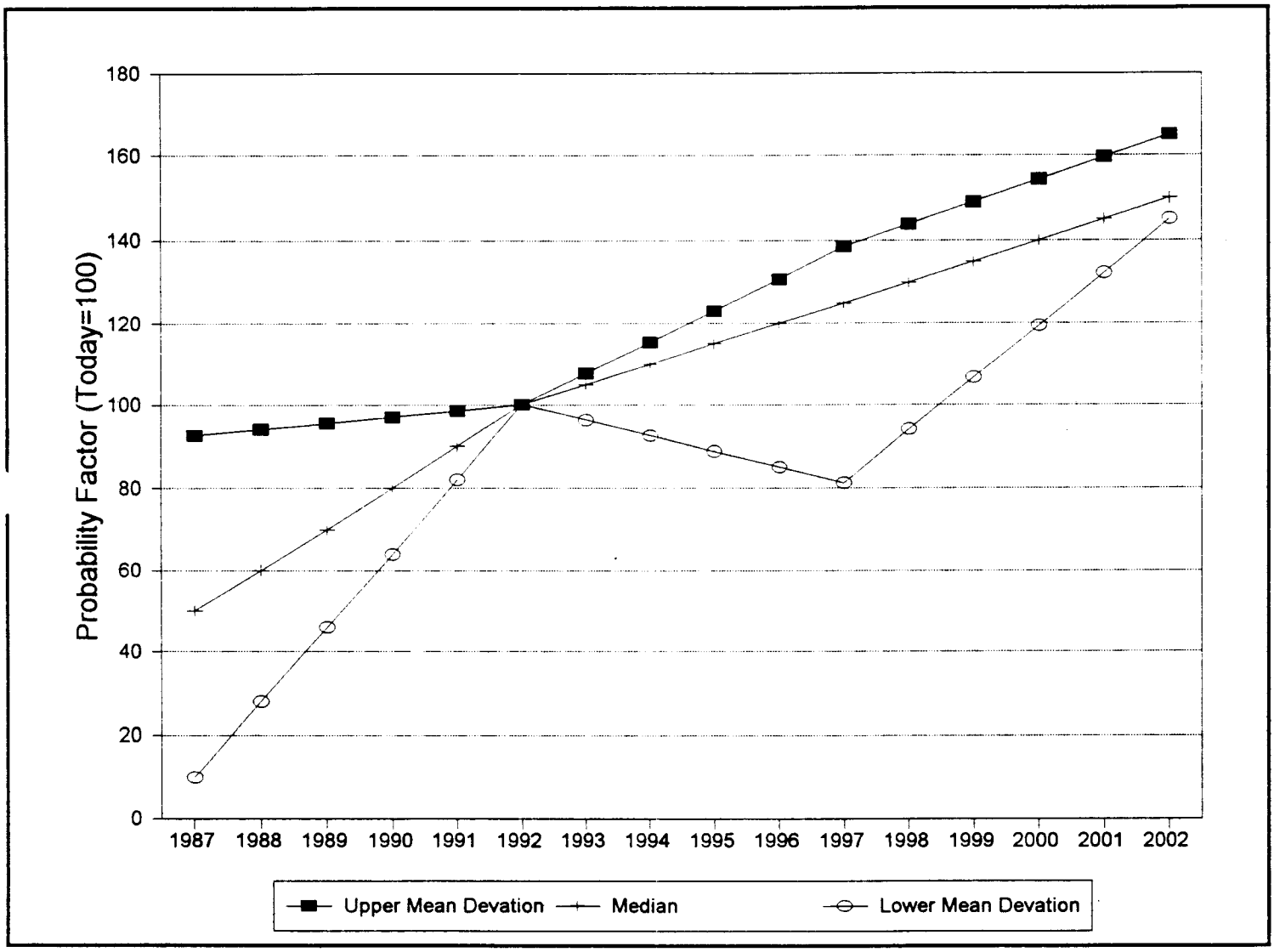
The criminal justice systems efforts to rehabilitate.

The MCD group defined this trend as what they perceive as shift of emphasis in the criminal justice system. They believe that the United States in moving away from punishment due to jail overcrowding. As a result, new programs of rehabilitation are being emphasized.

The group felt that the criminal justice system is beginning to swing back towards rehabilitation more of necessity than design. Jail overcrowding will force new ways to deal with problems and the new ways may simply be to rehabilitation. The group below the median believes that we are still focusing on punishment and will for some time to come. Only at year seven through ten does this group believe the system will turn to rehabilitation. The group above the median is consistently a little more aggressive in the probability that the criminal justice system is changing course. The group collectively believes that this will put more violent criminals on the street which will increase the likelihood of police confrontations.

TREND: 6

THE CRIMINAL JUSTICE SYSTEM SHIFTING TOWARDS REHABILITATION AS JAILS OVERCROWD



TREND SEVEN

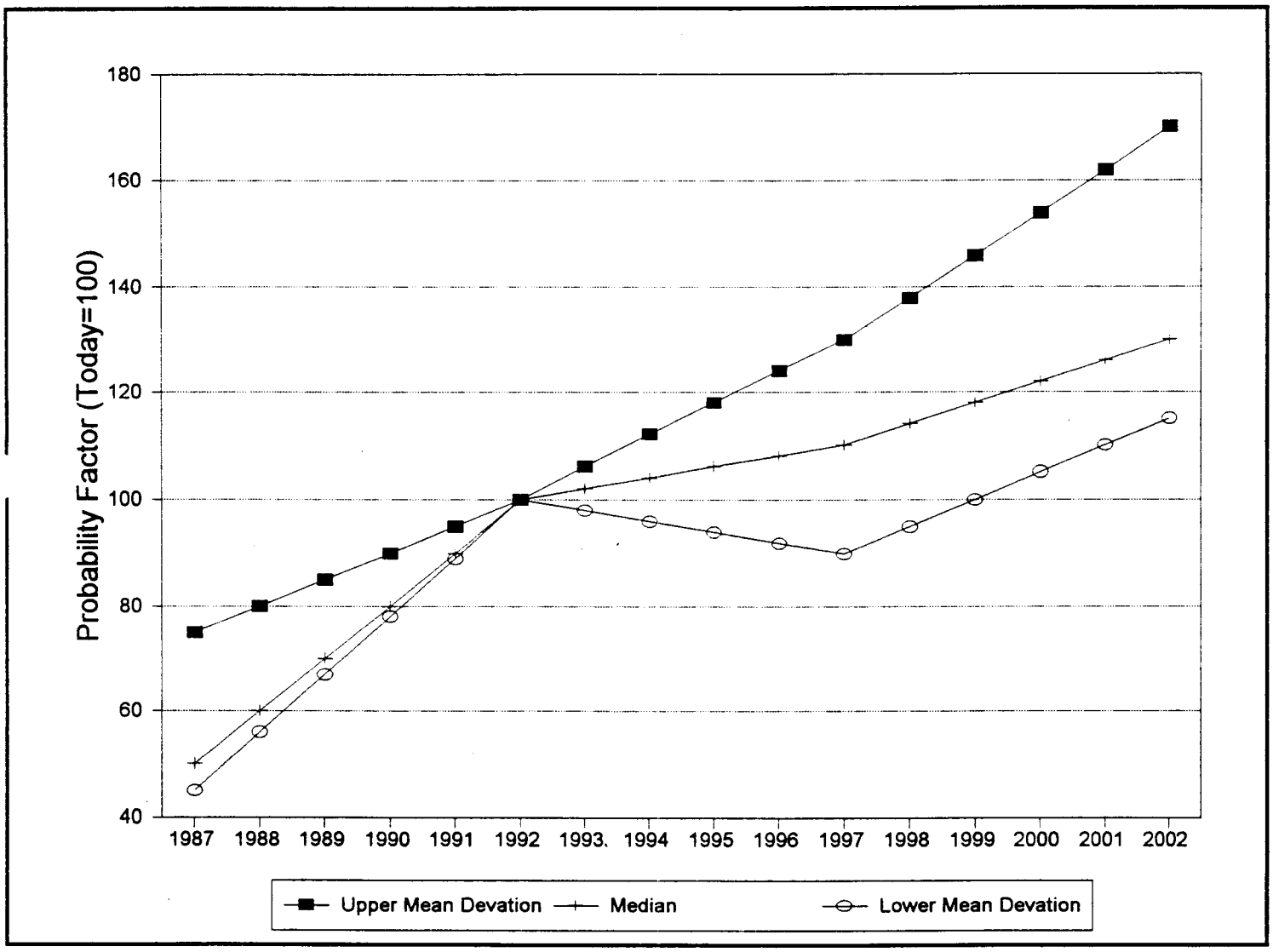
Movement towards "problem oriented policing" and away from the "arrest and jail" mode.

The MCD group believes that this trend is defined as a realization that police methods of focusing totally on arrests is not working to decrease crime. Now police are beginning to focus more on the problems that lead to specific types of crimes in an effort to prevent crime. This problem oriented approach is the focus of the trend.

The group believed that the nation is moving toward community oriented policing and away from the arrest and incarcerate mode of policing. However, the group was very skeptical that governing agencies were really committed to the funding necessary for police agencies to be effective in community oriented policing. The group below the median felt that the financial crisis of governments was long term and had little confidence that any significant efforts would be made in the next ten years. The group above the median was far more optimistic that the political pressure was to great for major cities to use the "smoke and mirrors" approach typical of politicians of the 1980's.

TREND: 7

MOVEMENT TOWARDS "PROBLEM-ORIENTED POLICING" AND AWAY FROM "ARREST AND JAIL" MOLD



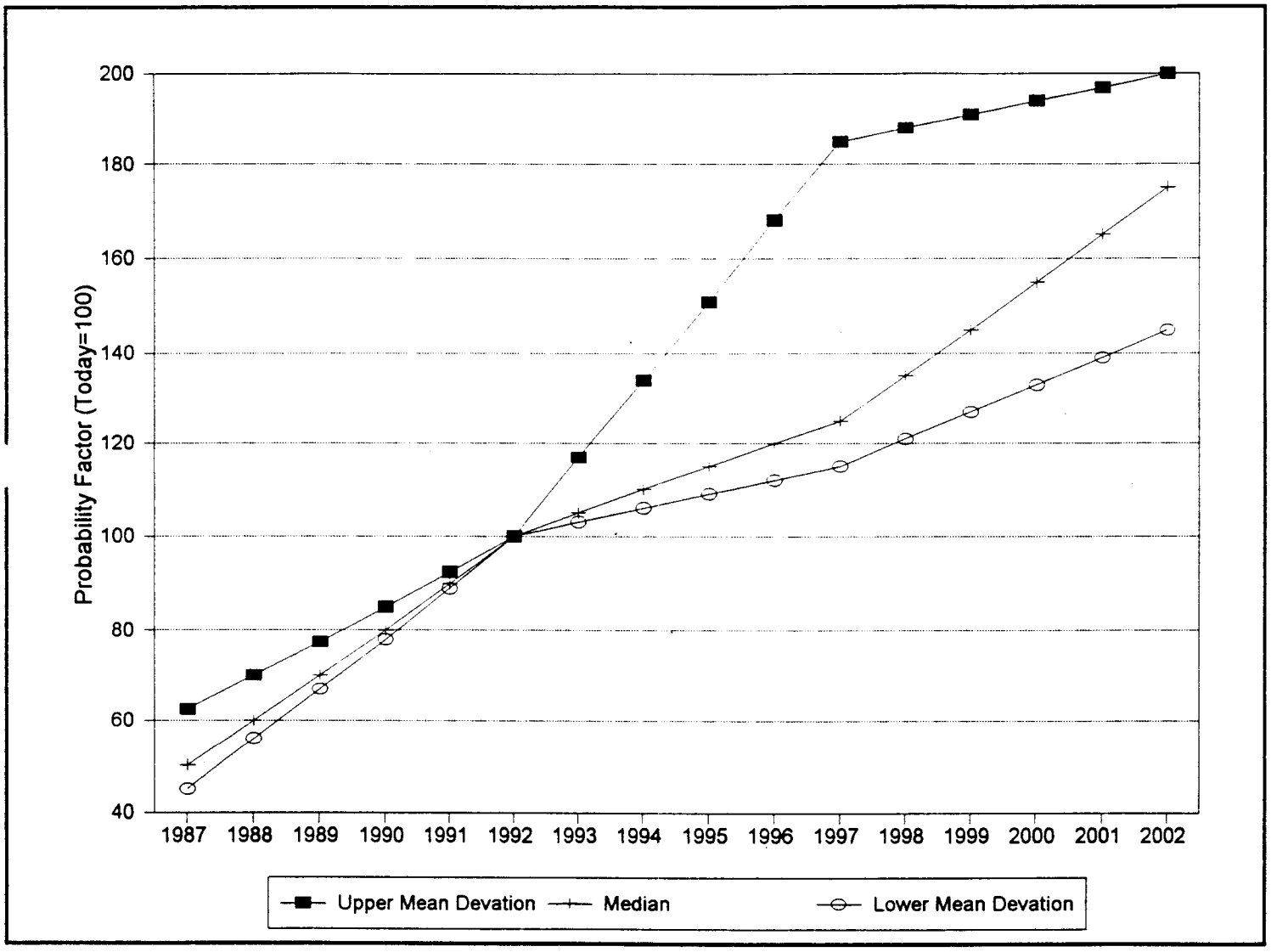
TREND EIGHT

The patrol function becomes more automated for quicker response and greater efficiency in daily tasks.

The MCD group believes that this trend is clear. The group felt the patrol function would become far more automated and create faster response to calls for service. The group above the median felt that very quickly police would be responding to calls much more quickly and therefore confront more violent crimes in progress. This would require more force used by police and the spiral affect of more controversial use of force. The group below the median said that crime was traditionally reported after it occurred and would have little impact on police use of force.

TREND: 8

THE PATROL FUNCTION BECOMES MORE AUTOMATED FOR QUICKER RESPONSE AND GREATER EFFICIENCY IN DAILY TASKS



TREND NINE

The level of body armor protection.

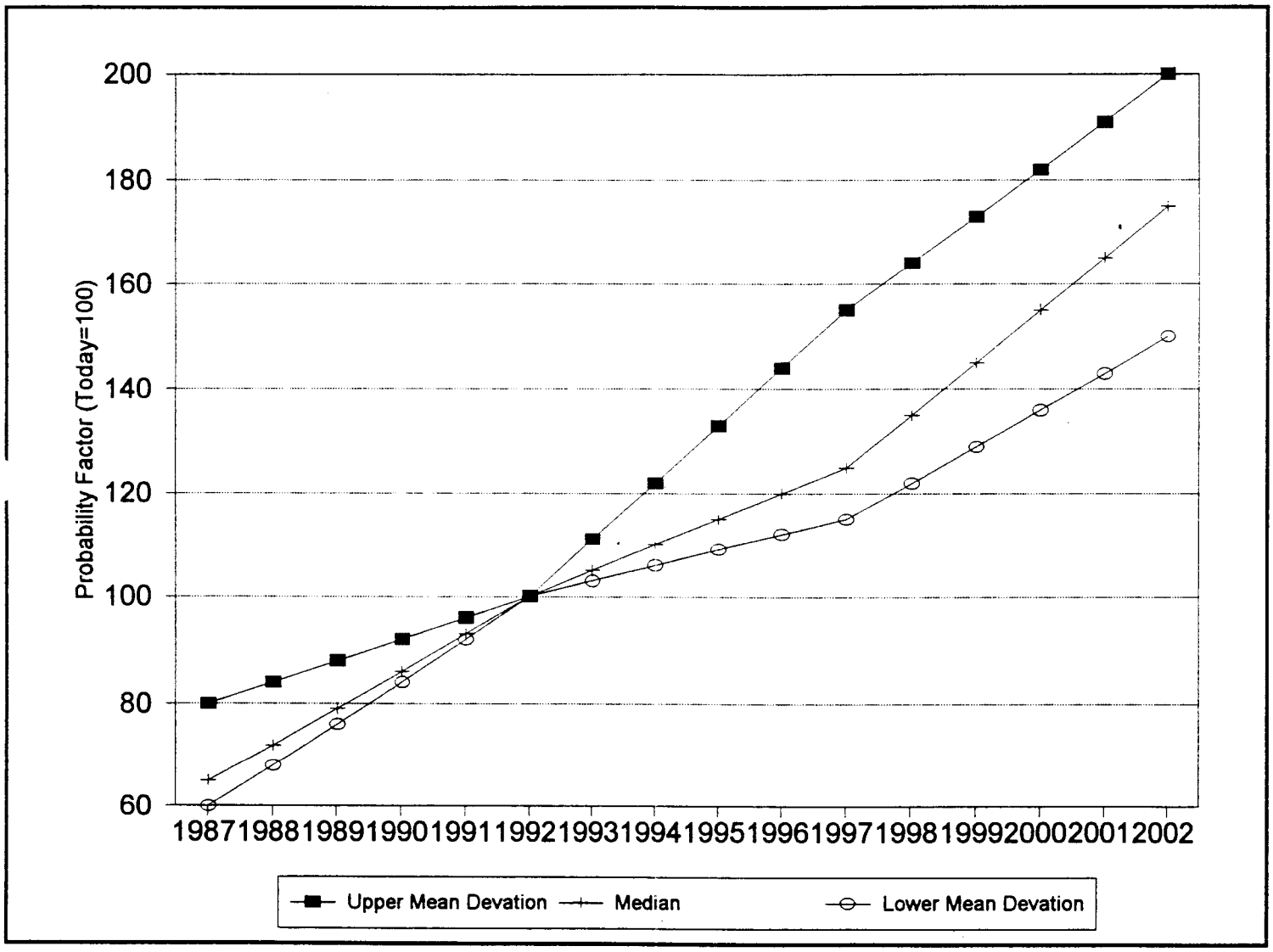
The MCD group defines this trend as the continued improvement of body armor to add greater protection and less injury to police officers.

The group strongly believes that the further development of body armor will be a key factor in the development and acceptance of nonlethal technologies to use of force situations. The group above the median felt that because of the pressure to move towards nonlethal weapons, officers will demand better body armor and this pressure will spur its development. The group below the median didn't believe the new weapons would come until years five to ten, so the improvements and demand for body armor would also be slow to develop.

The group felt that body armor development could be a key strategic element for law enforcement officials to develop prior to full implementation of nonlethal weapons.

TREND: 9

BODY ARMOR CONTINUES TO PROVIDE GREATER PROTECTION AND COVERS MORE OF THE BODY



TREND TEN

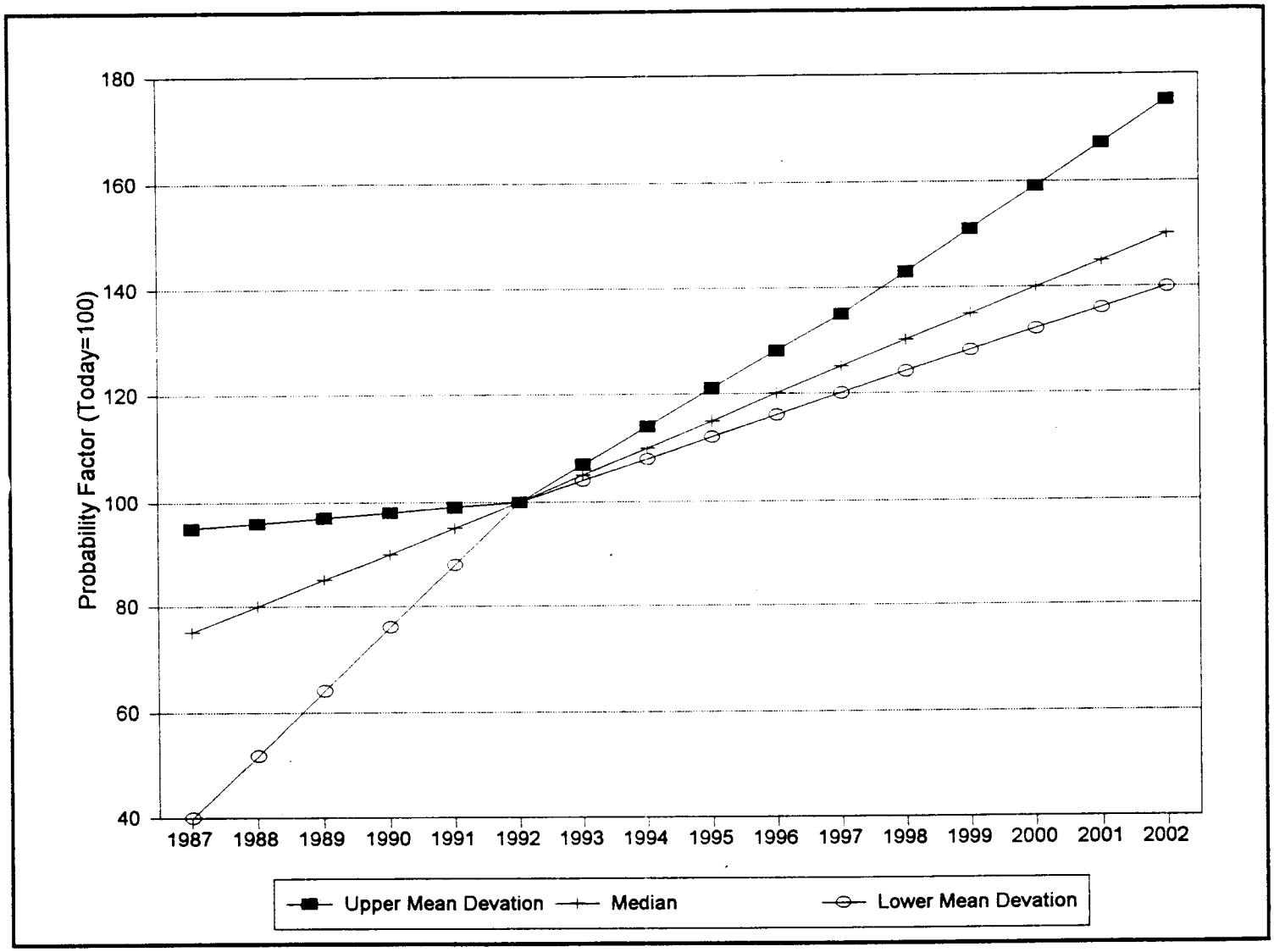
The Number of violent crimes to people in ratio to population.

The MCD group felt that crimes of violence will continue to rise disproportionately to population increases. In Los Angeles, the group believed that the population density and cultural diversity issues will further escalate crimes of violence. Many of the new residents to California are citizens of countries where violence is the norm in solving disputes. The group sadly related that not much is different in the U.S. today.

The variation from the median to the group below is minimal. The group above the median saw violent crime as a way of life in the next ten years with nothing to hold it in check.

TREND: 10

CRIMES OF VIOLENCE ON PERSONS INCREASE IN GREATER PROPORTION TO POPULATION INCREASES



EVENTS

1. Demonstration of a totally nonlethal weapon.
2. A controversial officer-involved shooting focusing political and media attention on nonlethal weapon alternatives.
3. A police department adopts a nonlethal weapon.
4. First successful use of a totally nonlethal weapon.
5. The nonlethal weapon fails to stop a suspect after police application.
6. A police union files suit to stop deployment of a nonlethal weapon.
7. A police officer uses the nonlethal weapon to abuse a suspect.
8. A department develops a new use of force policy requiring use of the nonlethal weapon prior to deadly force application.
9. A long term negative medical affect of the nonlethal weapon is discovered.
10. An officer's misuse of the nonlethal weapon leads to attempts to "politically" ban the use of it.

EVENTS(not in rank order)

Two nonlethal weapons developed simultaneously.
Manufacturer of a device goes out of business after a lawsuit loss.
Court order to stop using an effective device.
Environmental impact suit on a nonlethal weapon is upheld and a ten year hold is placed on its use.
Officers begin job actions to demand that new nonlethal weapons be developed.
Community demonstration and unrest over the implementation of a new device.
A ballot initiative is passed for money to research new technologies.
A new weapon is discovered in the "files" of the fallen Soviet

Union.

Lethal weapons banned for all people in the United States.

Court bans lethal weapons in the U.S.

EVENT ONE

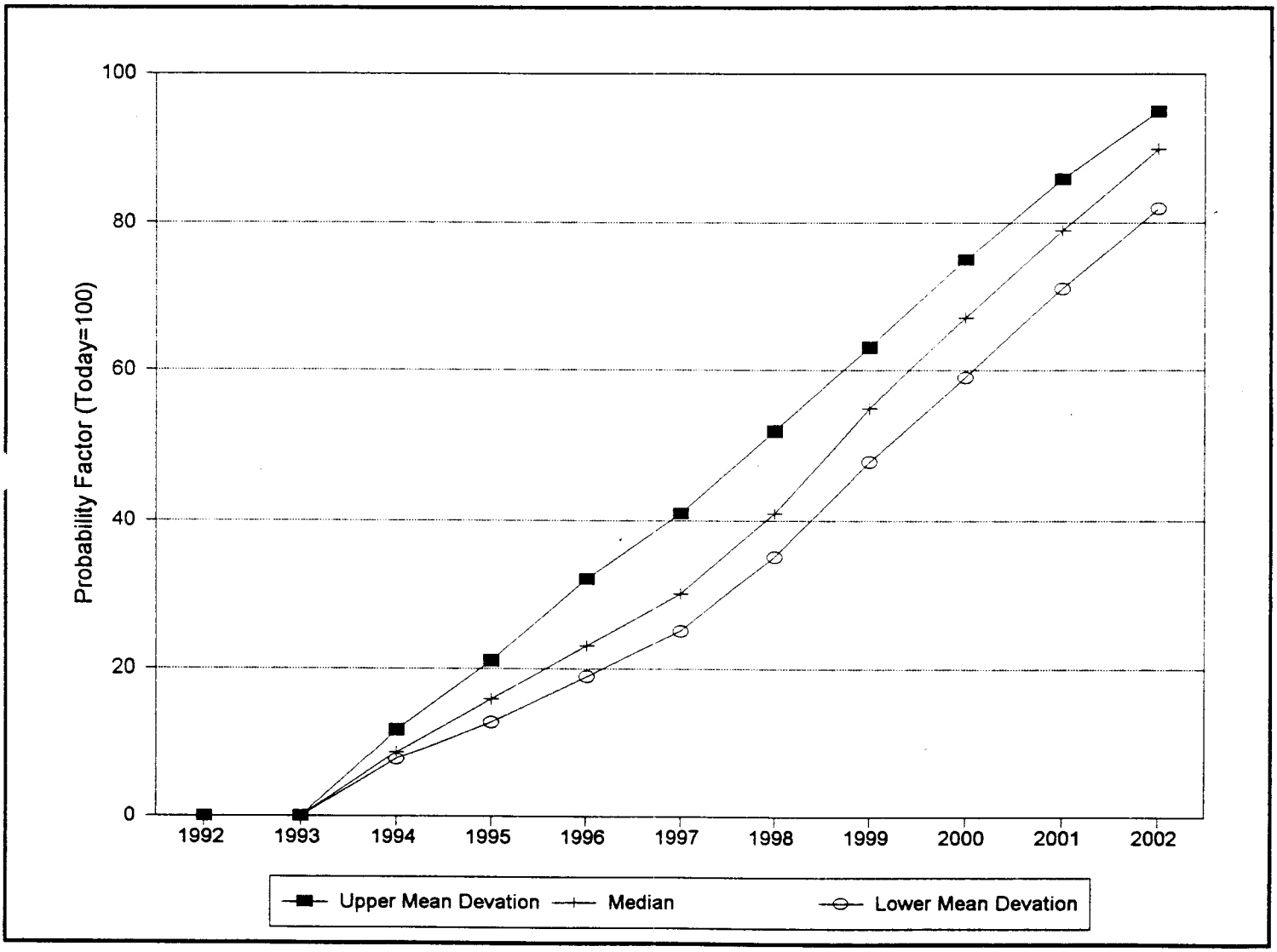
Demonstration of a totally nonlethal weapon.

The MCD group defined this event as the demonstration of a device that can be applied by police in a use of force situation, that causes no permanent or significant injury to the suspect or officer.

The key event in this projection is the actual development and demonstration of a totally nonlethal weapon, capable of replacing the handgun in all use of force situations. The group believed that this event could first occur in 1993, year two. There was little deviation from the median by the upper and lower groups.

EVENT: 1

DEMONSTRATION OF A TOTALLY NON-LETHAL WEAPON



EVENT TWO

A controversial officer-involved shooting focusing political and media attention on nonlethal weapon alternatives.

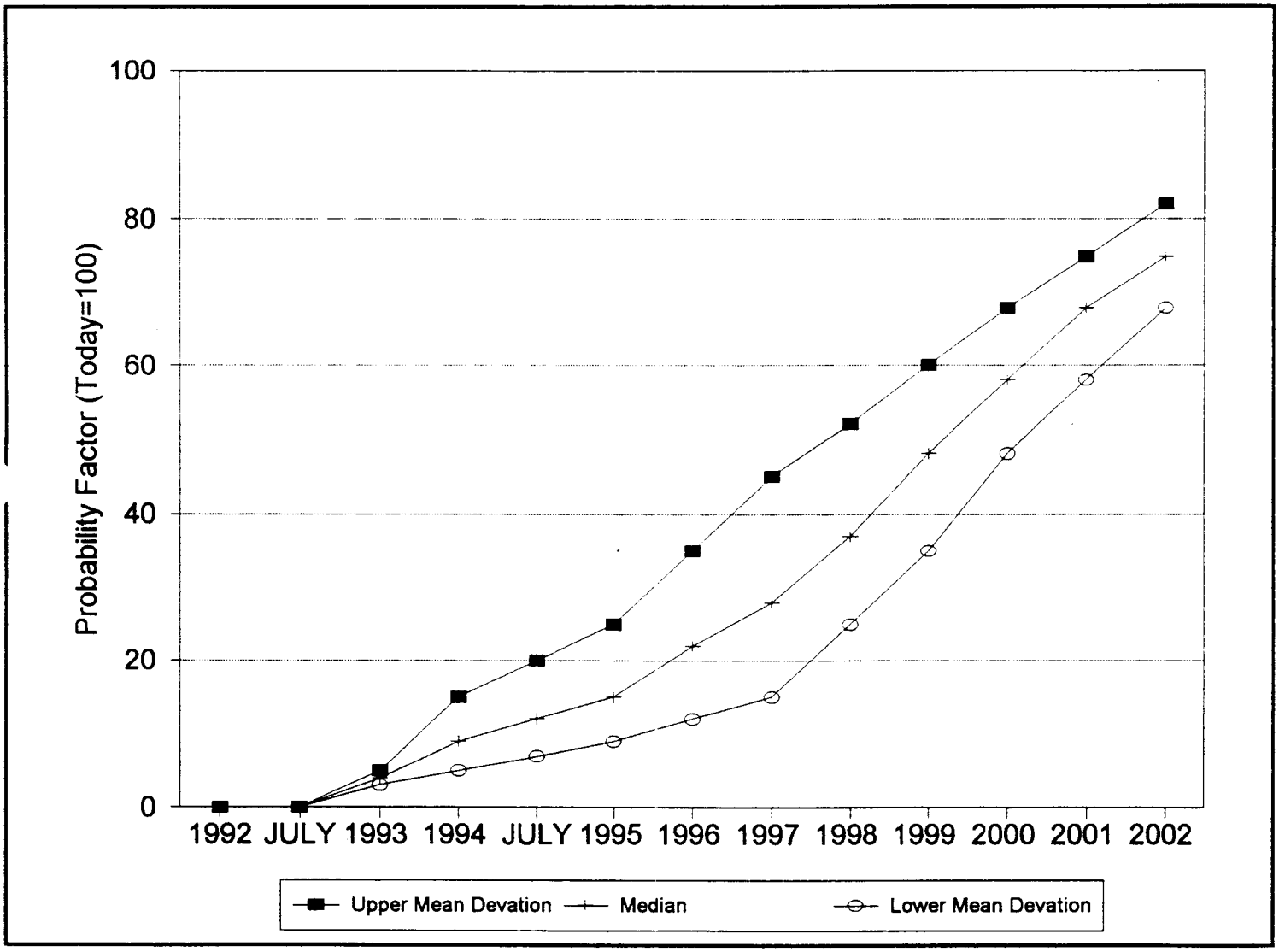
The MCD group defined this event as a police shooting that gained tremendous media attention. As the attention grew, the media and politicians actually decide to look at alternatives and nonlethal technology rather than attempt to scapegoat the officers involved.

The group felt that a controversial officer involved shooting would be the catalyst for political and media demands that nonlethal alternatives be developed. Unfortunately, the group believed that to force governments to focus on these technologies, law suits and controversy seems to be the only way that money will be channeled to development.

The group felt the first such incident could occur as soon as six months from the date the group met. The group above the median felt that it would happen more quickly because of the heighten attention to police use of force today. The group below the median felt police have always had controversial uses of force and that only after truly nonlethal technologies are develop, the pressure will not cause enough involvement in research.

EVENT: 2

A CONTROVERSIAL OFFICER INVOLVED SHOOTING FOCUSING POLITICAL AND MEDIA ATTENTION ON NON-LETHAL WEAPON ALTERNATIVES



EVENT THREE

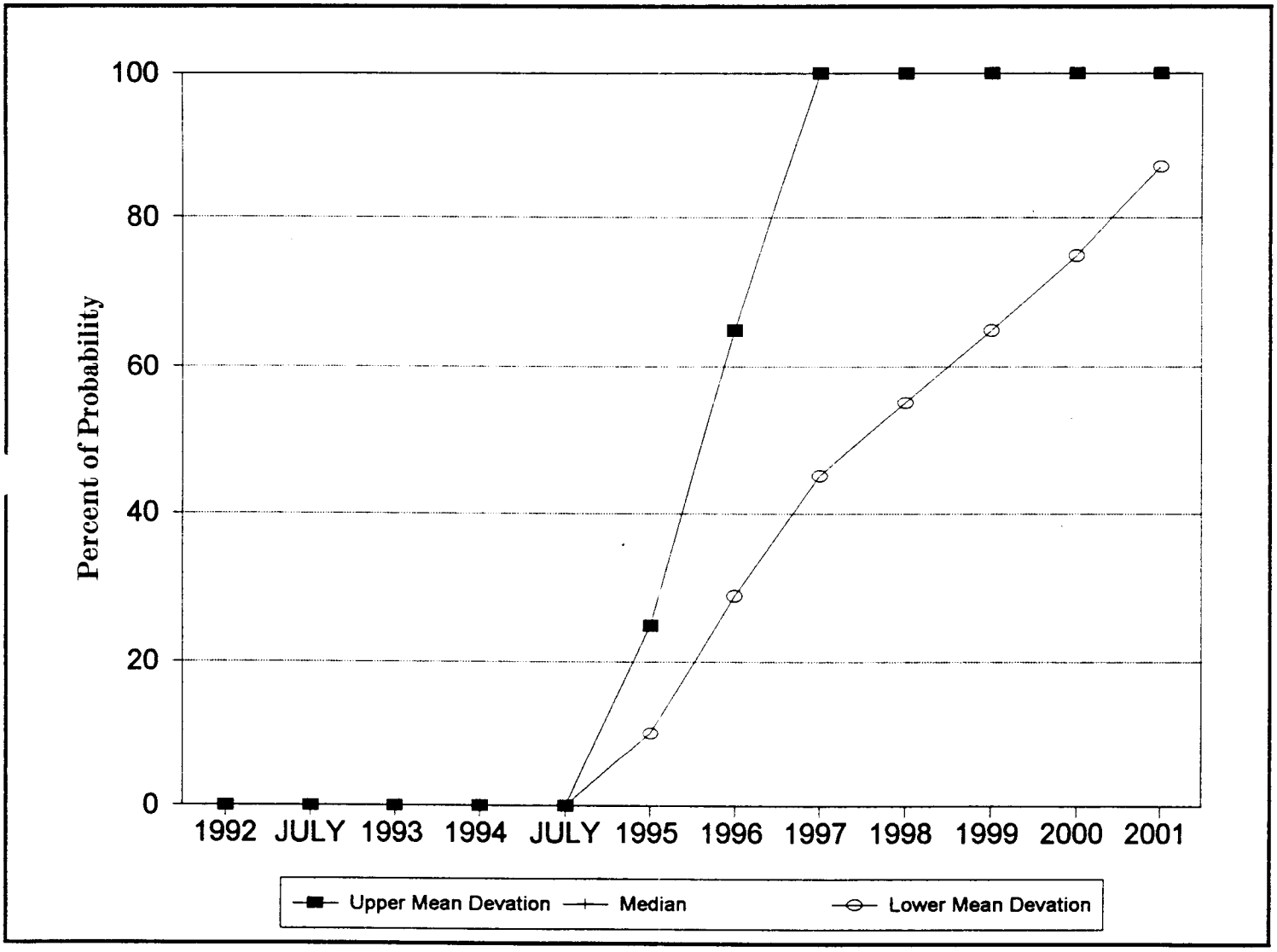
A police department adopts a nonlethal weapon.

The MCD group believed this event requires no explanation.

The group believed that soon after development of nonlethal weapons, a police agency will adopt it. In this case, the group believed that it might first occur between 1994 and 1995. Half of the group was at the median, believing that the course for nonlethal weapon development has been set by recent events and that by 1997 the probability is 100% that a police department will adopt a totally nonlethal weapon. The group below the median simply did not believe the technology was that far along in development.

EVENT: 3

A POLICE DEPARTMENT ADOPTS A NON-LETHAL WEAPON



EVENT FOUR

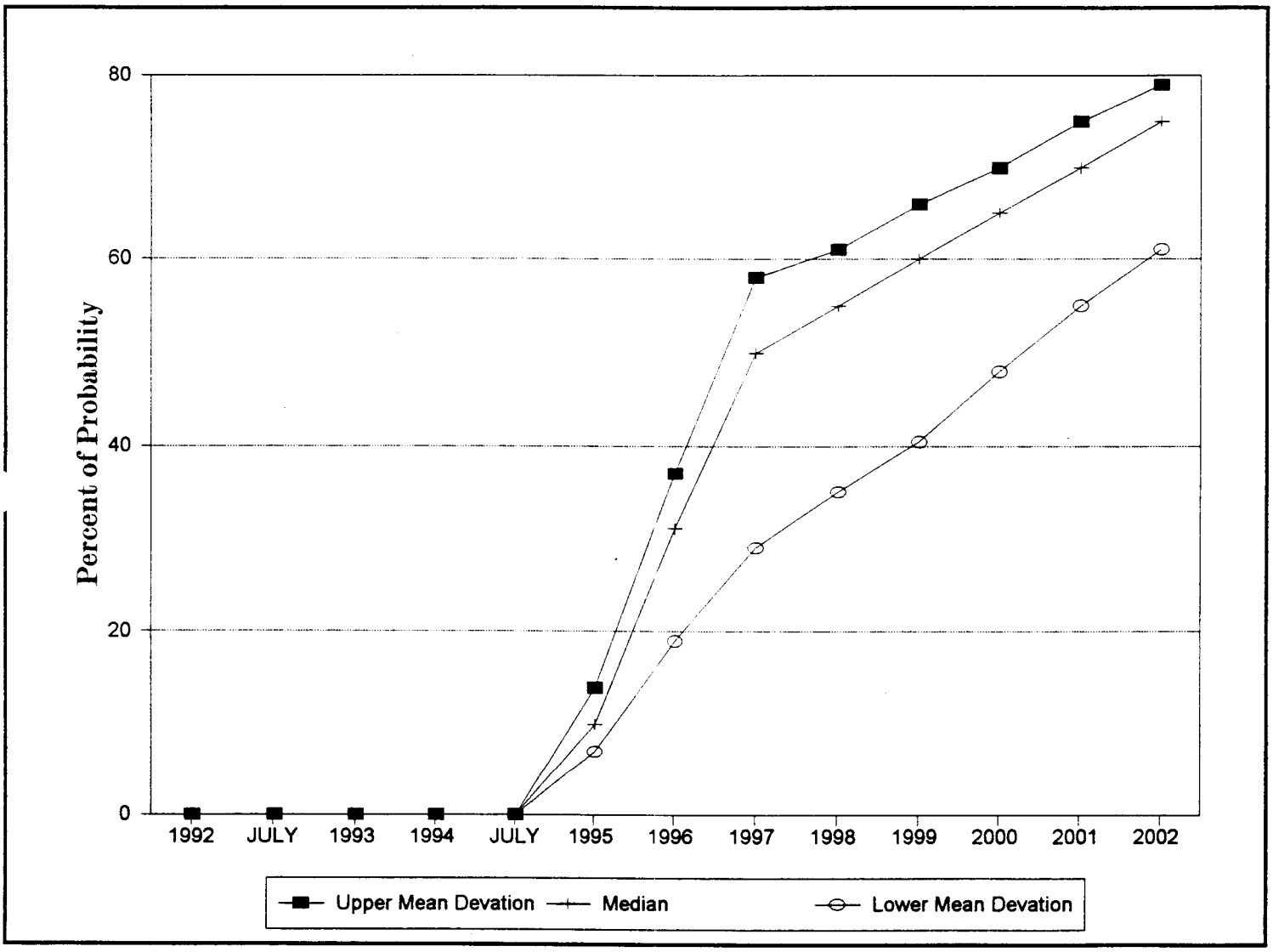
First successful use of a nonlethal weapon by a police officer.

The MCD group describe this event as the first use of a totally nonlethal weapon by a police officer in the line of duty. The use is totally successful in apprehending the suspect with no injury.

The group naturally believed that the first successful use of a nonlethal weapon would coincide with a police agency adoption. The group above the median had only slightly higher expectations of the occurrence which the group said would probably have a chance of occurring in between years two and three. The group below the median did not believe the technology would be available that soon and begins to close the gap with the median group in 2000, 2001,and 2002.

EVENT: 4

FIRST SUCCESSFUL USE OF A TOTALLY NON-LETHAL WEAPON BY A POLICE OFFICER



EVENT FIVE

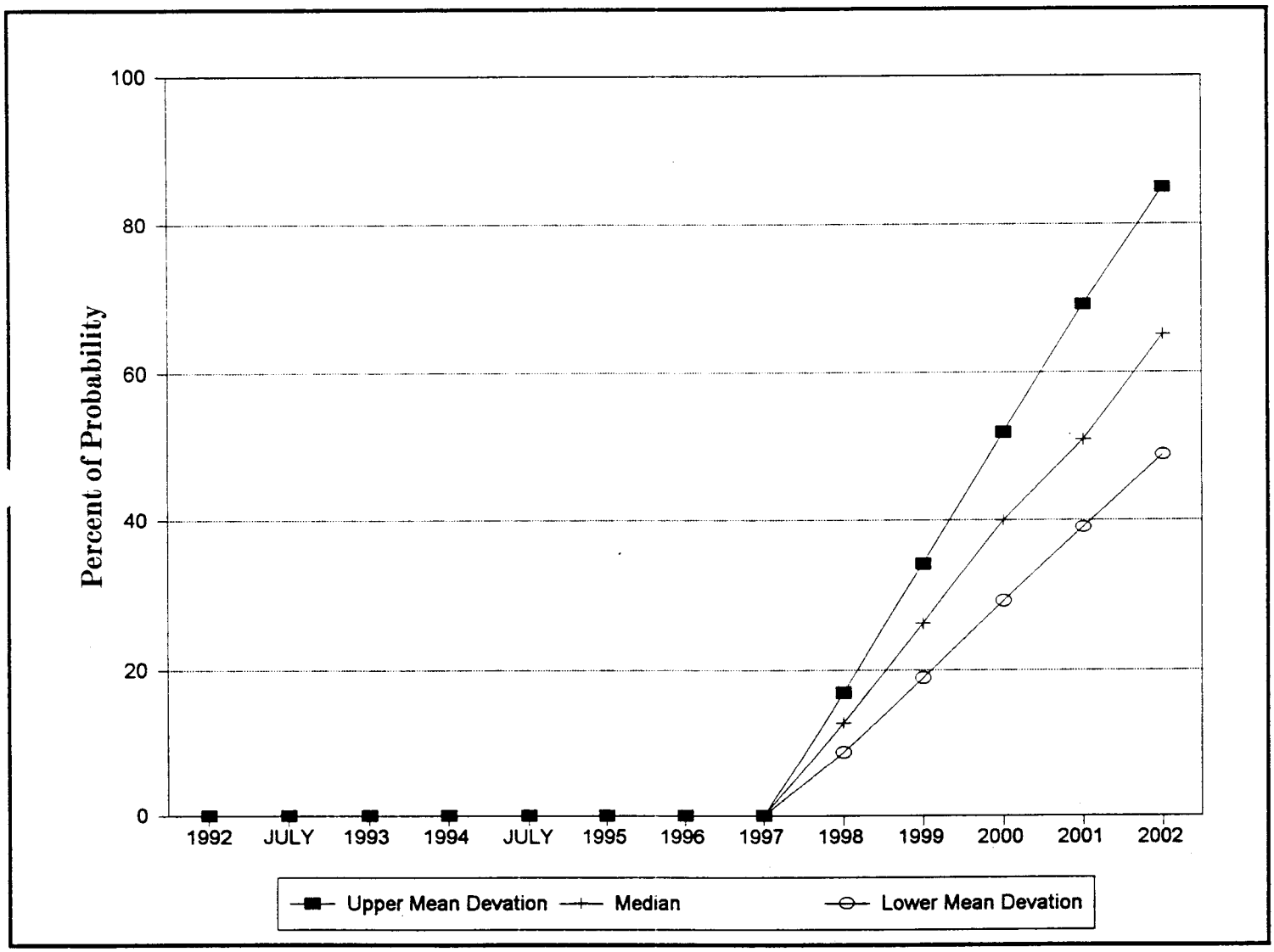
The nonlethal weapon fails to stop a suspect after police application.

The MCD group defines this event as the application of a nonlethal weapon by a police officer in the line of duty. As the weapon is used, it fails to stop the suspect and what ever the action the suspect is taking continues.

Inevitably, the group believed that the nonlethal weapon would fail to stop a suspect and jeopardize either a citizen or a police officer. The group varied little from the mean and believed that the first significant case would probably not occur until 1997. The group felt that early quality control and suspicion of the weapons would cause careful use. As time moves forward, quality control and care by police will wane and the inevitable will occur, thus shaking confidence in the weapon.

EVENT: 5

THE NON-LETHAL WEAPON FAILS TO STOP A SUSPECT AFTER POLICE APPLICATION



EVENT SIX

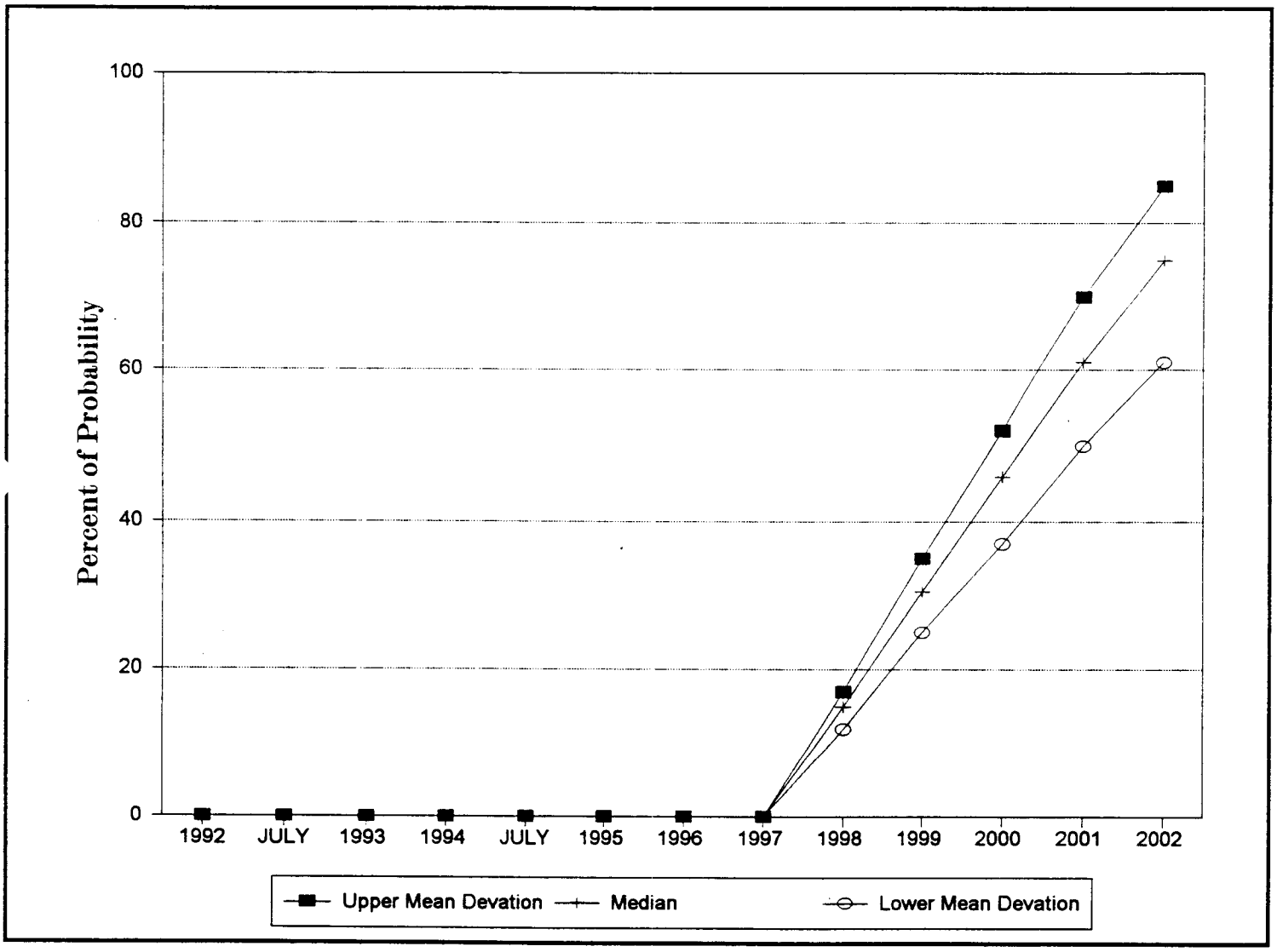
A police union files suit to stop deployment of a nonlethal weapon.

The MCD group defines this event as a union suit to stop a police department from implementing the use of a nonlethal weapon for any reason.

The group believes that in 1997 and beyond, that a police union will file a law suit to stop deployment of the nonlethal weapon. The group felt it would come at the time that an agency tries to totally replace the handgun with the nonlethal device. The group above the median felt it would happen much sooner because of the sensational nature of the event and its impact on police. The group below believed that the unions would be hesitant to get bad press so they would hold out for a good event to focus attention on the issue and then file suit in "self defense."

EVENT: 6

A POLICE UNION FILES SUIT TO STOP DEPLOYMENT OF A NON-LETHAL WEAPON



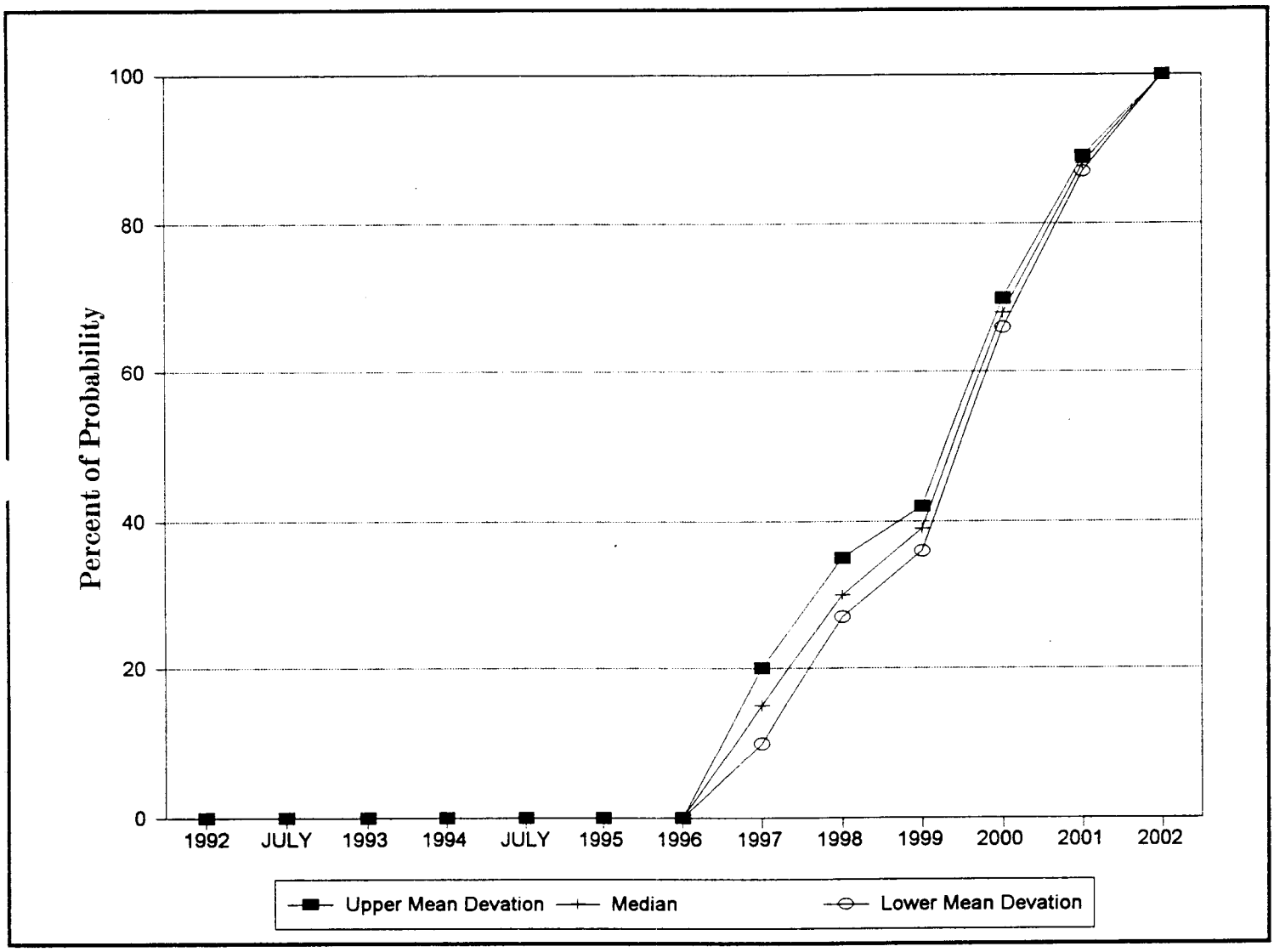
EVENT SEVEN

A police officer use the nonlethal weapon to abuse a suspect.

The MCD group describe this situation as one where an officer, given a nonlethal weapon by his department for self defense situations, uses the device to punish a suspect without cause. Unfortunately, the group knew it was only a matter of time before an officer used the new weapon to abuse a suspect. The group was very consistent with the median, believing the event would first potentially occur in 1996. When first introduced, the group felt officers would be careful with its application. As times wears on, human nature will take its course.

EVENT: 7

A POLICE OFFICER USES THE NON-LETHAL WEAPON TO ABUSE A SUSPECT



EVENT EIGHT

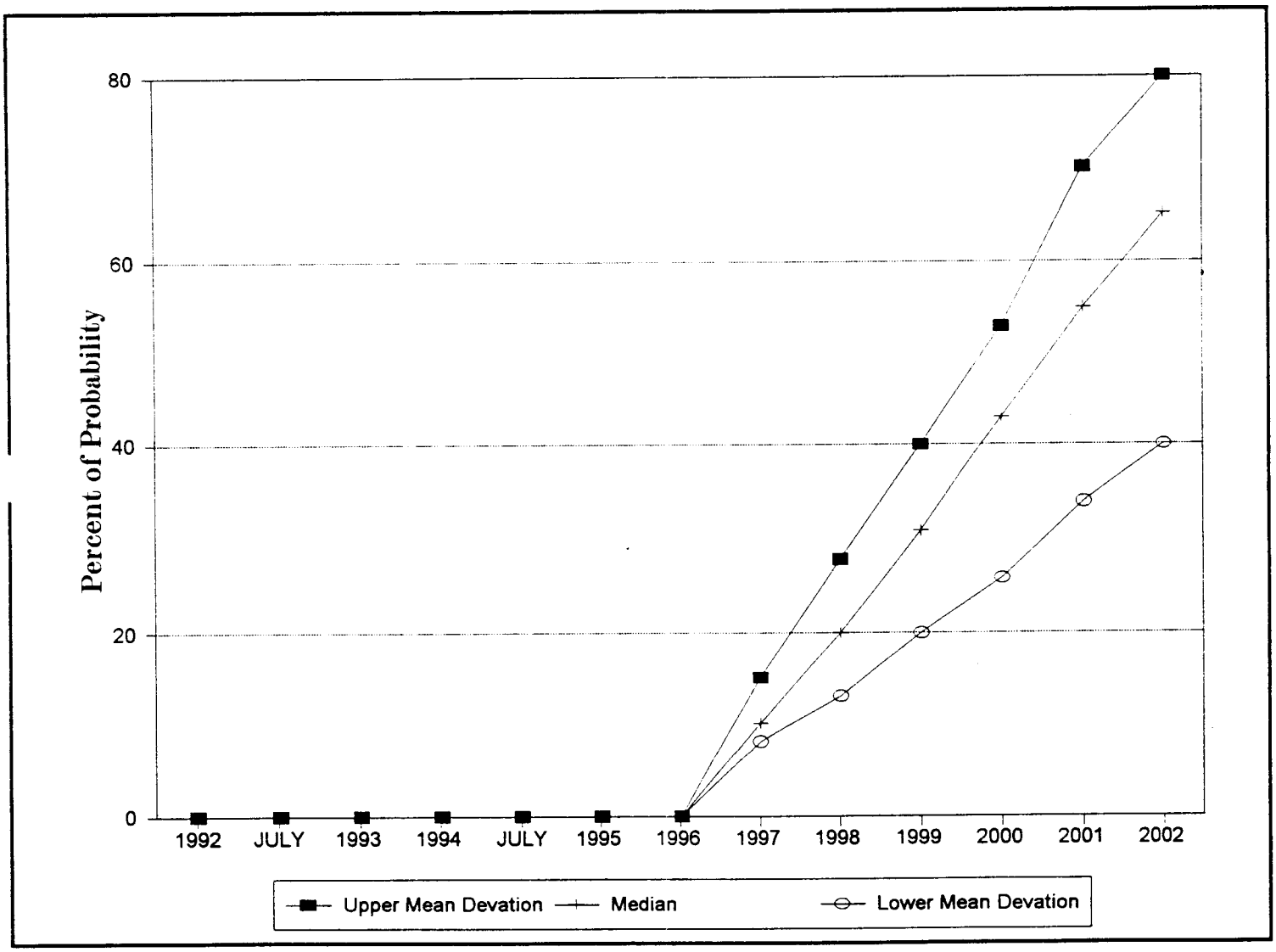
A department develops a new use of force policy requiring use of the nonlethal weapon prior to deadly force application.

The MCD group decries this event based on a new use of force policy being adopted by a police department. As part of the new policy, in a traditionally authorized deadly force situation, such as an attack with a knife, the policy require an officer to use the nonlethal weapon first. Only after the nonlethal device fails, can deadly force be used.

The group felt that the next important event would be the development of a use of force policy by a police agency that requires use of nonlethal technology prior to the use of deadly force. As noted by the graph, the group felt this would occur after 1996. The group above the median felt it would be pushed politically even before the weapon was properly evaluated. The group below the median felt that police pressure and community resistance to "disarming" the police would hold back the probability of this event.

EVENT: 8

A DEPARTMENT DEVELOPS A NEW USE OF FORCE POLICY REQUIRING USE OF THE NON-LETHAL WEAPON PRIOR TO DEADLY FORCE APPLICATION



EVENT NINE

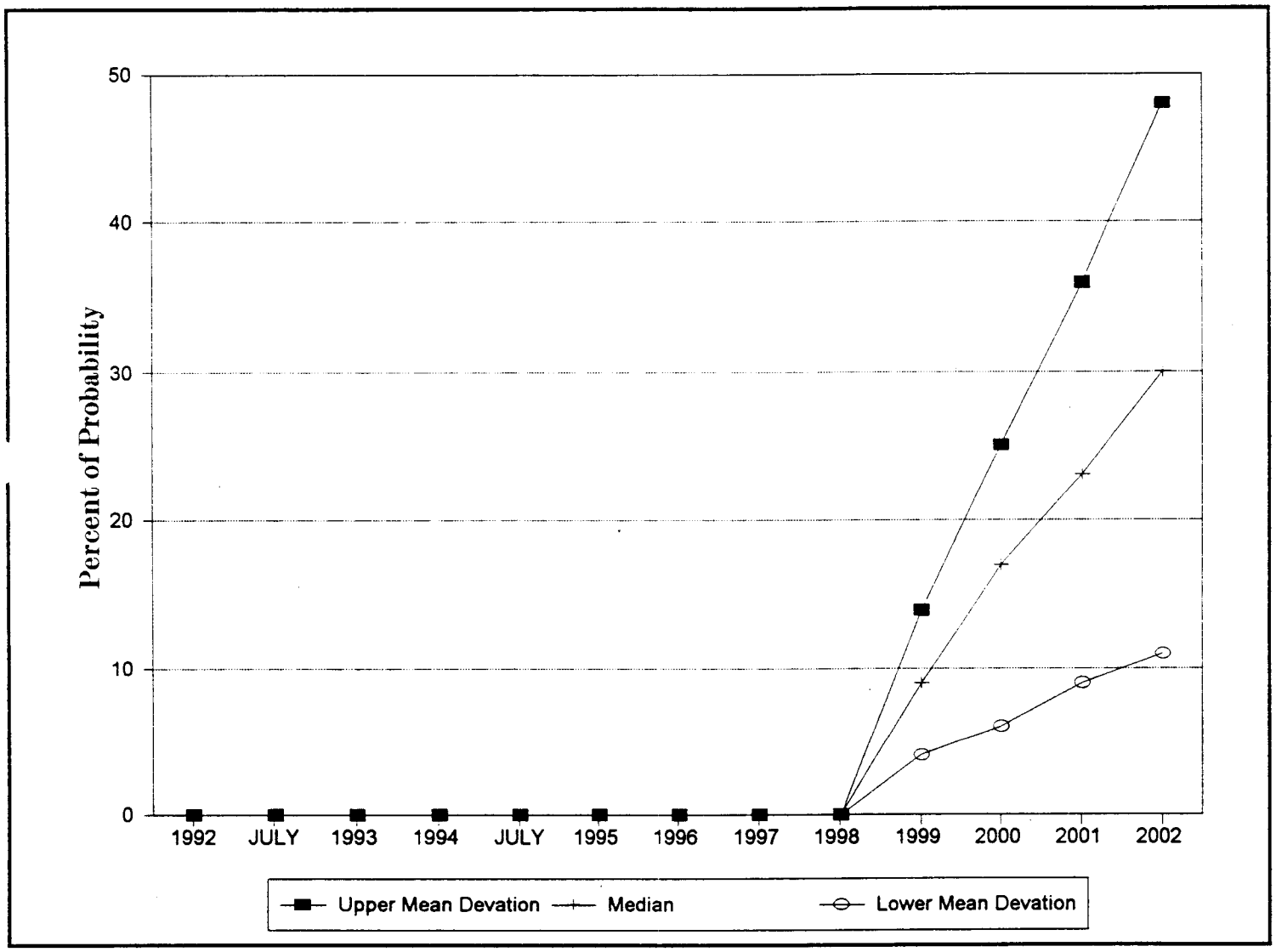
A long-term negative medical affect of the nonlethal weapon is discovered.

The MCD group defines this event as being unforeseen. As the device is used over some period of time, it is found that some long term medical implications that was not discovered earlier, is found after the device has been in use by police departments.

The group believed that at some point a long term medical problem from use of the weapon would develop and cloud its use. The group above the median just expressed the sentiment that political climates would force use of the weapons before full testing was complete, thus problems are not far behind. The group below the median did not see a medical issue as a significant factor once initial research was completed. They have faith in science.

EVENT: 9

A LONG-TERM NEGATIVE MEDICAL AFFECT OF THE WEAPON IS DISCOVERED



EVENT TEN

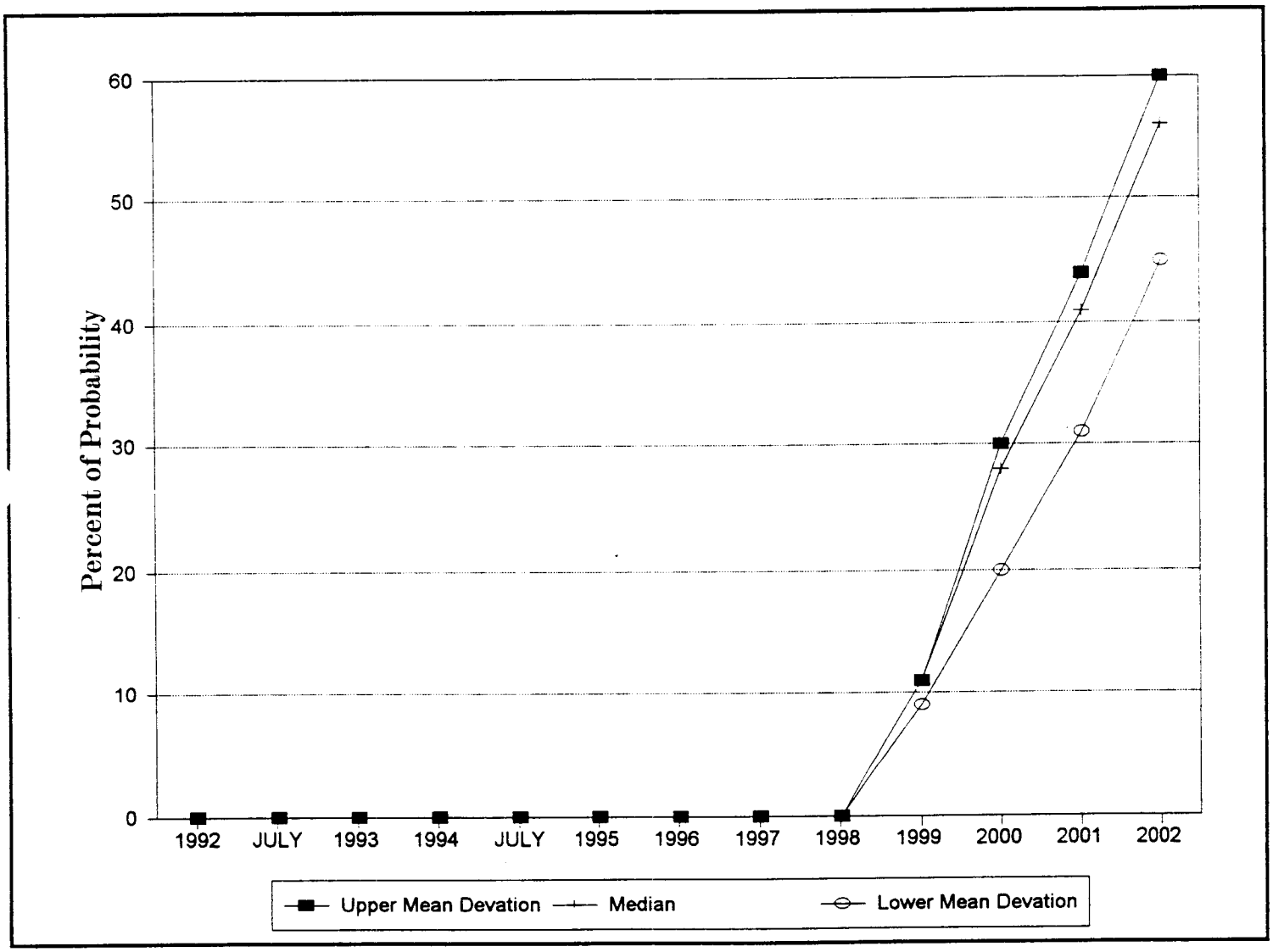
An officer's misuse of the nonlethal weapon leads to attempts to "politically" ban the use of it.

The MCD group describe this incident or event as different from event number seven. In this incident of abuse, the community and the media begin an effort to stop the use of the device for all officers based on the actions of one.

The group went forward on the theory of misuse and believes that a significant misuse would lead to political attempts to ban any use of the weapon. As one can see from the graph, the group did not vary much from the median. The group did not believe that these attempts would be successful because of the alternative to return to deadly force, but once again the focus would create tension and problems for police use of force situations.

EVENT: 10

AN OFFICER'S MISUSE OF THE NON-LETHAL WEAPON LEADS TO ATTEMPTS TO "POLITICALLY" BAN THE USE OF IT



CROSS-IMPACT ANALYSIS

The author next had the same group that completed the NGT and MCD, work individually, discuss and then worked alone to gain a tabulated consensus regarding the impact that each of the events would have on both the events and trends based on a percentage of impact either positive or negative. Sample forms are presented on the next pages. The author took this group consensus and then made final decisions about impacts based on the author's personal beliefs about the varying impacts.

At this point, a computer program was used to develop alternative futures based upon the originally generated trends and events (ten each) from the NGT. The following data was entered to provide tables from which to develop alternative futures:

*Event-to-event cross-impact matrix results

*Event-to-trend cross-impact matrix results

*Cumulative event probability for ten events

*Median forecasts of ten trends

The program compiled and correlated the sets of input data and generated 100 iterations or alternative futures.11 The one chosen is the one believed to be the most likely to occur. The author then chose two alternative futures to discuss potential deviations from the first scenario in the event that things don't go as anticipated. The purpose of these scenarios is to give the reader a glimpse of potential futures and allow strategic planning to be based on futures research rather than pure hunch.

The criterion used to select these scenarios were a common sense approach to the most likely outcomes in light of past history and current events.

Charts that depict the iterations selected for the three scenarios are provided on the next pages. Every attempt was made to correlate data and the facts in the scenarios.

SCENARIO: 1

TREND	10193	123193	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	100	101.3	364.6	305.7	357.7	420.6	398.6	316.3	297.5	304.2	232
2	100	101.9	343.1	304.8	320	408.5	443.2	451.8	455.7	368.2	378
3	100	103.3	162.6	135.5	174.8	229.7	282.4	301.3	332.8	276	306.4
4	100	108.1	220.8	196.3	229.8	344.3	362.5	408.5	402.3	336.5	337.7
5	100	105.1	85.1	87.1	132.1	50	57.9	130.1	171	163	211.7
6	100	105	110	115	120	125	130	135	140	145	150
7	100	100.9	137.9	127.6	134.7	193.8	219.6	242.2	213.9	186	198.3
8	100	105	110	115	120	125	131.5	137.8	172.4	179.2	185.4
9	100	104.1	136.4	119.1	160.5	206.8	197.4	224.3	206.9	190	245.7
10	100	105	110	93.8	146.2	132.8	203.9	214.3	195.2	175.9	175.8

EVENT	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	0	1	0	0	0	0	0	0	0	0
2	0	1	0	0	0	0	0	0	0	0
3	0	0	0	1	0	0	0	0	0	0
4	0	0	0	0	1	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	1	0	0
7	0	0	0	0	0	1	0	0	0	0
8	0	0	0	0	1	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	1	0	0	0

SCENARIO: 2

TREN	10193	123193	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	100	101.3	86.5	27.6	79.6	266.1	352.3	300.9	251.2	242.4	170.2
2	100	101.9	88.6	50.3	140.4	213.9	353.4	436.8	410.7	428	452.8
3	100	103.3	104.8	77.7	30.2	128.5	239	301.3	246	276	306.4
4	100	108.1	110.5	86	88	186.8	268	361.2	292	289.2	337.7
5	100	105.1	114	116	59.8	64.5	144.7	151.8	149.3	141.3	211.7
6	100	105	110	115	120	125	130	135	140	145	150
7	100	100.9	100.7	90.4	72.7	107	126.6	186.4	158.1	173.6	198.3
8	100	105	110	115	120	125	160.5	166.8	172.4	179.2	185.4
9	100	104.1	107.4	90.1	59	127	146.6	253.3	235.9	219	245.7
10	100	105	110	93.8	63.7	119	107.6	118	99	162.2	175.8

EVEN	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	0	0	0	1	0	0	0	0	0	0
2	0	0	0	0	0	1	0	0	0	0
3	0	0	0	0	1	0	0	0	0	0
4	0	0	0	0	1	0	0	0	0	0
5	0	0	0	0	0	1	0	0	0	0
6	0	0	0	0	1	0	0	0	0	0
7	0	0	0	0	0	0	0	0	1	0
8	0	0	0	0	0	0	1	0	0	0
9	0	0	0	0	0	0	0	1	0	0
10	0	0	0	0	0	0	0	0	0	1

SCENARIO: 3

TREN	10193	123193	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	100	101.3	241	305.7	357.7	266.1	259.6	254.5	173.9	180.6	201.1
2	100	101.9	238.3	304.8	320	243.9	443.2	451.8	455.7	368.2	288.2
3	100	103.3	104.8	135.5	174.8	113.9	311.4	344.7	361.8	305	263
4	100	108.1	157.8	196.3	229.8	171	331	329.7	370.8	305	243.2
5	100	105.1	56.2	87.1	132.1	136.8	195.4	195.2	265.1	257.1	255.1
6	100	105	110	115	120	125	130	135	140	145	150
7	100	100.9	100.7	127.6	134.7	107	163.8	180.2	201.5	173.6	148.7
8	100	105	110	115	120	125	160.5	166.8	172.4	179.2	185.4
9	100	104.1	107.4	119.1	160.5	127	219.1	202.5	228.6	211.7	194.9
10	100	105	110	93.8	146.2	105.2	121.4	186.7	195.2	175.9	162

EVEN	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	0	1	0	0	0	0	0	0	0	0
2	0	0	1	0	0	0	0	0	0	0
3	0	0	0	1	0	0	0	0	0	0
4	0	0	0	0	0	1	0	0	0	0
5	0	0	0	0	0	1	0	0	0	0
6	0	0	0	0	0	1	0	0	0	0
7	0	0	0	0	0	0	1	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	1	0	0

SCENARIO ONE (Most likely)

In 1993, the Carefree City Police Department, located in Southern California, continued to experienced unprecedented population growth. The city of four million was made up of cultural communities representing all major world countries and many new emigrees are first generation. However, 1993 has provided policing problems unprecedented in the city's two hundred year history. Marked by the largest civil disturbance of any major city in the United States in this century, Carefree continues to struggle with cultural clashes and civil disturbances that had polarized many of the minority communities and the local police precincts. Several highly publicized cases involving police use of force, viewed as excessive and sometimes criminal, continued to haunt police efforts to establish community based policing programs.

Law enforcement nationally continued to struggle with the use of force issue because of the antiquated systems of self defense for police officers and the lack of technological advances in the area of less-than-lethal and nonlethal alternatives to physical force. The budget deficit of the city hampered any research and development for such technology, a pattern that was consistent throughout law enforcement nationally. Police in Carefree used the basic weapons of police that are at least a century old: a gun and baton.

The aerospace and military industries faltered and downsize as a result of the reduction in military budgets. These industries struggled to find new direction in civil applications of technology, however, funding for research and development lagged. Several small companies looked into law enforcement technology applications. The single largest problem of technology transfer from military to civilian industries remained the cold war systems of "black projects" that keep much of the needed research data in classified documents. This required industries to reconstruct

millions of dollars and years of research that has already been completed. This remained the hurdle for new technology transfer to police work in 1994. The large aerospace industrial developers began efforts to create bureaucratic changes in government storage and classification of research.

In 1993, crimes of violence out-paced population growth. Carefree Police attributed the rise in violence to gang and street narcotic activity. The designer drug manufacturers made great strides in meeting the insatiable demand of the drug using public. Police and the criminal justice system remained at a loss to effectively reduce the problems of use, sales, gangs and violence.

Carefree Police Department began a program to develop better field tactics for its officers. The first pilot test of the new tactics were favorably rated by the officers involved. Also, the Department redesigned the entry level testing and oral interview process to identify police candidates with superior social and human interaction skills. This change was not received well by existing police officers and seen as a dramatic lowering of hiring standards. The police union attempted to stop the change through court action but was flatly rejected during early court hearings. The new practices were put in place during November, 1993.

With the combination of the media coverage of the many controversial use of force situations and the court battle over hiring standards, Carefree Police saw a decline of applications for police careers. It was becoming critical in minority and female classes, and it strained the Department's efforts to meet its affirmative action goals.

The criminal justice systems was again overwhelmed in 1993, and Carefree saw a large increase in early release and halfway house confinements of previously incarcerated felons. The system struggled in 1993 to find alternatives to overcrowded jails and lack of support services in parole and probation programs.

The technology advances for automated dispatch systems and

report writing systems began to improve police response in 1993. These same advances saw some improved research and development of experimental body armor for police protection with new prototypes on the horizon.

In 1994, The City of Carefree continued a moderate increase in violent crime that out-paced population growth. Automated dispatching systems of 1993 were built. But, the improvements were negated by the increasing number of calls for service and no new personnel increases for the police department. The criminal justice system struggled with overcrowding and nothing of note was offered to effectively resolve the problem.

In February, 1994, Blaster Industries (BI) demonstrated a new, handheld electromagnetic device that stunned humans and created a state of instant unconsciousness. The United States Department of Justice withheld public use of the weapon for further research to ensure public safety. Minimal research done by Blaster Industries regarding long term affects for humans did not detect a long term problem. The device worked by slowing brain wave activity and many civil rights and environmental groups protested the intrusion on the mind of any human being.

In Carefree, the minority communities continued to struggle with what they perceive as a more concentrated use of force by police in their communities. News reports of the new device and the restrictions on its use by police was seen as racially motivated and an institutional attempt to keep minorities oppressed by excessive use of force. The protests led to several civil unrest situations and clashes with police during 1994.

Carefree Police continued hiring and training of new personnel, emphasizing community based policing efforts and human relations skills. Police application rates improved in 1994 as the media recognized the Department's efforts to recruit community oriented police officers. The training efforts in new tactics of the day, showed improvement for field operations and some reduction

in police use of force situations was noted. Emphasis on nonlethal alternatives to physical force continued in training as officers are kept informed on the development and application of potential future technologies such as the Blaster Industries Brain Sleeper (BIBS). Several new prototypes of body armor were tested in police operations by Carefree P.D.

In December, 1994 a national controversy developed over a firearm killing of a 13 year old minority in Carefree who attacked police officers with a pocket knife. The incident spark days of protest in the minority communities. The protests were marred by sporadic crowd violence and clashes with squads of helmet-clad police. This further fueled that debate over perceived federal government "foot dragging" on the BIBS device.

In 1995, the often violent protests of police use of force continued in Carefree. Each new violent demonstration led to countercharges of police brutality and further violent demonstrations. The pressure continued on local, state and federal governments to release the new technology for nonlethal weapons. Individual violent crime significantly declined in 1994 and the only explanation seemed to be a community focus on unity over the police use of force issues.

In 1995, Carefree saw an increased in revenues for the first time since 1990. With the current focus on policing and crime, the city funnelled new life into the hiring and training of police. The community perceived this as effort to hire police more empathic to community concerns and more representative of the cultural mix of Carefree. The training programs had paid off in better field tactics and better protective body armor was purchased for police. The Department trained and prepared for the eventual implementation of nonlethal weapons in deadly force situations. The community based policing efforts began to gel into successful eradication of community problems and less emphasis on arresting every law violator by police.

In 1996, Carefree P.D. became the first police agency in the country to gain temporary approval to test the BIBS device in actual field tests. The experiment was closely controlled and monitored by the U.S. Department of Justice. Because of this caution and the limited use by a few officers, the community continued its protests of what they perceived as unnecessary delay in full implementation. The City Council studied ways to finance purchase of the device for $4,000 per unit. It represented an almost insurmountable cost for full implementation of the device. The community demanded implementation at any cost.

Officers were initially skeptical of the new device, feeling that political influence would cause implementation before the weapon was properly tested. Officers protested its use until their safety was guaranteed, considering there were no second chances in deadly force situations. Training and updates on the device and the pilot project were stepped up in 1996 as the Department responds to the concerns of its personnel.

Carefree continued hiring new police officers and increasing the size of the Department. During 1996 the Department experienced a dramatic decrease in applications for police jobs. This was attributed to renewed suspicion of police from minority communities. Police officials also believe that the new nonlethal device had created the same moral dilemma of meeting deadly force with only nonlethal force for people considering a career in law enforcement at the time.

In 1996, new body armor was obtained for police in an effort to head off criticism of the new weapon technology. The new armor covered more body mass, was lighter and had increased stopping power. Police officers were skeptical of the motive but were enthusiastic in the use of the armor.

A disturbing leap in crimes of violence shook the foundation of the entire use of force issue for police. Police protests focused on the dramatic rise in violent crime as a signal that requiring

nonlethal use of force put police at a great psychological disadvantage and potentially a great threat of personal risk. Issues between police and the community flared into protests in 1996.

In 1997, a Carefree P.D. officer used the new device on a jailed prisoner, who was merely using verbal threats to him from within a jail cell. A closed circuit monitor was being observed by a supervisor and a video tape was obtained for the internal investigation. During the investigation, a police officer released the video to the media thinking it would at least delay the implementation of the new weapon. The release initially caused an adverse reaction. However, the effort backfired. Civil rights groups acknowledged the intolerance of abusive use but worked on the angle of the minimal damage that resulted from this type of "force" abuse. Efforts to fully implement the weapons continued to increase from the community and the City Council desperately pushed for ways to finance the implementation. The test pilot continued with no adverse results.

Dramatically, in December, 1997, Carefree P.D. adopted the new weapon and required it use prior to deadly force. Despite great advances in tactics and body armor that has dramatically reduced confrontations and injuries to officers and suspects, police officers were gravely concerned and protested. Training continues and the police protests remained professional. The justice system was used in attempts to stop deployment.

In 1998, the Carefree community supported implementation of the new weapon. But suspicion prevailed. Many communities believe that the weapon was held back unnecessarily because police preferred guns. However, the focus turned positive as the year progressed and injuries and deaths to citizens and police dropped dramatically in the first year of full implementation. The Department training programs continue in full swing. The training had paid great dividends in better field tactics and lessened fears

of the new weapon and policy.

The community reaction to new technology and reduced use of force situations created a significant increase in the number of applicants for police careers.

On the down side, violent crime skyrocketed in 1998. The growing street violence centered on gang violence. Gang activity began to cross all economic and social scales and has permeated even the most quiet of communities.

In January, 1999, a second officer uses the weapon on a jailed prisoner to let him know "who is in charge." The outrage in the community and media force politicians that represent the minority communities to push for banning of the weapon as a item that police cannot be trusted to use. However, in a key victory for the Chief, in rare coalition with civil rights groups, the merits of reduced injuries and use of force quells the attempt to ban the BIBS device. In the months after that event, the coalition gained community support for the new weapon and safeguards that the Chief installed for reporting and reviewing each use.

The Police Department worked hard in its continuing effort to recruit officers that represent the best of community based policing skills. The unauthorized use of the weapon and the continued controversy had a devastating effect on the number of people that applied for the Department in 1999.

Technology in the body armor field made strides in 1999 with the development of clothing weighted material that could stop small caliber bullets. This technology began to improve the officers' feeling of safety, despite the loss of deadly force in deadly force situations. The City of Carefree was progressive in spending the money it took to equip its officers with all new advances in body armor.

In the year 2000, community support for the Department vastly improved as a result of community based policing efforts and the successful reduction of controversial uses of force. Use of

Physical force was down 72% after the new weapon was fully deployed. Field tactics greatly improved, as did police confidence in the new technology.

In 2000, a highly sophisticated computer dispatching and mobile phone system dramatically improved the response time of police in Carefree. The same year violent crime reduced significantly. Police attributed response time and the new weapon for the reduction in violent crime, despite the criminal justice system's continued efforts to rehabilitate criminals released from jails.

In 2000, the Chief instituted a new policy that eliminates the hand gun from field officers and only allowed deployment to special weapons and tactics team. Despite years of training and preparation, the protest was loud and long by police, culminating in a law suit. However, public sentiment and the successful record of the BIBS device quickly led to a court ruling in favor of the Chief. Many believe this issue also affected the number of people applying for police careers.

In 2001, several trends of the previous five years took a slight downturn. The community support continued to improve. Officers became accustom to the new policy on deadly weapons. Officer safety issues were lessened after the new weapon proved very reliable. Police applicants began to increase in numbers as the initial hysteria about the hand guns was overcome. Violent crime continued to improve for a two year period. 2001 became a year of solidarity and calm on most fronts in Carefree.

In 2002, Carefree experienced hiring freezes for all city employees and police applications plummeted. Although support for the Police Department had reached a several year high, the economic crunch brought new frustration to the application of new technology advances to the City. The budget crises caused the City to forestall the purchase of new BIBS device with greater technological advances and effectiveness. The City disregarded the poor repair of the old units.

In May, 2002, an officer was killed because the BIBS device did not work on a suspect with a gun. The fury of protest lasted beyond the revelation that poor repair was the cause and not the weapon itself. After months of training, meeting and discussions, the City bought the state-of-the-art models.

One new advance in the body armor field, a clothing-weight suit, was developed that could stop most bullets. This technology was field tested by police as uniform material and the police focus shifted to obtaining these items for 2003.

SCENARIO TWO (Alternative future)

In 1993, Carefree saw insignificant change in the field of use of force, tactics and technology. As the nation's police moved toward community based policing and away from strict arrest and control tactics, Carefree began efforts to recruit and hire officers with the skills to be effective in that mode. This period saw a readjustment in hiring methods and testing to identify people skills and empathetic behavior. The year 1993 was a basically uneventful and the status quo was maintained.

In 1994, nonlethal technology was still a thing of the future and interest was low. Use of force was not a significant issue for Carefree and its police. The Department began its new hiring efforts and successfully attracted community oriented people despite a lean year of hiring. The Chief was very happy with the performance of his new officers in the community. Recruitment became a problem because of the lack of hiring and the city began to focus on that issue as it tried to meet its affirmative action goals.

The criminal justice systems struggled with jail overcrowding by releasing prisoners on experimental rehabilitation programs that had a spotty record of success. Violent crime on the streets

continues to rise and the community pointed to these programs as the root cause. The frustrations of gang issues plague the city and police remain baffled as to remedies.

In 1995, nonlethal weapons were not an issue for police. The budget deficit and lack of hiring as officers retired, caused a drop in personnel. As a result, training for officers was drastically cut to put more officers on patrol. Tactics and field use of force became a problem and the community was beginning to question field tactics of police.

The 1995 hiring efforts for community oriented personnel had stalled with a hiring freeze on police. Tensions rose in the community and the Department as money grew short. Training was reduced, and officers grew tired of controversy, as use of force incidents rose.

In January, 1996, without advance notice, Blaster Industries announced the development of the Blaster Industries Brain Sleeper (BIBS), a totally nonlethal weapon that the company claimed would replace all police handguns at a cost of $4,000 per device. Many in the community and political leadership were skeptical and called for federal investigation of the device before it was used. Police in Carefree were immediately alarmed, noting that they believed they would be in danger from implementation of any such weapon, should it fail. The police union began lobbying to keep the weapon away until it is truly proven successful, feeling confident that knowing bureaucracy, it would take decades to study. The officers were not confident and felt a sense of impending doom.

With the continued hiring freeze training was non-existent. Field tactics suffered and the community was more vocal about its concerns for excessive use of force. Calls for service began to choke the effectiveness of community policing efforts and officers were once again chained to the radio and away from community concerns.

Recruitment is dramatically increased as the City establishes

a comprehensive recruitment drive in minority community appealing to assist in the community based policing efforts. The efforts were met with overwhelming success and applications began pouring in.

In January, 1997, a Midwest police department began to experiment with the BIBS device and had several successful uses. 20/20 Television did a one-hour special and the City of Carefree received frenzied calls for use of the device to reduce police use of force. The community demand was so great, the City scrambled to analyze the device and find funding, which ran into millions for a city that is just recovering from a bad economy.

Violent crime in the City took a dramatic drop in 1996. The Police explained that increased street violence was the cause of increased police in police use of force. This was quickly called into question by community activists. The pressure by the time of the 20\20 program reached fever pitch to obtain the devices.

In 1997, recruitment drives for personnel with social skills and problem solving skills showed good progress. Hiring began once again as the City found renewed revenues during an upturn in the economy. Comprehensive training programs for police regarding the new technology and compatible tactical training began to deal with the fatigue and fears of field officers. New strides toward better body armor produced lighter weight vests with better coverage and bullet stopping power. The controversy among police is brewed, but the trends in training and product development held trouble in check.

In 1998, field officer tactics demonstrated dramatic improvement. The intensive training of 1997 had paid measurable dividends in significantly reduced use of force situations. This was further evidenced by a significant reduction of officer and citizen injury and death in 1998.

The short term economic recovery turn to recession in 1998 and once again Carefree suffered in budget cuts for all Departments.

The lack of hiring destroyed the recruitment efforts of the last two years and once again fewer applicants were available for police vacancies.

In 1998, Carefree secured a federal grant for testing of a state of-the-art computer dispatch system. The system tied into police vehicles with instant communications on cellular phones to calling parties. The City decreases response time significantly and also observed a significant reduction of violent crime.

In November 1998, the Department tested the BIBS device after a major incident involving the questionable use of deadly force by two officers. The media and community outcry created a situation that demanded the test of the new device, much to the dismay of police officers. The Police Union immediately filed suit to stop the new weapon, but the effort failed and testing began in December, 1998.

In 1999, Carefree deployed the weapon for all field officers. By July the Department developed a new use of force policy requiring the use of the weapon prior to the use of deadly force. The officer rebellion continued and was greatly exacerbated by the failure of a device on a suspect that led to serious injury of two officers. The Department began an extensive training and development program to deal with the issue of officer safety and seemed to prevent serious problems with police morale and productivity.

The Department also made dramatic moves to community based policing as part of its training programs. Police officers were positively impacted by the community outreach and renewed commitment to the police.

Violent crime continued to emerge as a critical problem for Carefree as the gang problem reaches all areas of the City. The final bright moment of 1999 was the development of a full body armor suit, similar in weight to sweat clothing and capable of stopping handgun ammunition. Carefree immediately purchase the

items for uniform material and the police were grateful and responsive in productivity.

In 2000, a long term medical result of prolonged use of the weapon on humans was found to cause cancer. The discovery was discounted because the device would never be used under the conditions required by the experiments that required daily use over several months.

In the year 2001, the Department faced its first controversial misuse of the new weapon as a tool to force a confession from a suspect. A station surveillance camera in the holding area taped the event and the story created a media event. The furor was overshadowed by the lack of physical harm in favor of the advances in reducing overall use of force by officers. New guidelines for use and reporting were instituted by the Chief and the community quickly recovered from the single event.

In 2001, officers field tactics and teamwork continued to improve. At the same time, morale and productivity improved as well. The community based policing efforts began to build stronger ties in the community and police felt better about their role in solving community problems.

In 2001, the trend of street violent crime took a dramatic leap and the community remains paralyzed in solving the problem. Renewed calls for more prisons seem to be the only answer as once again, history repeats itself and rehabilitation efforts are a miserable failure.

In 2002, violent crime continued to plague the city and officers are becoming more frequent targets of violent crime. Body armor continued to improve, with better stopping power and lighter weight materials for warm weather conditions.

The Department experienced great improvement in community support. The support has reach levels not seen since the early 1990's. The interesting twist remained a decline in applications for police jobs. Some speculated street violence against police

was the root cause.

Late in 2002, an officers misuse of the BIBS device led to great debate and protest in the City. Efforts to politically ban the weapon were thwarted by a unique coalition between the Chief and civil rights groups. Both recognized that the best virtues far outweigh any abuse that results in no physical injury. The BIBS device became the weapon of choice for police.

SCENARIO THREE (Alternative future)

In 1993, Carefree P.D. began a course of revising hiring practices that identify people with people skills and social skills. The Department changed focus from strict arrest and control posture to community based policing. They also experienced a slow down in applications for police careers and hoped to change that trend through announcement of revised hiring standards and Department philosophy.

Simultaneously, violence in the streets continued to out pace population growth. The gang problem remained unchecked with no solution in sight. This problem was impacted by steady jail release programs because of overcrowding. Some saw the problem as related to the criminal justice system's shift towards rehabilitation in response to overcrowding, through community release rehabilitation programs.

In 1994, the BIBS device was demonstrated for the first time. The Department saw this as an opportunity to gain public support by testing the device for possible future use. Recognizing the obvious resistance by police before they announced testing, the Police Chief began an aggressive training program about the weapon. He also began a major media campaign to capitalize on community support as a pioneer in efforts to reduce use of force injuries and death.

The officers reaction was guarded but cooperative as the training efforts paid off. The community rallied to support the Chief and lobbied political leaders to help finance the device which could cost millions of dollars if fully implemented for a Department of 10,000 officers.

By the end of 1994, the support of the community was so great, recruitment efforts took a huge leap forward in all communities.

In 1995, community pressure to implement the weapon continued to grow with evidence of successful use of the weapon by Carefree Police. The police training efforts were very successful in giving police guarded optimism about the device, and field tactics developed for the device, greatly improved officers daily tactics. The improved field tactics resulted in less use of force situations without even using the device and injuries to officers and citizen dropped dramatically.

Hiring was moving at a good rate and recruitment of people with social and empathetic skills continued. The Department believed that the new process greated aided in the community based policing efforts. The newer officers displayed those abilities in daily contacts and subtly influenced the older officers.

After the continued success of the device and great training programs, the Chief was able to adopt the weapon for the entire Department. It became an alternative to deadly force at the discretion of the officer involved in the situation. The public support was at an all time high for as long as most in Carefree could remember.

One down side to this period was a drop in application for the new police jobs. Apparently the public did not have the benefit of the police training on the device. Many potential applicants felt that it would leave officers defenseless in lethal force situations and the Department had a difficult time in 1996 changing that misperception.

In 1997, Carefree experienced a settling of many issues with

the new weapon. It was accepted by the Department and the community. It was a quiet period on use of force issues and no significant events occurred.

In 1998, the calm was broken by a BIBS device that failed to stop a suspect with a gun. The officer was killed and as a result the police officers were paralyzed with fear. Quickly the Police Union filed a suit to stop use of the weapon as a nonlethal alternative to deadly force.

The community outrage at the Union's action created mass demonstrations to keep the device in place. The Chief once again began a major training program after analysis of the device that failed showed it was poor maintenance that caused the failure and not the technology. Aggressive steps were taken to improve quality control and maintenance procedures.

The law suit was dropped by the Union after negotiations with the Chief. It was clearly a good leadership effort by the Chief as he held the system together.

The down side of the year was the continued perception by potential police candidates that the job was not safe because of the device. The bad press coverage was no help in quelling the problem. The Department's community based policing efforts got a shot in the arm from approval to hire 1000 new officers in 1998. The new selection process continued to hire the type of officers that worked affectively under community based policing philosophies.

In 1999, the Department investigated the first blatant misuse of the device by an officer to threaten a gang member who not committed a crime. The officer attempted to explain her actions as an effort to curtail street violence that was significantly outpacing population growth in Carefree for the last two years. The public was outraged at the explanation and the Chief quickly removed the officer from the Department for excessive force.

Once again, the Chief successfully kept a horrible incident

from destroying the years of hard work in the community based policing programs. He kept the public's support through this period and instituted new reporting and investigation procedures to prevent future abuse.

In the year 2000, another incident of misuse led to attempts by some political leaders to take the weapon away from police. The effort failed miserably because of community support and a coalition of civil rights group that stood by the Department. It was difficult to defeat the argument that even with some abuse, the device causes no lasting physical harm to citizens.

The Department continued to hire new officers, but could not overcome the bad publicity of these two abuse incidents. Also many saw the new weapon as a threat to police lives for years to come, despite Department efforts to show otherwise.

Patrol dispatch automation continued to show good improvement and response time was reduced. However, the early response did not seem to increase use of force situations as some might predict.

The year 2001 and 2002 proved to be uneventful years for use of force related issues. The City and Chief had weathered the period well through planning and strategic efforts to institute the weapon as an alternative to deadly force. Plans to replace firearms with the weapon are being very carefully studied with the same aplomb shown during the last ten year period. The future is bright for the City of Carefree. Only violent crime remains out of control.

OVERVIEW

Futures research cannot accurately forecast the future regardless of the techniques used, the expertise of the researcher or any human effort known to this world. Clearly, from the scenarios provided, the wide range of alternative futures has an infinite number of possibilities and outcomes that no one could

ever anticipate. Futures research helps to guide and document that intuition in a form that all good leaders can one day develop and refine on a daily basis, a vision for the future of any endeavor.

In police careers, officers too often become slaves to the chaos, crisis and carnage of our daily activities. We seldom stop to look forward and find long range solutions to seemingly insurmountable issues. The minimal investment in time that futures research can provide may prevent this. One is challenged to break the mode of the past and look to a future. One may be able to control more than is realized.

In the scenarios provided, three distinct futures are outlined. The hope is that one would realize the common threads that could be controlled by strategic planning. Scenario Three is no more likely to occur in the same order of events and trends than any other type scenario, yet the planning and efforts of the Chief could be accomplished in any situation. As the trends and events change, so must the future projection. It must be continually updated based on known events and trends as they occur.

A department cannot have a single future planning effort and then wait for it to happen. Each day requires a renewed analysis of the events of the day and potentially a change in the forecasted futures. Once this system is in place with the management and staff of a Department, it will become a welcome relief from the frustration a future guided, today, by single incidents and crises that stifle planning and build frustration in all police agencies. As leaders, the ultimate responsibility is vision and vision is made up of dreams and values. Those dreams and values of an entire organization can be captured in futures research if only the commitment is made.

POLICY CONSIDERATIONS

The events and trends forecasted have differing impacts that

require thought about the police issues facing a major police agency. For this consideration of policy, the author selected his own agency, the Los Angeles Police Department (LAPD).

Focusing on the sub-issue of training, the scenarios clearly point out the impact of preparation versus the lack of preparation. From a policy standpoint, the LAPD must unequivocally develop a future strategy that focuses on the development of training and information systems to implement any new nonlethal technology. As the first scenario points out, preparation can focus your efforts on those situations the LAPD know will occur, positive or negative, and prepare now for the actions to deal with the events and trends forecasted. The LAPD knows it will have controversial uses of force with any new device and preparation for that happening can deal with the issue head-on rather than reactionary and defensive. The LAPD can also take great advantage of positive events and trends for both retention and hiring, the other two sub-issues this study addresses.

If the LAPD commits to strategic planning to develop training and information programs for nonlethal weapons application, the retention issue will be lessened. Current officers can be brought into the process of implementation to ally their fears that a non-lethal weapon places them in any danger.

Moreover, the sub-issue of recruitment is directly impacted by the feelings of current personnel at the time of those recruiting efforts. If the LAPD has prepared its current employees, this will not be a significant deterrent to hiring. However, The LAPD must also focus strategic planning efforts to educate and prepare the public at large about potential nonlethal technologies. This effort can attract candidates who would be lured by such an event or trend and simultaneously reduce the fears of those offended by such concerns.

STRATEGIC PLANNING

Los Angeles is the second largest city in the United States, with a population over four million. The City covers nearly 500 square miles. The population speaks over 124 different languages and boasts 92 different cultures. It currently has the smallest per capita police department of any large city in the U.S. The City recently went through an exhaustive search for a new police chief. For the first time in 45 years, a chief was selected from the outside. With this backdrop, a strategic plan is presented.

MISSION STATEMENT

The mission statement adopted by the Los Angeles Police Department on October 8, 1993 is as follows:

> Our mission is to work in partnership with all the diverse residential and business communities of the city, wherever people live, work, or visit, to enhance public safety and to reduce the fear and incidence of crime.
>
> By working jointly with the people of Los Angeles, the members of the Los Angeles Police Department and other public agencies, we act as leaders to protect and serve our community.
>
> To accomplish these goals our commitment is to serve every individual in Los Angeles with respect and dignity. Our mandate is to do so with honor and integrity.

This mission statement was written by Chief Williams and presented to the Department as the final product. It is now the mission statement of the Los Angeles Police Department.

Within the Manual of the Los Angeles Police Department are

values and objectives developed over the last 25 years by various members of the LAPD. Some of these values and objectives give guidance to this futures study issue. One such value is the reverence for human life.

> Reverence for human life is the primary consideration in developing tactics and strategies...12

The Law Enforcement Code of Ethics is also a part of the value statements of the LAPD Manual and it addresses use of force. It states,

> ...never employing unnecessary force or violence...13

These values and the mission set a course that clearly fosters and supports efforts to deploy nonlethal weapons as they are produced.

To address the issue statement, "What impact will limiting use of force to solely nonlethal weapons have on major city law enforcement by 2002 A.D.?", a mission statement was developed for this study.

The mission of the LAPD in the development of use of force policy and tactics is to work closely with the diverse communities and other public and private agencies, to develop, test and implement any technology that can reduce the use of physical and/or deadly force. This includes doing everything possible to prevent injury or death to police officers and the public, whenever use of force by police is required to apprehend suspects or protect the public.

The objectives of this mission are as follows:

* To prepare for affects of nonlethal technology on recruitment of future officers.
* To develop information systems and programs that properly educate the public regarding nonlethal technology.
* To develop comprehensive training programs for our officers regarding evaluation, testing and implementation.

* To work with public and private agencies to generate research and development of nonlethal technology for application in law enforcement.
* To work within the LAPD, allowing all levels of the organization to participate, in the evaluation, testing, training and implementation of any nonlethal technology.
* To ensure testing and evaluation is complete and accurate regarding any new technology, protecting the officers and City from personal and civil liability.

SITUATIONAL ANALYSIS

In the development of a strategic plan for the LAPD, based on this mission statement, eight members of the original MCD group were formed to conduct a Strategic Assumption Surfacing Technique.

Commander Dan Watson, LAPD
Captain Mark Leap, LAPD
Captain John Desmond, LAPD
Lieutenant Charlie Beck, LAPD
Lieutenant Earl Paysinger, LAPD
Sergeant John Romero, LAPD
Officer Steve Moore, LAPD
Officer Saila Adams, LAPD

This group was specifically selected from the LAPD to develop a strategic plan based on an analysis of the environmental weaknesses, opportunities, threats, and strengths to build a clear foundation for the underlying planning. This process will be referred to as the WOTS-UP analysis. The WOTS-UP analysis is a framework used to assist the author and the group, in evaluating the impact of the identified trends and events. It also formulates a structure to identify and analyze the weaknesses and strengths of the LAPD regarding the issue and sub-issues. Moreover, it focuses

attention on the opportunities and threats to successful implementation of a plan in the organization environment, as well as the external environment that might impact planning and implementation efforts in the LAPD.

The WOTS-UP group analyzed the ten trends and events identified earlier, and brain-stormed in an open group discussion. The brainstorming was directed by the author, focusing on threats and opportunities for each regarding the LAPD. External and internal issues were identified by the group, as well as other external factors, for their impact on the LAPD's ability to respond to the strategic issue. Each trend and event, based on the perspective of each group member, was seen as both a threat and an opportunity.

Finally, the group had an open discussion regarding the LAPD's strengths and weakness in responding to this strategic plan.

Environment

The author chose the following format to clearly lay out the environment, and to identify the threats and opportunities as a result of the WOTS-UP group efforts:

SOCIAL

TECHNICAL

ENVIRONMENTAL

ECONOMIC

POLITICAL

This format will include identification of the internal and external environment of the LAPD. The analysis is a compilation and organization of the WOTS-UP groups discussion, with the author's final selection of key factors. No attempt was made to include every factor identified by the group. As a result of the research and experience of the author, the key issues and factors were selected at the author's preference.

Social

The social environment is at an all time high throughout the country as a result of the Rodney King Affair. Government and communities call for changes in police use of force, and yet, few are willing to pay for the changes needed to address the issue. The greatest single hurdle is the conflicting interests and demands that appear to make consensus and unity of direction a dream. Special interests groups vary on the subject of use of force. Some believe the police should never be allowed to use force, under the false belief that a "Startrek Faser" actually exists and is being denied to the public. Some believe that no one cares about the daily death and injuries to police that escalate with the upward spiral of violence in the community. The news media continues in a relentless reporting of negative incidents of use of force, while critics of the media say the media distorts the truth and neglect the thousands of uses of force that result in no injury at all. With this backdrop, some clear threats and opportunities were identified during the research phase.

Opportunities

Community pressure, nation-wide and in Los Angeles, for change can be channelled to assist police in gaining support and funding for research and development of new nonlethal technologies. The continual media focus on police use of force incidents and law enforcement related deaths, can focus dialogue on alternatives to deadly force. Internally, LAPD officers are demanding the same alternatives to deadly force. The officers believe that very little exists in the mid-range use of force policy, between firm grip and the baton. Clearly, the LAPD is ready for any new technology that can assist in this area.

Community pressure, nation-wide and in Los Angeles will welcome methodical, controlled experimentation of nonlethal weapons

to prevent physical force. After two years of unprecedented attention on police use of force in Los Angeles and throughout the U.S., Los Angeles is receptive to new weapons that can prevent serious injury or death to suspects and officers. A new form of tear gas, oleo resin capsicum (OC) based, was introduced in 1993 and was implemented Department-wide within a few short months. Only minimal resistance by the ACLU was experienced, however, the Police Commission in Los Angeles was not swayed by efforts to prevent its deployment. Clearly, Los Angeles is ready for any new nonlethal technology.

Politicians are greatly impacted by this same community pressure and can be pulled in to assist in new technology development and implementation if the politicians can be shown it will benefit their careers. Nationally there appears to be little support within the government. The focus nationally is on economics. At the State level, The Governor and Attorney General have been very supportive of use of force alternatives as was seen in the implementation of the OC tear gas at a record pace for the usual State bureaucracies. At one point, the California State Department of Justice had delayed the use of the OC tear gas for over six years because the California Environmental Protection Agency (Cal EPA) was concerned about the environmental impact of the new tear gas. After six years of Cal EPA stalling, the Governor and Attorney General stepped in and released OC to law enforcement and the public at large for self defense. The current State government is ready to assist in efforts to implement new nonlethal technologies.

Chief Willie Williams of the LAPD has also shown great support for any new technology. The entire organization will test and adopt any affective technology.

Spiralling street violence in Los Angeles can be used strategically to educate officers about the benefits of nonlethal weapons. New technology that is less lethal for suspects and less

traumatic emotionally for the officers who use them, will actually allow officers more safety. The officers will be afforded more opportunity for judgement in nonlethal weapons use, because injuries and deaths are reduced. Most officers truly look forward to nonlethal technology as an alternative to serious physical force and deadly force.

The local media can be used to assist in research and design, as well as implementation of any new technology. The Los Angeles media has been focused for some time on police use of force and hardly a day goes by that an article or story is not told regarding it. The media can be used to search out and assist in the development of new technology just by public and political awareness of new efforts. The media in Los Angeles has tremendous potential for informing the public and police officers in general about new technologies as they emerge.

Threats

Uncoordinated and factional community pressures in Los Angeles and the nation can stifle efforts to implement new technologies. If the community is not properly and accurately informed about any new technologies, implementation of a new device will be extremely difficult. The Los Angeles community in particular has always shown resistance to any new self defense device and that resistance will continue with an uninformed or misinformed public.

An uninformed media can destroy efforts with a single bad incident and misinformation, anywhere in the U.S. This is painfully true in Los Angeles. One only needs to remember the loss of upper-body neck restraints in Los Angeles to prove this. In 1982, despite proof that the carotid control hold did not cause a death in Los Angeles, this hold was lost along with the bar-arm control that did cause death. No amount of information today that shows the carotid control hold to be nonlethal will even allow the

issue to be discussed in Los Angeles.

Police organizations, if left out of the process of study and implementation of new technology, will surely fight efforts to move away from lethal weapons if uninformed. Basic management and leadership training shows that inclusion of the organization in the efforts to implement new technologies or ideas is essential. In Los Angeles, because of the two years of organization change and distrust of management as a result of the entire restructuring of the LAPD management, inclusion of officers in this process is critical to be effective.

Based upon the politics of the City at the time of new weapon implementation, unrelated labor strife may cause union opposition for the pure sake of opposition. For nearly two years, the police officers' union has been without a contract. Therefore, any new meet and confer items regarding officers working conditions is rejected by the union, until a contract can be reached.

Single issue politicians with great power, of which there are five in Los Angeles, left out of the process, can easily derail any such effort with fictional information. Los Angeles politics are volatile at this time. At least five City Council members, in the opinion of this author, have worked hard to block any new self defense technology from the LAPD. Nothing indicates that this will change in the near future. Few state and national politicians seem to show any significant interest in this subject for Los Angeles.

Society at large and police generally will resist efforts to curtail the availability of lethal weapons. The gun owners of America are a formidable foe to any effort that may restrict the right to bear arms. At all levels of society, and Los Angeles City is no exception, resistance could come from this group of individuals if new technology is either withheld from general public use, or if new technology is perceived as a beginning of focused attention on lethal weapons bans.

Violent arrestees, who believe only nonlethal force will be

used on them by police will see no fear in using deadly force to escape arrest. The perverbial "unfair gunfight" issue will cause great concern for police officers everywhere.

A single misuse, which is inevitable with human police officers, can derail all efforts towards implementation as was demonstrated with the chokehold controversy of the early 1980's for LAPD. Any new technology will be abused just as existing technology and weapons are. Los Angeles in a hot bed of controversy for police use of force. Lack of preparation for the inevitable abuse can be the undoing of any new technology.

Technical

The technical aspects of nonlethal weapons is shrouded in the secrecy of cold war politics and will remain so for many years according to scientific sources used in this research. In addition to the belief that nonlethal technologies can be easily converted to highly lethal weapons with minimal technological skills, trade secrets of scientists add a new dimension to the problem. Throughout the world, tens of thousands of highly skilled and brilliant minds have developed specialized fields of information of which only a select few people are aware. Add to this backdrop the dying defense and aerospace industries, and these people are literally fighting for their financial lives. Countries are falling apart and economies destroyed. These individuals will closely guard their secrets for the highest bidder and today that is not any form of United States government entity. However, several opportunities can overcome the threats to success.

Opportunities

New chemical sprays are already beginning to show success and with improved delivery systems, these chemicals can become formidable weapons. OC tear gas has been very effective in Los Angeles. However, it still appears to be ineffective on suspects under the influence of PCP and suspects with severe mental

problems.

In the field of electromagnetics, many scientists already can alter brain activity and control human behavior. These once top secret programs are already beginning to surface in discussions with several noted experts in the field. This technology poses great potential for development in the next five to ten years, according to discussions with the author.

Government and private military programs could be channel to this field of technology with great effort and focus on the part of visionary leaders around the country. Law enforcement has traditionally made no effort in this field. However, the time is here to become involved. The government is looking for ways to convert military industries to civilian applications. Many federal government agencies are currently working independently on nonlethal technologies and again, leadership, locally and nationally, can channel collective effort towards common goals.

Threats

Sensational singular failures of new technology can derail any new idea without proper focus of the products development and research. In Los Angeles, as previously stated, this is critical.

Long term medical implications are the greatest threat to new technologies and simply stated, some time, often years of use, must be risked to finally identify those implications. These continue to derail all kinds of technology transfer to law enforcement throughout history, such as chokeholds, less-lethal projectiles, stunguns, etc.

Officer abuse of new technology is inevitable and a great threat as stated in the social arena.

Many deaths related to less-lethal and nonlethal weapons are caused by sudden death syndrome, unrelated to the use of any force. However, the poor state of taxpayer funded medical pathology leads

to inaccurate and often incomplete findings on such deaths. This leads to community and political pressure to ban any such device regardless of its previous success. As stated, in the case of the chokeholds in Los Angeles, this was acutely true.

Environmental

The environmental issues regarding nonlethal technology is difficult to assess without actually knowing what future technologies will be. However, foresight can capture visionary opportunities and avoid the foreseeable threats.

Opportunities

Nonlethal weapons could lead to eliminating the choice of deadly force. This simple fact is often forgotten in the efforts to forestall new technology applications. Law enforcement must become more sophisticated in educating the community about the limits of police use of force options. Nationally and locally in L.A., as new technologies are identified for testing, this long range goal must be focused to balance short term concerns of those who might stall testing and application.

Methodical medical studies on devices prior and during actual implementation can greatly reduce the chance of bad information being release and tragedy being avoided. Los Angeles political leaders can play a role in coaxing national leaders to fund and organized long term medical evaluations of new technologies to prevent this dilemma. The issue is money and local government is not equipped to finance these endeavors.

Successful research must balance the need of humane detention and apprehension of violent criminals with some of the environmental concerns that are popular today. As was the case in the OC tear gas for California, any new technology must be balanced

against the greater good of the people of our communities.

Threats

Ancillary health hazards to technology developers and users could become a factor with the chemical and electromagnetic devices. Anytime chemical or physical applications are made to the human body, unforeseen results may appear without proper testing. Long term, unforeseen medical implications are always a concern in any new application on human beings under all circumstances.

Civil rights groups focus on intrusion of the human body or privacy will always be a factor in these fields. Any device or technology that involves physical touching and/or application to the body creates a need to review the civil rights issues involved. Nationally, and most certainly in Los Angeles, the focus of civil rights is on any government role. Clearly, this threat will be present in any nonlethal technology developed, and the justifiable concerns of civil rights must be addressed.

Economic

The greatest threat to the development of nonlethal technology at this time is the uncertain and depressed economy of this country. Research and Design in these fields costs millions or even billions of dollars at a time when budgets are a disaster. However, every point in time can be analyzed to highlight opportunities and threats to a project's success.

Opportunities

As a result of the police use of force controversy, many wealthy charitable foundations are ready and willing to fund projects that show great promise. The opportunity for police

becomes identifying projects with great promise and matching them to foundations.

Military cutbacks and aerospace downsizing leaves ripe fields to harvest with visionary leadership and political backing to be success in the development of nonlethal technology. Significant leadership by the management of the LAPD or any major law enforcement agency could be a force to begin technology development. State and national political leaders could be approach by LAPD and L.A. City officials to gain the support needed for this effort. The economic crisis in California is particularly ripe for visionary leadership and partnership with the scientific community and failing businesses.

The ability of nonlethal technology to greatly reduce the new field of police lawsuits for excessive force can save governments millions that can be channeled to weapon development. Again, vision and leadership is the key.

Threats

The stifling impact of budget cuts and the dismal view of the future economy of California in particular, dulls any effort to rally funds for long term development of technology. Just as this is an opportunity, it is also a threat without leadership at the local, state or national level. Left to natural business demands for nonlethal technology, companies involved in such research will not look to money strapped police agencies as financial opportunities.

The specter of law suits related to new technology also delays efforts and commitment to long term development in the eyes of politicians who hold the purse strings. Rightfully, local politicians are weary of any police use of force issue because it is the growing area of recent law suits.

The immediate costs for research and development could run

into billions of dollars. The long term need for nonlethal devices is often forgotten, to focus on immediate needs, in even the best of economies, by pubic and private entities.

Political

The political climate for police use of force is proportionate to the community climate described under social issues. However, some unique differences identify this area with specific opportunities and threats.

Opportunities

Nonlethal weapons provide a great opportunity for political figures to be identified with far reaching success for the entire country. Identifying and soliciting those individuals is a great opportunity. This opportunity, although external to the LAPD, provides the opportunity for internal managers to identify local, state or national leaders with a vision to accomplish such a task.

The political change of policing to community based efforts, however one chooses to describe them, can be channeled to assist police in gaining public support. That community support can be transferred to political support for nonlethal technology development and implementation. Again, although an external factor for the LAPD, LAPD leadership can direct this effort through community support groups and community leaders.

The internal pressure on police management from LAPD officers, can be channel to professional management organizations at the local, state and national level. These organizations can funnel their clout with political leaders and foundations to push for new technology development.

Threats

The current bureaucratic process for research and development of nonlethal technologies is stifling. Human research in the United States is difficult to do under current federal law. Clearly, the difficulty for research make the medical implications of all technologies difficult to assess until the weapons are actually used. Few manufacturers of such weapons are willing to risk the outcomes. Thus, the bureaucracy has created yet another "catch 22".

The cold war code of silence in the military research persists despite congressional and presidential declarations of the opposite. As discussed, the "black projects" hide most currently useful technology transfer.

Although many obstacles seem insurmountable in the environment of nonlethal weapon development, no one has ever been able to stop the human spirit. The opportunities outweigh the hurdles and clearly, vision and planning can overcome any of these obstacles.

ORGANIZATIONAL CAPABILITY

The Los Angeles Police Department was chosen as the target agency for development of the organizational capability research for this project. The Department is in the current eye of the storm, and has a unique opportunity to once again show true vision and leadership. The attention of the world remain on Los Angeles for all the wrong reasons (riots and trials), yet the opportunity is present. The LAPD can gain great strides in the field of nonlethal technology. Focusing strictly on the LAPD, many strengths and weaknesses organizationally were identified.

Strengths

Chief Williams has been spotlighted for his vision and leadership skills locally and nationally. His clout would gain immediate national attention to an issue.

The search to find alternatives to batons and guns is the highest priority in Los Angeles for the Department, the community and the political leadership. The LAPD leadership needs to channel this focus on the development of nonlethal technology. The City is wide open to new ideas and research.

What is often called the "mid-level" range of police use of force, between verbalizing and use of batons is the focus of efforts in L.A. This is the exact location of nonlethal technology in the use of force policy continuum for the LAPD. As discussed, it is the one are where officers want the managers to identify new types of devices.

Police officers and their union are ripe for implementation of nonlethal weapons. The current climate places most officers in the tenuous position of being unwilling to use any force or more significant, avoiding street contact with potentially violent individuals. The WOTS-UP group was unanimously behind the identification of this opportunity.

The scientific community has show great commitment to assisting the LAPD in its efforts to develop new technologies. Many of these individuals will work free of charge. Again, although external customers, the LAPD needs to provide visionary leadership. The Federal government and military appears to be willing to open some doors to look at current research that once was classified. The leadership of LAPD still has significant ties to organizations and foundations with the money and clout to organize efforts to develop new technologies. The leadership of the LAPD needs to channel this opportunity as well.

Weaknesses

The community is skeptical and suspicious of any new ideas about use of force from the Department. The community is giving Chief Williams rave reviews, but the community minority leaders are opposed to new ideas because of the distrust that has developed over the years.

The City budget has been devastated by State cutbacks and the specter of layoffs is imminent. It is difficult to channel the vision of local politicians, who control the purse strings, on any type of long range planning or effort that has a price tag attached. State and national leaders are of the same mind.

The LAPD officers' union is facing pay losses and will use any tool to forestall such loss. This includes challenging any new device for the officers regardless of it merits, to challenge pay losses and contract demands.

Some civil rights groups will fight anything for a cause. Nonlethal weapons will be fought by these same groups regardless of the research and positive implications. Some of these groups include the ACLU, the Revolutionary Communist Party, and other left wing groups looking for a platform that provides media coverage.

The mid-level management of the LAPD is still "jockeying for power and position", and continues to stifle new innovation or ideas in place of the safe, tried and true ideas. Risk is an "all talk and no action" dynamic. The new Chief is still struggling to identify his true base of support in the LAPD.

The size of the organization and complications of training and budgets, make even the simplest item difficult to implement. Implementing any new technology will take a major training effort and commitment of time to the training process. For an agency that is truly understaffed by 50% or more, according to most accounts in the City leadership, this is a major hurdle for new devices and

training.

The legal battles since the Christopher Commission Report outlined how to sue the LAPD have made the entire City hesitant to implement new ideas, despite their search for them. Many new self defense programs and new less-than-lethal devices have been identified, but the LAPD and City leadership are hesitant to try these systems and devices except under limited conditions that make them only available to a select few. This deployment to a select few, makes their use in field operations almost nonexistent.

The chaos of change in leadership and the overall attitude and climate in the City makes anything other than daily reaction to crises nearly impossible. The various trials as a result of the King affair and the riots of 1992 has the LAPD almost totally focused on potential civil unrest. Although this may pass, it has been a heavy burden for almost two years.

In summary, the climate of the LAPD shows tremendous opportunity for leadership and change if the Department can overcome the stifling grip of chaos and budget cuts.

COST BENEFIT ANALYSIS

The cost benefit analysis of nonlethal technology goes beyond the obvious savings in human life. Nonlethal technology could potentially eliminate civil suits for wrongful death from the use of force. In the past ten years, that represents in excess of 100 million dollars in Los Angeles County alone. Included in this analysis must be injuries, medical costs, workers' compensation costs and the difficult to define costs of poor publicity and strained public relations for police agencies involved in such incidents. The morale of a police agency suffers under the scrutiny and stress of highly publicized incidents. Correspondingly, the productivity of the concerned agency's

officers can be greatly reduced.

On the other hand, nonlethal technology, depending on the type and its use, could eliminate the hours of training and self defense for police. It could potentially eliminate the need for physical confrontation. Tactics training, currently established for physical attacks or attacks with weapons, could be greatly diminished. This could require far less training and preparation for police officers. This same technology could reduce the costs involved in ongoing training and testing to maintain proficiency skills that current weapons and self defense techniques require. Although the original costs of any new device remains unknown, all the savings described will almost surely dwarf the eventual savings to police and the community they serve.

STAKEHOLDER ANALYSIS

The stakeholder analysis was done by a group of five individuals, in addition to the author:

Sergeant Art Atkins, LAPD

Lieutenant Paul Kim, LAPD

Officer Saila Adams, LAPD

Vito Alonzo, an LAPD intern from the University of Southern California

Steven King, Aide to City Councilperson Mike Woo

The group was given an overview of the issue and sub-issues, with a brief discussion of the ten trends and events that were forecasted into 2002. The overview also covered the WOTS-UP analysis of the LAPD and external factors. The group began identify the stakeholders for each of factors identified in the WOTS-Up analysis. This is known as the Strategic Assumption Surfacing Technique(SAST). They also identified stakeholders impacted by the issue and sub-issues of the futures study. Finally, an open discussion of the various stakeholders was held to

develop information for the final selection of important stakeholders. An office secretary was used to record the discussion on the blackboard.

At the conclusion, the author identified the major stakeholders based on the information received from the stakeholder analysis group. This was done in front of the group along with a recording of what the group believed were the rationale for inclusion, in addition to the author's personal rationale. The following stakeholder analysis is a combination of the group's effort and the author's personal preference. However, the bulk of the information is a result of the group analysis.

Finally, the group conducted a Modified Policy Delphi process to identify a variety of alternative strategies, designed to address the strategic issue. Each member was asked to return the next day to present strategies. The group presented their strategies and rated the six strategies presented 1-6, 1 being best. The group then discussed the strategies and re-voted. First, a presentation of the stakeholders is presented.

As the stakeholders are presented, two assumptions are made regarding each. These assumptions were selected by the author, based on the discussions of the group. To select the assumptions, the author selected the ones believed to have the most significant impact on the futures issue.

Police Officers

Obviously, police officers are the prime stakeholders. They will be the ones that use the devices and their safety is the primary issue in any nonlethal weapon implementation.

1. Initially nonlethal weapons will make some police officers feel defenseless against the deadly weapons that suspects will possess, despite any government effort to ban lethal weapons. Police officers could unite in a rebellion against the

implementation of nonlethal weapons as a threat to their safety. This moral dilemma could cause tremendous resistance to new technology if it is initially perceived as a effort to disarm lethal weapons from the police officers.

2. However, with the criminal sanctions and civil suits that continue against police officers personally, the climate could be right to introduce the new weapons as an alternative to deadly force at the discretion of the officer.

People of Los Angeles

The citizens of Los Angeles are major stakeholders as tax payers responsible for the pay, benefits and litigation costs involved in police use of force. Although every citizen will not be intimately involved in the police use of force process, if the use of force cause financial hardship on the individual, one can bet they will become intimately involved.

1. Today, the minority groups of the City, particularly blacks and hispanics, have leadership groups that are actively involved with the LAPD in the review of police use of force and any new weapons. They actively voice their opinions at Police Commission hearings. The Police Commission is a five member body, appointed by the Mayor, that sets policy for the LAPD.

2. The general community will support efforts to use humane weapons to restrain violent people. Also, the ever present fear of crime for most in Los Angeles today, will usually cause support for most police initiatives that deal with the violent criminal element.

Local Politicians

1. The bulk of local politicians is supportive of new technology that can give police options to serious and deadly use

of force situations. However, a weary Los Angeles electorate, as a result of riots and continued controversy, will want the new technology to be tested for some time, and proven to be safe.

2. If the technology is proven safe, it will be a great platform for fame, for which some politicians lobby.
The local politicians become significant stakeholders because they hold the keys to funding any such project. Therefore, they are the gatekeepers to implementation.

Scientists

Scientists involved in nonlethal weapons research are significant stakeholders, not only because they will invent the technology.

1.Scientists will share in the profits made from devices implemented. Moreover, with the Cold War era gone, many of these scientist are looking for new ways to make a living. As new weapons are produced and implemented, in California's current climate of frenzied litigation, scientist also share in the liability of the weapons effectiveness as a nonlethal weapon.

2. Scientist may also become very guarded in their research as this technology reaches the testing phase. As with any invention, the monetary rewards will cause delays and maneuvers by scientists, created to guard their financial futures. These problems could make scientists hesitant to release new technology as quickly as police agencies may wish.

Lawyers

1. Lawyers are actively pursuing police use of force cases. Groups of these attorneys are forming alliances to coordinate data bases of information with which to successfully sue police officers. This is a lucrative field financially for attorneys,

because of federal civil rights laws that pay them handsomely for their efforts. As minor stakeholders, the attorneys motives will generally be monetary.

2. On the other hand, lawyers may actively fight the new technology because it represents a threat to a lucrative field of litigation represented by lethal weapons.

New Weapon Manufacturers

1. New weapons manufacturers will appear on the market to supply the newly developed technology. This new industry will be major stakeholders who are intimately involved in the process of evaluation and implementation.

2. Not only will their financial futures be at stake, if more than one manufacturer of similar weapons arise, the competition to be the first will be fierce. In this situation, quality control and accurate research will make these manufacturers key stakeholders. As in any business, the risk of shortcuts is high.

Gun Manufacturers

1. Gun manufacturers may be stakeholders as manufacturer of new nonlethal technologies in competition for profits.

2. They may also become significant if they begin to perceive the nonlethal weapons as a threat to their firearms business. With all the talk of gun control, this type of technology could tip the balance towards gun control efforts.

Civil Rights groups

1. Civil rights groups, most notably the ACLU in Los Angeles, will fight any intrusion on the human body as cruel and unusual punishment. They will be key stakeholders that will demand

exhaustive testing to prevent any possible bad side effects or serious injury.

2. However, as a significant stakeholder, if groups such as the ACLU were brought into the testing and evaluation process to assist, they could become a powerful ally at the point of implementation. After all, the ACLU will applaud true efforts to reduce use of physical force by police officers.

State and Federal Politicians

1. State and federal politicians that can be lobbied to support research and development of new technologies if they are given a key role of power and credit. Money becomes necessary to research and development of new nonlethal weapons, and the state and federal governments are equipped to fund such work.

2. Some politicians may be wary of special interest group backlash, but the pervasiveness of the police use of force issue should overcome any reluctance if the right politicians are identified by police managers.

Violent Criminals

1. Violent criminals that require physical force by police officers to detain, are significant stakeholders. They become the target of the devices. Although they are insignificant as a group in development and implementation of new nonlethal weapons, their actions during the arrests makes them somewhat significant initially. Initially, criminals will not fear the threat of deadly force from police as its application is diminished by successful nonlethal weapons. This may incline them to be more liberal in using deadly force themselves to escape, knowing that the worst that can happen is a nonlethal attack by police.

2. Moreover, criminals will get the weapons on the black

market and be more effective in crimes, and possibly more confrontive with police, using the new weapons to escape being apprehended.

Media

1. The Los Angeles, and potentially the national new media of all types, will publicize any effort in nonlethal force options. The media becomes a stakeholder because it will have members on both sides of any issue. The key for LAPD will be to get out accurate and timely information on any new technology.

2. As stated earlier, the media will have impact on the recruitment and retention of police officers, because the size of the LAPD and its often inability to communicate internally, the Los Angeles media outlets become prime sources of information on most issues regarding police. The media also sets the tone for community reaction to any new technology.

Military

1. The military is still very protective of nonlethal technology. Because nonlethal technology can be easily converted to lethal technology with minor modifications, the military is cautious and skeptical about the release of any such devices.

2. However, thousands of government and military scientists, as stated, are looking for new applications of war time technology. Although the federal government talks of civilian technology transfer, to date, the military has been very quiet on the issue. As a major stakeholder with the greatest source of nonlethal technology research and development, the military must be a target of any strategic plan to implement nonlethal weapons technology.

Charitable Foundations

1. Wealthy charitable foundations in the U.S. will assist any worthwhile cause for the betterment of society. This has been especially true for the Ford Foundation in law enforcement related programs. If the foundations can be shown a great, strategic decision to be in the forefront of significant policing change, they will assist in the development of nonlethal technology financially, and thus become significant stakeholders.

2. However, they will be skeptical about the amount of money necessary to develop such technology. This will require significant efforts on the part of police managers to convince these foundations to participate.

Police Administrators

1. Because most of the stakeholders already identified will require skillful coaxing and informing, the police administrators become the single most important stakeholder for this plan. Police chiefs are already scrambling for any new technology that is effective and safe.

2. However, because all police chiefs are political appointees, they will carefully protect their careers. They too, will need carefully crafted and comprehensive testing on nonlethal technologies.

Police Union

1. In Los Angeles, the police union will have grave concerns for officer safety and the loss of deadly force alternatives at some point in the future. A police union exists to address these very issues. Representing one of the most important stakeholders in any plan to implement nonlethal weapons, police officers, the union cannot be overlooked in strategic planning. They can be a

great ally or a formidable enemy.

2. However, as previously stated, the police union in Los Angeles is looking seriously for what are referred to as mid-level use of force options, which nonlethal weapons would initially fill until proven 100% affective in all circumstances.

Gun Lobby

1. Guns clubs and the National Rifle Association are stakeholders in any discussion of weapons in this country. They will do everything to protect right to bear arms. They will want new weapons available to the public, and this is the fear of the military.

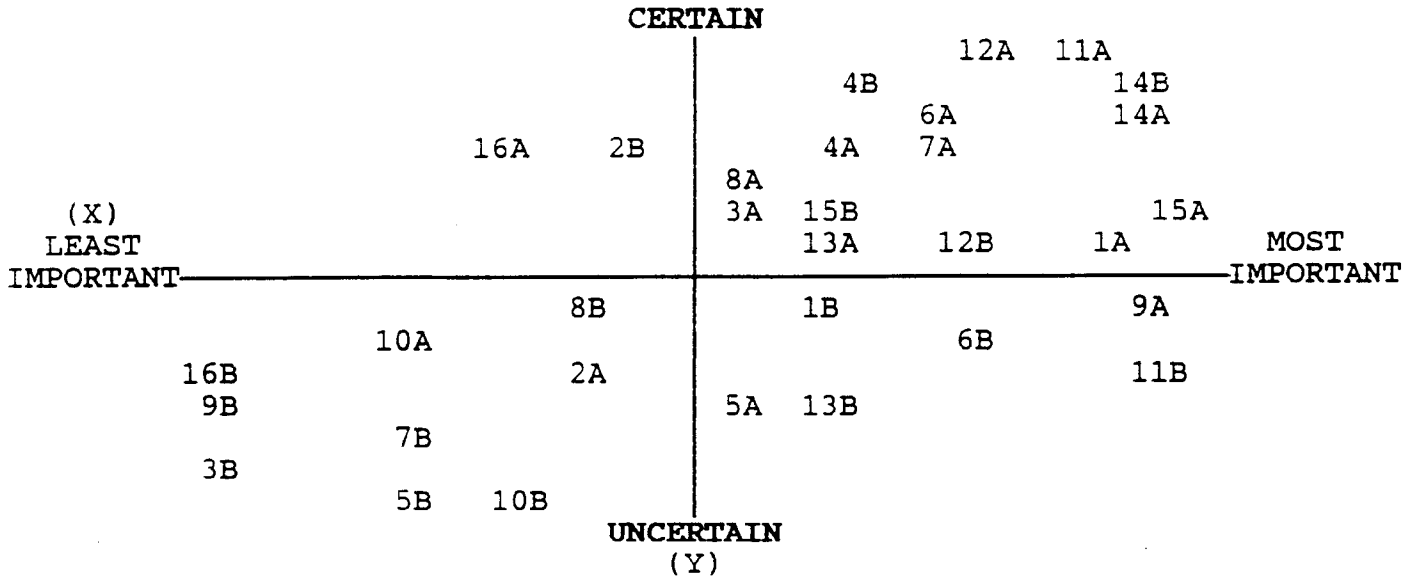
2. Moreover, if the gun lobby sees nonlethal technology as a threat to tip the balance of politicians to call for banning of lethal weapons, one can rest assured this group will fight the implementation of nonlethal technology no matter how noble the cause.

Strategic Assumption Surfacing Technique(SAST) Mapping

The following map depicts what is believed to be the impact of the various stakeholders on the strategic planning that will be developed later in this paper. The Modified Policy Delphi group used the SAST technique as the third step in the situation analysis. The SAST identifies stakeholders, and plots them on a SAST map. The two criteria for plotting are:

1. the importance of this assumption's stakeholder to the LAPD and the impact of nonlethal technology by the year 2002; and
2. the degree to which the author is certain that the assigned assumption(s) is correct. Perfect certainty means 100%

STRATEGIC ASSUMPTION MAP



LEGEND

"X" AXIS - Importance of the stockholder's assumption to the organization's management of the issue

"Y" AXIS - Certainty/Uncertainty regarding the stockholder's assumption

1A - Defenseless (officers)

1B - Prevent lawsuits (OFFICERS)

2A - Resistance (community)

2B - Seen as humane (community)

3A - Support nonlethal (local politicians)

3B - Assist for fame (local politicians)

4A - Profits (scientists)

4B - Secretive (scientists)

5A - Profits from suits (lawyers)

5B - Threaten deadly force suits (lawyers)

6A - Profits (new makers)

6B - Shortcuts (new makers)

7A - Profits (gun makers)

7B - Threat to guns (gun makers)

8A - Body intrusion (ACLU)

8B - Reduced use of force (ACLU)

9A - Support R&D (State & Fed politicians)

9B - Wary of backlash (State & Fed politicians)

10A - More deadly force (criminals)

10B - Black market (criminals)

11A - Sensationalize (media)

11B - Information to officers (media)

12A - Protective of research (military)

12B - Civilian application (military)

13A - Funding (foundations)

13B - Skeptical (foundations)

14A - Searching (managers)

14B - Protect careers (managers)

15A - Fear new weapons (union)

15B - Mid-level force options (union)

16A - Want weapons (gun lobby)

16B - Protect gun rights(gun lobby)

probability the assumption is correct. Perfect uncertainty means there is a 50% probability the assumption is correct.

The SAST group and the author have identified police officers and the gun rights lobby as the "snaildarters" in this process, or the stakeholders mostly likely to cause a surprise threat to the implementation of nonlethal technology. Police were seen as terrified of losing guns altogether and being left defenseless. Their clout in the community and the community concerns for the daily assaults on police could quickly undermine this effort. The gun lobby pressure to make all weapons available to the public could make the entire political situation of approving these types of weapons a real dilemma for community safety. Although nonlethal, criminals could exert greater control over victims and police with less criminal consequences. This is an arena that is yet unexplored and the topic of a futures research in and of itself.

ALTERNATIVE STRATEGIES

The Modified Policy Delphi group that provided assistance in the development of the SAST, identified several strategies to successfully research, develop, implement and evaluate nonlethal technologies for the futures study issue and sub-issues. Three were selected by the author. The first two are designated as interesting strategies that were develop to show alternatives to the one selected by the author as the best strategy to confront the development of nonlethal technology.

STRATEGY ONE

This strategy would involve the development of a federal

taskforce in the U.S. Attorney General's Office to spearhead the effort. Federal money and clout could be used to pull together the necessary resource to develop emerging technologies. The task force would be made up of leaders from the FBI, and Chiefs of Police selected from states of cities with major policing responsibilities. Staff assistance would come from the U.S. Attorney's office.

The mission of this taskforce would be to expedite the research and development of nonlethal weapons for law enforcement. That development would include programs for training and implementation under a federal standard to ensure uniformity of application and training.

The objectives will include:

1. Research existing technology.
2. Select promising technology for development.
3. Evaluate and test emerging technologies.
4. Develop training and implementation protocols.
5. Budget for funding of research and development efforts.
6. Budget for assistance to law enforcement agencies in training and implementation.
7. Conduct ongoing programs for later technology.
8. Evaluate actual use of the device.

Currently, little direct technology application exists in the field of nonlethal weapons. The task force will be required to research, develop, test, implement and review the discovery of any new emerging weapons. To give the task force structure, a time line is required. The time line is based on the ten year term of this futures study.

1993-1995

In the first two years, the task force will study and review the current state-of-the-art technology. Promising technologies will be identified and research regarding feasibility for nonlethal

weapon development; practical application of the technology; current state of the potential risks; costs of development and implementation; and identifying industries willing to produce the product.

1995-1997

During this period, the task force will budget for and develop design specifications regarding the selected technologies. Private nonprofit foundations could be approached for some portion of the budget needs. With the identified industry executives, a plan will be developed for testing and marketing of the end product.

1998-2000

As the new products become marketable, the task force will work with selected law enforcement agencies to test and evaluate them under routine duties. Simultaneously, the weapons will be evaluated for any potential medical or physical problems not noted during the research and development phase.

2001-2002

The task force will assist law enforcement in the training and implementation of new technology. This may include budgeted funds from the federal government, or private enterprise monies.

Analysis

The key factor in a task force of this type, is the clout and money that the federal government is capable of mustering. The federal government also has the ability to see and use confidential materials. This also allows this group to ascertain complications that might not be released to unclassified researchers. In the long-term the federal government has the resources to sustain a relentless effort that only money and resources can provide.

The difficulty of this operation is the need for short term results in today's word. The word "short-term" is not in the expectation when one uses any government agency for this type of program. Stakeholders will also be aware of this deficiency and those that most impact the successful implementation of nonlethal technologies will be skeptical at best and probably non-participative.

A "snaildarter" for this strategy will be the charitable foundations. Most foundations are very leery of government programs and rarely make anything but a token donation under extreme political pressure. On the other hand, scientist and the military are very supportive because they know that the government tab is a lucrative and long process that can sustain a real future for long term research. Manufacturers also like the government tab to prevent personal expenditure on research and design which is very costly and often not profitable for private industry.

STRATEGY TWO

In this strategy, the group identified industrial, manufacturing and retail companies that might be singled out and formed in a cooperative effort with local law enforcement to research and develop emerging technologies. Many of these companies are also involved in government and military research and have the ability to transfer unclassified information to the effort. This group can avoid the pitfalls of classified information they are aware of, but unable to discuss openly. This task force would be headed by a prominent law enforcement executive, such as the Director of the FBI or the chief of a major state or city police agency. The task force members would be selected by the chairperson based on the criteria of interest and ability to deliver new technologies. The mission and objective for this task force would be similar to the ones in strategy one.

The mission of this group would be to identify merging technologies for application as nonlethal weapons in a police setting. They would ascertain the feasibility of marketing these technologies within ten years. The group will develop private, government or a combination, to fund research, development, testing and implementation of new technologies for law enforcement.

The objectives of the task force will be:

* identify promising technologies
* select the best technologies for practical application
* budget for the research and development of weapons
* test and evaluate new weapons
* develop training and implementation protocols for police
* study experiment efforts of field testing
* market new devices

To be affective, the committee will need to focus on a time line that is reasonable and adjustable based on current information and efforts of the committee. To keep the process on track, the following time line is presented:

1992-1994

Chief Williams and his staff identify key players to become group members. Chief Williams organizes the group and shares the vision, mission and objectives. The group analyzes, modifies and adopts the mission. The group identifies merging technologies and researches the potential for production within ten years.

1995-1997

The group selects emerging technologies for potential development. Funding sources are identified to include, but not limited to, charitable foundations, government grants, existing government programs, private funding, etc. Development of prototypes for testing begins.

1998-2000

The group begins testing of the new technology within the LAPD. Training and evaluation processes are established prior to field testing. LAPD field officers are involved in the development of training and testing protocols. LAPD officers are given scheduled updates on the progress of the devices by Chief Williams. Each new device goes through the same process prior to any implementation. Chief Williams keeps the media and public informed on regular updates as well. Chief Williams prepares budget packages for the testing and eventual implementation of the plan. Through the Los Angeles Police Commission, Chief Williams addresses the concerns of the various special interest groups and communities with concerns about the new technology.

2001-2002

As new technologies are implemented, the LAPD prepares protocols for incidents of abuse by officers. These include ways to prevent abuse, discipline for abuse and dealing with the community response to abuse. The LAPD must also develop protocols for unforeseen affects of any device that may derail its use once implemented with the Department. Finally, the Department must develop training programs, using field officers, that prepare the Department for the day when the nonlethal technology replaces lethal weapons.

Analysis

In support of this strategy is the community partnership that appears to be the synergism of industry and local governments today. Short-term results of existing technologies could be quickly implemented. Community support for the effort would be high because the likelihood of press coverage and knowledge of progress would keep the efforts moving.

On the down side, cost would be difficult for industry to bear in today's economy. Costs would probably kill long-term commitment if early success is not found. If early success is found, better and newer technologies might be forestalled by the need to profit on earlier investment and research. Also, sustaining any long-term commitment of industry to government is rarely possible without government paying the bills.

The "snaildarter" of this scenario is the government and military classified data arena. It is unlikely the government would support private industry in the gray areas of giving classified materials or information even if it was not divulge to the public. However, local government and communities would greatly support the idea and the companies would gain good will.

STRATEGY THREE

In this scenario, the group envisioned a collaborative group of charitable organizations, national police management organizations, key federal congresspersons, and noted research corporations as a committee to focus on this arena. A powerful national politician would be courted to head the committee for obvious reasons. The final members would be key local chiefs of police to ensure the focus met local law enforcement needs. This strategy was selected by the author with the following modifications added as a result of the author's evaluation of the issue, sub-issues of the future's study. Also there is a need for a single catalyst to ensure the process proceeds in an orderly fashion. Finally, the author believes that a combination of all three strategies is necessary to accomplish a smooth transition of any new technology.

The organizer of this group would be Chief Willie Williams of the LAPD. Through the efforts of his staff, Chief Williams would identify the group members, and identify a prominent political

leader to head the committee. This leader would assist in recruiting the significant members identified by the Chief as essential to the plan development.

The mission of the committee would be to research, develop, test and implement merging technologies that could provide nonlethal weapons for law enforcement. Moreover, the committee will develop long term training, testing, and potential funding for nonlethal weapons.

The objectives of the committee will be:

* identification of promising technologies for development within ten years
* research and development of weapons for direct law enforcement application
* testing and long term evaluation of new devices under routine police use
* development of training and evaluation protocols for new weapons
* evaluate the entire process of the committee to restate the mission or objectives as necessary
* evaluate the marketing process for quality control and pricing of new devices
* develop information programs for the public regarding new devices
* prepare plans for the inevitable product problems and failures to prevent total derailment of the effort
* involve legal advice during the development process to prepare for the potential legal challenges to new devices
* prepare law enforcement for the day that nonlethal technology replaces lethal weapons

Analysis

The positive side of this approach would be the best parts of all three strategies in the author's opinion. This is a monumental task with a mission that is equally difficult. Designating Chief Williams as the spearhead represents an individual with great personal and professional drive to take on such a responsibility. Chief Williams also has the political clout to orchestrate this plan.

This plan would garner the clout to get the job done by breaking down hurdles to information previously described. Government money could be obtained to sustained long-term commitment to the process. Current technologies could be more quickly identified and implemented and the research focus of the group be sustained past any initial success. Most of the stakeholders would like this consortium approach.

The negatives include the noninvolvement of some key stakeholders which could stall efforts. The committee would have to work closely with the stakeholder groups to keep them informed of the committee efforts and accomplishments. Chief Williams has the clout and personal human characteristics to succeed in this "tight wire" proposal. The military, individual scientists and actual manufacturers who could all be potential "snaildarters". Feasibility of the plan is only stalled by the drive of its leader. Clearly some hurdles will have to be overcome. It will take great vision and leadership by the key players to pull it together and keep the committee on focus.

TRANSITION MANAGEMENT

After considering all of the research presented to this point, it becomes evident, with a focus on the issue question of this study, that a tradition management proposal must focus on the LAPD internally. The day that nonlethal technology is identified and slated for development, is the day the LAPD must prepare for future implementation. As noted, many controversies could arise, and a transitional management plan is critical. To begin the transitional management process, the critical mass of individuals must be identified. These individuals will shape the future of nonlethal weapons in the LAPD.

CRITICAL MASS

The critical mass for the transition effort was identified through the efforts of two executive level personnel of the Los Angeles Police Department assisting the author, focusing on the LAPD as the organization which will implement the plan (Captains Charles Beck and John Desmond). Once again, this group was given an overview of this project as it has been presented up to now. The group then selected the individuals believed to be critical to the success implementation of the plan.

After the critical mass was selected, it was recognized the general makeup of the group would only change slightly for other major city police agencies based upon the political decision-making structure of that agency. The critical mass was selected because they are the key individuals that can make a successful transition occur within the LAPD and successfully influence and guide the stakeholders to either assist in implementing the device, not interfere or neutralize their efforts to stop implementation. The critical mass was also selected to be a part of the transition

management committee because of the potentially highly charged implications of such an effort. Also, these individuals will also be critical to successful implementation.

The Chief was designated as the critical transition manager. He was selected to oversee the strategy, speak publicly and organizationally about the status of the transition. The Chief must be the focal point of all media and key progress report efforts.

As an organizational description, the LAPD is run internally by two Assistant Chiefs that are part of the critical mass. Without their mutual support, any plan in a major department is destine to delay or failure. Although the Chief is in charge, the organization and the process of testing and implementation can be greatly delayed or sabotage by either individual.

The Assistant Chief in charge of Administrative services will be designated as the project manager. His role in the organization includes training and development of new weapons. He is clearly the leader in getting this project done for the LAPD. His staff will do all the administrative work necessary to test, develop training, write budget proposals, and provide accurate data based reports for the media, community and Department. This person already has a commitment to exploring nonlethal technology as part of his regular duties. He has implemented new, less-than-lethal devices in the past year. He needs to be directed by the Chief of Police to get behind the nonlethal weapons effort. When that is done, this person is committed to the direction of the Chief.

The second Assistant Chief, in charge of all Department field operations and investigations, was selected as a key member of the transition management committee. As stated previously, he can derail efforts to pilot test and implement any device by his influence over his personnel and the actual field test efforts. In the LAPD, all field tests are controlled and administered by the Operations Chief after development by the Administrative Chief.

Moreover, his selection of personnel to implement the program can influence the outcome by the commitment of those personnel selected to support any such device. This individual tends to be very methodical and resistant to new ideas that have not been completely researched and all possible negative issues resolved. He is committed personally to reducing the use of force by police officers whenever possible and with this angle, he can be persuaded to assist the committee work at the direction of the Chief. If he believes, in the early activities of the committee, that the effort is worthwhile, he will make every effort to assist in the mission. If he does not feel it is productive, he will take a neutral position in either assisting or thwarting the groups efforts. However, a neutral position on assisting could cause delays by the inaction of his staff, when staff senses his position.

The next person selected for the critical mass is the President of the LA Police Protective League, the police officers' union. The union greatly influences the attitude of the officers at this point in the Department's history. The officers have several daily communications with the union through hot lines, mail, union newspapers and direct discussions with delegates. Police officer support will be directly impacted by the support of the union. The Union President needs to be fully informed about decisions and progress regarding any device. Committee inclusion will also be somewhat unique for such an effort and will improve the potential for gaining support of the effort. His current position on nonlethal technology is supportive. However, the current contract negotiations have stalled any discussion of any item other than the contract at the time this report is written. Outside of the contract resolution, all that needs to be done is the Chief's commitment that the field officers will be involved in the planning process and implementation of any new device. If at any time he believes that this is not the case, the union president will fight efforts to implement the plan.

The newly elected Mayor ran on a platform of law enforcement reform and rebuilding. As a critical mass and committee member, he can successfully lobby the full City council for the necessary money and program support. He can also influence community concerns. Although unusual for such a committee, in this highly volatile issue for the City today, he can establish himself as a leader for change. Moreover, at this point in history, his focus on law enforcement has put him in good stead with police officers. This could assist in influencing officers to successfully test and implement such a device. Officers struggle with the moral issue of only using nonlethal force against the deadly force of suspects, and nonlethal weapons can use all the leadership support and commitment this committee can obtain. Therefore, the unusual step of including the mayor on the committee was made. The Mayor is committed to providing the police department the best equipment available. The Chief will be able to garner his full support and commitment by the vary nature of what nonlethal weapons represent in the safety of police officers.

The Police Commission, consisting of five members, was identified as part of the critical mass. The Commission is charged with overseeing the operations of the Department and approving all policy changes. They are civilians, appointed by the Mayor, and work part time. They were not made part of the Committee because they are greatly hampered by the part time status and their full time careers outside the Commission duties. The current Commission members, appointed in July, 1993, are supportive of any effort to improve the use of force by police officers. If the committee provides adequate research and medical proof of a weapon's safety, that is all that is required for this effort. Moreover, if one or two break decades of tradition by not going along with the Chief or Mayor, only a majority vote is necessary to implement the plan. Any plan will require Police Commission approval to implement.

The next members of the critical mass are the three member

City Council committee on public safety. Their support will be necessary to obtain funding and program support. The City Council is the true leader of the City. Independent of the Mayor, if they do not agree with him, they can stop any new program. To gain their support, the Chairperson of that committee will be placed in the transition management committee. This will help develop support and commitment to any plan. Also, the Council will not be slighted by the Mayor's appointment to the committee. Again, an unusual selection to a transition management committee, but this is truly a volatile issue that will need high level City official support to derail political and special interest groups efforts to stop implementation of a device. The Council is usually split on most issues and their level of support is difficult to gain, with 15 members, until a specific proposal is before them.

The final member of the critical mass is the actual manufacturer of any device being considered. Inevitably, this person(s) will being pushing hard to implement the device, regardless of its implications or actual success as a nonlethal weapon. This person(s) will have to be influenced by the Mayor and Chief to let the process go forward without anything other than technical support. This person(s) will obviously be supportive initially. However, as product development proceeds, if this person(s) feel threatened in any way, the Chief will have to solidify that support.

CRITICAL MASS COMMITMENT

The chart provided on the next page depicts the commitment that is necessary in the critical mass to ensure success of the plan. The chart depicts where the actors commitment is currently at by the mark of an "X". The "O" marks where the commitment of the actors needs to be to make the plan work. Moving the commitment of the critical mass is essential to success of the

CRITICAL MASS CHART

Actors in Critical Mass	TYPE OF COMMITMENT: Block Change	Let Change Happen	Help Change Happen	Make Change Happen
Mayor			X-------	----->O
Police Commission		X------	----->O	
Chief of Police		X------	----------	----->O
Asst. Chief of Administration			XO	
Asst. Chief of Operations			O<-----	-----X
L.A. Police Protective League	X---	----------	----->O	
City Council		O<-----	----------	-----X
Manufacturer				

implementation plan. The following paragraphs provide an analysis of the critical mass and the position movement that is required, as discussed briefly under the critical mass descriptions.

The Chief currently is focused on the major issues of change in command and community pressures for community based policing. A champion for this project needs to influence the Chief to be the key player. This plan may be the beginnings of that effort. The Chief could be sold based on his focus on the community and the King incident that still remains unresolved in the eyes of many.

The Mayor needs to be moved by the Chief to a position of making it happen. He is focused on law enforcement as an election platform. He can be influenced by the Chief as a law and order issue that can eliminate the fear of many officers today to get too involved in field enforcement as a result of recent prosecutions and law suits over use of force. Also he can prove his leadership ability through this cause that can make everyone a winner. It could also gain the Mayor national acclaim for finding such a device.

The Police Commission, as discussed earlier, will be led by the Mayor and Chief to a position to help change occur. Commission support for the plan will help change community commitment and the City Council support for the plan.

The Protective League must be moved from its current position of opposition to anything management tries to implement. For two years, the League has tried to stop any new program as a result of the City's lack of negotiating a pay raise. This hurdle will require the efforts of the Mayor and Chief to move the League to help change occur. It will be helped by inclusion in the Executive Committee.

The two Assistant Chiefs can be influenced by the Chief. The Chief of Administration currently works in a mode of helping the Chief make change happen and the Chief can reinforce that. The

Chief of Operations generally operates as a doer. The Chief needs to emphasize his role as helping it happen and not moving in to take over the development necessary under the chain of command of Administration.

A product manufacturer, as previously stated, needs to be moved from a position of making it happen for personal gain. The Chief must demand, up front, that the manufacturer's role is to assist and let change happen during the implementation plan efforts.

Finally, the City Council needs to be moved, by the Mayor and Chief, from letting change happen, to active support of the plan. The community will want to see that support. Also, special interest groups will have to be controlled by the Council to stop their efforts to impede implementation of the plan.

GOVERNANCE/TRANSITION MANAGEMENT STRUCTURE

The structure selected is two-tiered. First is the Executive Committee described above, that includes the Mayor, Chief, two Assistant Chiefs, President of the LA Police Protective League, and the City Council Chairperson of the Public Safety Committee. The Executive Committee was structured to provide the political and leadership clout within Los Angeles to deal with what will clearly be a very controversial and potentially explosive issue for the City. Use of force is clearly the number one issue in Los Angeles and the eyes of the world remain on any effort to deal with this issue. Although this will be a difficult structure to manage, after this author's observation of Chief Williams for over a year, Chief Williams has the political leadership savvy to complete the task.

The actual work will be done by a second level of structure that will use the existing structure of the LAPD which is run by the Assistant Chiefs, with the Chief of Administrative Services in

charge of the actual project within LAPD. This structure will do all the actual research, reporting, evaluation, implementation and budgeting for the Executive Committee. This structure ensures that the usual system members are always involved and committed to the development and implementation of the plan. This structure will include the appropriate individuals in training, product evaluation, product field testing, and pilot user groups selected within operations personnel.

TECHNOLOGIES/TECHNIQUES TO SUPPORT THE PLAN

The first item to implement will be team building efforts of the Executive Committee. The Chief will direct this effort through the development of a consensus mission statement. This will require significant discussion of issues and problems each member possesses. Traditionally, this clears the air of hidden agendas and gives the committee a clean slate from which to begin the planning efforts. The mission statement will also be a major platform for initial press, department and community information releases for the transition effort.

Media tools will be the cornerstone of the committee's plan to get accurate and timely information to the stakeholders inside the Department and in the community. Clearly , media coverage of all kinds will influence the timely implementation of any device. The committee will use newsprint, television, radio, cable programs to be the key component of community information. It will also be a good portion of Department information in a City and Department the size of LA. Internal video taped programs will be the most effective in keeping the Department informed on progress and proposals.

As pilot programs are implemented, user groups can be used to speak to officer groups at roll calls and training days for divisions. Demonstrations will include data analysis about the use

and effectiveness of any device; critical to officer support.

Hot lines for the program will be set up for officers and the public to deal with the inevitable barrage of questions and rumors that must be controlled. Based on the hot line input, varying information techniques may be used to address issues.

The Chief will use three major community focus groups set up in minority communities to give regular updates on the program. The Chief has ongoing quarterly meetings with the Hispanic, African American, and Asian American committees. These committees would meet more often if necessary to spread accurate information on the program in their respective communities. The rest of the community will receive information from the other sources.

As stated earlier, the Chief will be the major focal point of all informational programs to ensure continuity and more importantly, show the importance and commitment to the program. In Los Angeles, all eyes are on the Chief inside the Department and the community. The vast majority in both want him to successfully lead LAPD through this period of its history. This position for the Chief makes his information efforts critical to the program's success.

Pilot testing, hands on training, technical and field data gathering as described will also be important tools for successful implementation. To gain officer support, thwart legal challenges and to assure political leaders, these tools will be essential.

TRANSITION MANAGEMENT PLAN

The transition management plan will be developed based on the mission statement written by the Executive Committee. The mission statement is critical to focus any controversy that will inevitably arise in the arena of police use of force. Should a controversial use of force situation arise during this period, the Chief can show and remind the community that every effort is being made not only

within existing policies and procedures. More importantly, he can show the Department and City's commitment to provide the latest nonlethal technologies as soon as they are available. It will be an ongoing plan and not just a "band-aid" approach to a current controversy.

On the following pages, charts are provided to outline and describe the plan that will follow in narrative fashion. The plan will be implemented as technologies become available.

As products are identified as potentially useable, initial research will be conducted under the direct management of the Chief of Administration. Frequent reports to the Executive Committee will be made as required. These reports should include all technologies that are identified, regardless of its potential for implementation. The committee needs to know about all technologies because the media and community frequently asks questions about some of these items. Knowledge of these technologies is critical to the credibility of the Executive Committee, especially the Chief as the general spokesperson. 30 day reports are recommended.

Selected weapons will be the responsibility of the Chief of Administration. These will be done as accurate and reliable data is available. Reports to the Executive Committee will be as necessary.

Once weapons are selected for pilot testing, the Chief of administration will develop a training program that will include policy implications of the particular weapon. Briefing papers will be devised for the Police Commission. This is necessary to keep the Police Commission informed on test pilot programs. Although approval of the Police Commission is not required, the volatility of the issue requires information prior to testing.

Under the direct command of the Chief, the Commanding Officer of Community Affairs Group will develop information releases for the community and the press, as part of his usual responsibilities. The media tools discussed will be the focus of press releases.

Feature story writers for papers will be invited for appointments with the Chief. The minority group committee meetings will be set by Community Affairs Group.

EVALUATION AND FEEDBACK SYSTEM

Technical and progress updates are critical from the Chief of Administration to the committee. Thirty day intervals are recommended with key information set for immediate special meetings. This would also include problems that arise, with a preset plan developed by the Chief of Administration and Community Affairs Group in the event of a negative incident involving the weapon.

As new technology is identified, tested, piloted or implemented, periodic and frequent reports must be made to the committee and the Chief of Police. A minimum of 30 day intervals is recommended, with the obvious exceptions such as breakthroughs or major problems as the processes continue.

Community feedback and evaluation systems are also essential. No matter how successful a device, if the community does not accept it, it will be defeated in attempts to implement or test. Many less-than-lethal tools, such as the upper body control hold, have faced this challenge and lost in many cities today. Community feedback and evaluation is a given in today's society.

These same systems must also include the city's leadership in the information process. Again, no device will survive if the leaders and political appointees are not involved in the critical evaluation process of any new device. These individuals must be included in the 30 day follow-up process.

Budget proposals prior to full implementation, will be the responsibility of the Chief of Administration. The budget proposal includes weapon approval in the City of LA. Final implementation of a weapon throughout the Department is also the responsibility of

the Chief of Administration.

A major community and press information release will be done by the Chief of Police and the Mayor to celebrate the team effort that led to success.

The attached chart also depicts the role of each actor in the committee to ensure tasks and decisions are properly executed. The chart places responsibility for each task or decision as previously described. It also depicts the roles of other members by fixing the following roles on each:

- R responsibility for the completion of the task or gaining the decision required. In this role, the authority for the task or decision may be with another individual.
- A the right to approve a plan or action as well as the right to veto it
- S provide support, putting resources and or energy towards a task or decision
- I being informed or consulted on an issue or decision
- \- no involvement to an item or issue

RESPONSIBILITY CHART

R = Responsibility (not necessarily authority)
A = Approval (right to veto)
S = Support (put resources toward)
I = Inform (to be consulted)
- = Irrelevant to this item

Actors

TASK/ Decisions	MAYOR	CHIEF	LEAGUE PRESIDENT	ASST. CHIEF ADMINISTRATION	MANUFACTURER	CITY COUNCIL MEMBER	ASST. CHIEF OPERATIONS	COMMANDING OFCR COMMUNITY AFFAIRS
Technical Updates	I	A	I	R	I	I	I	I
Program Updates	I	A	I	R	I	I	I	I
Budget and Program Proposals	I	A	I	R	I	I	I	S
Implementation	-	A	-	R	-	-	-	S
Cultural Evaluation	-	A	-	R	-	-	-	S
Publicize	S	R/A	I	I	I	I	I	S
Organize Committee	I	R/A	I	S	I	I	I	I
Mission Statement	A	A	A	R	A	A	A	A
Publicize Committee	A	R	A	A	A	A	A	S
Research Technology	I	A	I	R	I	I	I	S
Select Technology	I	A	I	R	I	I	I	S
Develop Training and Policy	S	A	S	R	I	I	I	S
Publicize Program	I	A	I	I	I	I	I	S

OBSTACLES/PROBLEMS

The obstacles of the various stakeholders has already been discussed. Specific event driven barriers and problems are also predictable in this field.

One discussed earlier was the routine use of force incident that grows to a controversy. In law enforcement today, these are more frequent and the community is less understanding of the limitations of human intervention in physical confrontations. As stated, the response to these incidents can be preplanned to discuss what can be done to prevent future occurrences in the future. This can be a great opportunity to focus attention on the goals and efforts of the committee.

Lawsuits inevitably call into question the use of any new device. The committee can prepare for the lawsuits in advance and acknowledge that they are inevitable in use of force cases. Plans can be develop to prevent derailment of the program by discussions of "what if scenarios" prior to testing and implementation of a device.

Community and special interest group resistance, as previously discussed, can be handled by frequent and routine information efforts by the Chief. Also the special minority councils can be used to ensure accurate data and information is the order of the of the day. During major controversies, as they arise, the same channels of information which have already been established can be used. The key will be accurate media information, with the Chief as the sole spokesperson to prevent conflicting information.

In these budget times, money may become a large issue. A solution in the short term may be manufacturer loans of equipment for test pilots. At full implementation, charitable and professional foundations, or government grant programs could be approached for financial backing. Ballots issues could also be written for community funding.

In the event of a negative incident involving the use of the weapon, a preplanned operation plan involving information releases, a protocol for committee investigation of the issue, community updates on progress of the investigation and potential suspension of weapon use, depending on the incident. This plan can be designed by the committee for any situation.

In the event of a new product with limited medical studies or liability analysis, this too can be planned for by the committee. A group of medical and legal professionals can be assemble to do the requisite analysis. Also, the City's risk analysis attorneys may estimate the current state of the product studies and determine if the risk is significant enough to prevent either testing or implementation of a device.

SUMMARY AND CONCLUSIONS

To provide adequate summary to the issue of nonlethal weapons, one must first revisit the issue question: What impact will limiting use of force to solely nonlethal weapons have on major city law enforcement by 2002 A.D.? The focus of this futures study has been on the Los Angeles Police Department. Nonlethal weapons have been defined as any technology, applied in police use of force situations, that can stop a suspect's resistive or combative actions, and cause no physiological or medical damage to the officers or suspects. All known technology used today can be classified as less-than-lethal because some injury occurs in all known devices.

One major concern noted in this futures study was the moral dilemma that police officers must face when nonlethal weapons replace deadly weapons as standard equipment. When this occurs, police officers will be asked to use nonlethal weapons against a suspect who will most often be using deadly weapons. As police officers ponder this issue, police managers will prepare to help

officers work through the dilemma. As noted by this study, the ultimate goal of law enforcement is to enforce the law with the minimal force necessary at all times. This goal will overcome the initial dilemma through training and education.

Another problem for future management of the police use of force issues, is the current heightened awareness of the community by the media. Since the King Affair, the entire nation has had law enforcement under watchful eye, with similar events being questioned throughout the country. The Challenge for management will be to ensure proper and accurate reporting of information to the community through all forms of media. Law Enforcement managers will have to anticipate the many future "King" affairs that will happen as long as police officers are recruited from the human race. Managers will have to swiftly react to these incidents with candor, discipline, training and research on all use of force alternatives. Focusing on the sub-issue questions provides a broader overview to the challenge for police executives.

The impact of nonlethal technology on the retention of current officers will be directly proportionate to the preparations made by the LAPD prior to any testing and implementation of nonlethal technology. The process must be methodical and comprehensive. It must include police officer who may eventually use the weapons, in the evaluation and testing process. As weapons are tested, managers must resist powerful forces internally and externally, to implement the weapons before adequate testing and training are complete. If current officers ultimately in the device, this will lessen the impact on slowed applications to police jobs. This is true because a significant portion of police applicants are recruited by existing personnel. As progress is made on testing, evaluation and implementation, a carefully crafted public awareness program will also lessen the fears and concerns of applicants in the general public.

The sub-issue of training will be the cornerstone of strategic

and transitional management plans. The training programs must include technology evaluation and testing progress reports; field testing evaluation reports; policy change issues; implementation plan; and ongoing evaluation process updates. Training must be a methodical and comprehensive plan to effectively contain the emotional and initial ethical questions nonlethal technology represents. As all phases of this program are developed, all levels of the organization must be included. Anything less will spell disaster.

Included in the training and evaluation process will be the critical mass identified earlier. As each member of the critical mass is identified and focused on the long range effort that nonlethal technology represents, lack of information will derail the interest of these individuals over time. It is critical that each receives the same type of comprehensive updates scheduled for the officers and the public. Moreover, those updates must be timely to prevent to inherent jealousies that exist among those in positions of power throughout our society.

Tremendous community tension exists today regarding the issue of police use of force. As violence continues to grow in our cities, police officers are becoming daily targets. The injuries and deaths of police seem to go unchecked. Nonlethal technology focus will also provide benefits in improved training in tactics. This will be the outgrowth of preparation for nonlethal weapons. Moreover, the focus on these weapons, and the need to improve the safety of police officers, can cause a systematic improvement in equipment. Bullet resistant clothing and helmets are standard equipment in the LAPD, and this focus on safety will seek improvement in these items as well. Nonlethal weapons represent the ultimate form of protection for police officers because the current deadly weapons consistently create doubt and anxiety prior to their use. Nonlethal technology, by definition, erases the concerns that deadly weapons raise.

The weapons development and transitional management plans presented represent a monumental task for Chief Williams and the Los Angeles Police Department. Yet, the LAPD is in a political position to accomplish this task. Chief Williams has brought back the respect the LAPD once enjoyed according to most print and local media evaluations. An exhaustive effort in the area of nonlethal technology could bring new recognition and pride to a battered organization. More importantly, law enforcement could finally remove the enormous wedge between police and some of the communities they serve: use of physical force.

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