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VIDEO GAMES
Concepts and Latent Influences
(Part I)

"The element of skill becomes a primary factor in determining whether an electronic video device is a gambling device."

By
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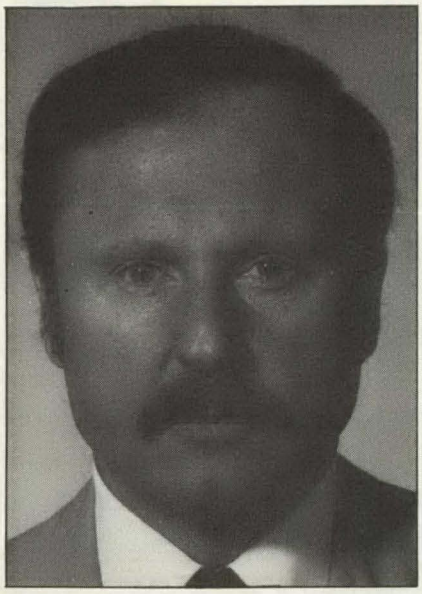
"Video games," a generic term denoting a family of electronic devices with a screen upon which images are formed by electrical impulses, fall into two distinct categories—gambling devices and amusement devices. Both types use the same electronic components, namely, miniaturized circuitry and microprocessors of the minicomputer. The minicomputer forms the basis for the development and growth of video games; however, the video game concept is also greatly influenced by slot machines, a relationship illustrated by the evolution of the slot machine.

History and Development of Slot Machines

Slot machines can be classified as mechanical devices, electromechanical devices, and electronic devices.

The first mechanical device slot machine, introduced circa 1890, was operated by three different play-action principles. The first principle used a scalelike mechanism which tilted when enough coins were randomly deposited upon it, causing the accumulated coins to be returned to the player. The second principle allowed a deposited coin to travel through a maze of pins. If the coin landed in a "winning" pocket, the player would receive the contents of that pocket. The third principle used a spinning wheel; if the wheel stopped in a winning position, a fixed number of coins would be dispensed.

In 1887, Charles Fey developed the first marketable slot machine, which he placed in selected San Francisco saloons in approximately 1895 and operated them on a percentage basis with saloon owners. Named the "Liberty Bell," it was the first automatic three-reel slot machine. Fey's machine had 3 reels bearing 10 symbols each, a manually operated handle to spin the reels, and an apparatus for the automatic payout of coins won. The symbols consisted of the four suits in a deck of cards, as well as



Special Agent Holmes

bells and horseshoes.

Just prior to the turn of the 20th century, a multiple-coin head was added, allowing the player to bet one to five coins. This concept developed into the multiple-coin feature used on today's "multiple-line play" slot machines.[1]

Tokens were introduced in the early 1900's to circumvent gambling law requirements. These tokens, also known as "trade checks," were traded for merchandise or services. They became unpopular when slot machine technology advanced to varied multiple payoffs.

In 1902, the "Big 6" was introduced, on which a player could bet one to six numbers and was paid 4 to 1. The house percentage was approximately 16 percent. Three years later, a slot machine that accepted only coins was introduced. The "Elk," however, paid out "trade checks," not coins.

A modified version of Fey's "Liberty Bell" was developed by putting 20 symbols on each reel. This produced 8,000 possible combinations instead of the 1,000 possible combinations on Fey's machine. By increasing the number of symbols on each reel, the machine offered more winning combinations, more frequent payoffs, and a larger jackpot.

In 1925, the "guaranteed jackpot" became a feature on slot machines, which paid the value of a jackpot even though the jackpot display was empty. The earlier jackpot was a "drop jackpot," i.e., when a jackpot was won, the coins would drop into a coin hopper, leaving the jackpot display empty. This empty jackpot display tended to dissuade further play, a problem that was partially solved with the introduction of the "dual jackpot," which displayed two jackpots side by side.[2]

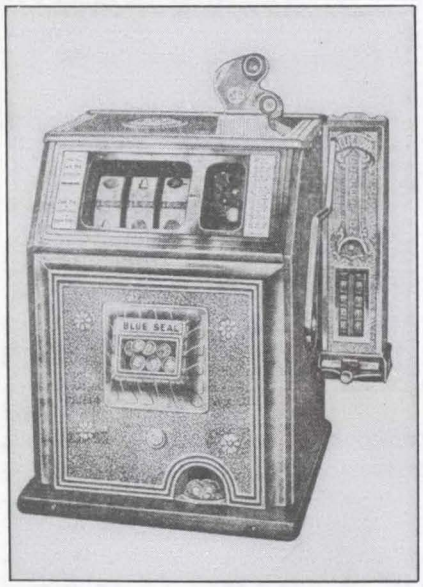
The twin jackpot gumball vending slot machine manufactured in 1933.

In 1944, Fey developed the "Bell" slot machine with the added feature of multiple reels with variable automatic payout for various reel combinations, a concept still used as the basis for the more recent slot machines.

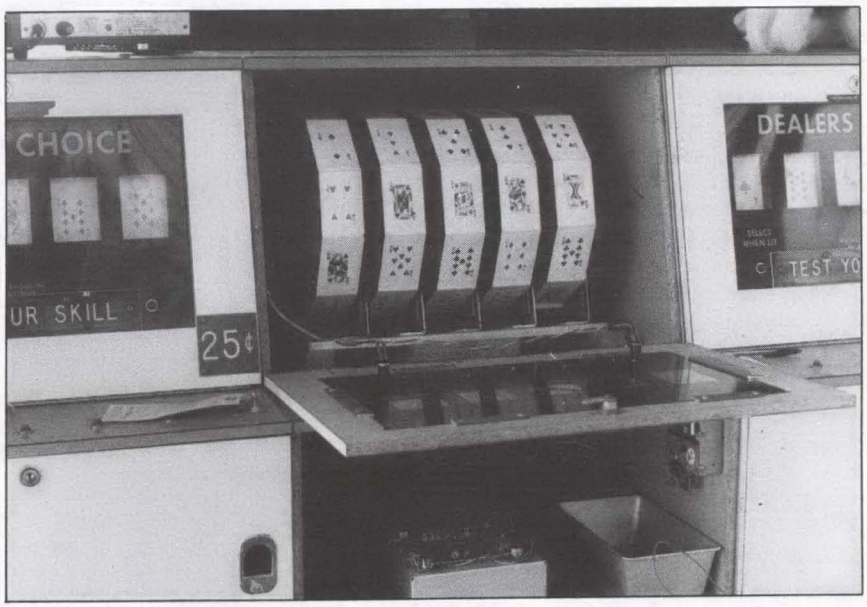
By the 1950's, a manufacturing company in Reno, NV, had designed and carved life-size figures of cowboys and Indians and incorporated slot machines into the upper torso of each figure. The handle used to activate the device was concealed inside one arm of the figure. Presumably, this is where the term "one-arm bandit" originated.[3]

In 1951, the Johnson Act[4] impacted the slot machine industry by providing the law enforcement community with the means to seize gambling devices, i.e., slot machines, if they were transported across State lines to locations not specifically exempted by local law.

The slot machine industry experienced a tremendous slowdown from the late 1950's to approximately 1963, resulting in several manufacturers going out of business. During this period, the industry began redesigning their machines and producing electromechanical devices. Electrical circuits were used to perform some of the mechanical functions, such as dispensing the correct number of coins for winning combinations and illuminating the reel display for bonus features. Flashing lights that were activated when winning combinations occurred and electrically operated "hold" buttons were added.



"Number 41 Nickel Play Jackpot" side vender slot machine.

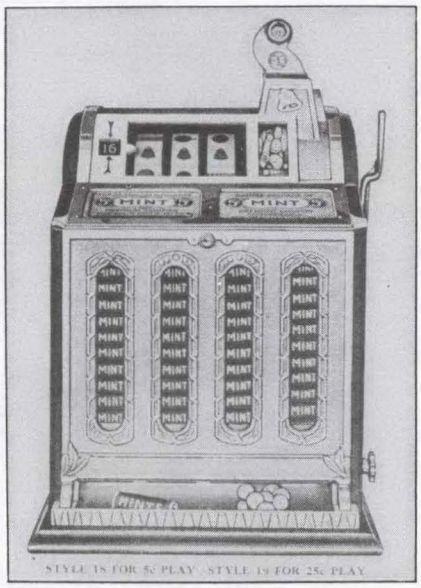


The "Dealer's Choice" is an example of an electromechanical device which uses "hold" buttons, supposedly adding skill to playing this device.

Ploys and Diversions Used

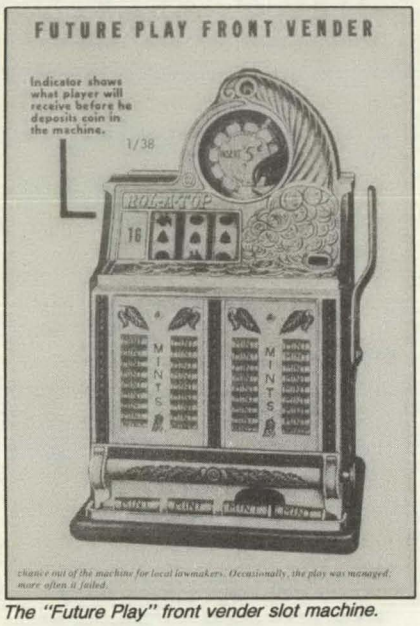
As early as 1902, ploys and diversions were incorporated into the design of slot machines in an attempt to disguise the true purpose of the device. For example, a music box was added to one model, implying that a customer played the device to hear the music instead of to gamble. Another popular ploy changed the "fronts" of these devices by incorporating "vending" features for dispensing mints, candy, or gum. There were three main types of vending features: A side vender, which was usually a hang-on attachment; a two-column vender built into the front, one on each side of the reel display; and a front vender, which consisted of four columns and covered the entire front of the device.

Other attempts to disguise the true nature of the slot machine were the "skill stop" and "future play" features. The skill stop feature added stop buttons for each reel, allowing the player to stop each reel independently. The claim was that this was an



A "Genuine O.K." front vender slot machine.

act of skill, thus removing the device from consideration as a gambling device. The "future play" feature, a more-popular concept, was used successfully for a number of years. When a player won a jackpot, the coins would drop onto an internal platform. The player did not receive any coins at this time, but an indicator would appear and inform him how many coins he would receive on the next play. The player would insert a coin, activate the device, and at the conclusion of that play, receive the number of coins indicated previously. The argument used here is that if a player knows *how many* coins he is going to receive and *when* he will receive those coins, the device is not a gambling device since the reward is not a product of chance.



The "Future Play" front vender slot machine.

An example of a "multiline" play slot machine.

Electronic Slot Machines

In approximately 1964, "electronic" slot machines were introduced using a minicomputer to generate electrical impulses to create images on a screen, initiating a generation of slot machines that gives the player more options of play. The action imitates the spinning of reels by flashing images on a screen in rapid succession.[5] "Multipliers" allow the player to bet one or more coins to increase the payout, and the "multiline play" feature gives the player more ways to win for each coin inserted.

The "progressive" slot machine visibly keeps track of plays since the last jackpot and dispenses the cumulative total of coins as a bonus jackpot. A "both ways" feature gives the player the option of reading the sequence of images forward or backward to determine a winning combination.

Slot Machine Characteristics

The slot machine occupies a unique position in today's gambling community. In casinos, slot machines are the most popular attraction. A survey by *Public Gaming Magazine* reported that in 1981, slot machines produced 42.7 percent of all gaming revenue in Nevada and 43 percent of all gaming revenue in Atlantic City.[6] The slot machine is most popular with female gamblers, and among various age groups, the elderly, both male and female, predominate. As a rule, the more knowledgeable players refrain from playing the slot machine; however, with the introduction of the "progressive-line" and "Big Bertha" slot machines, this trend is changing. The incentive these machines offer, such as a jackpot of a million dollars, contributes to this phenomenon.

Simplicity of operation, the expectation of gaining a large return for a small consideration, the excitement of play without undue stress brought on by lack of knowledge or experience, the relatively small bets on each play, and easy access to the machines themselves all contribute to the slot machine's popularity.[7]

Historically, the judicial system has held that three elements must be present to classify a device as a gambling device per se: The consideration (the cost or value of the coin needed to begin play); the outcome of an event determined wholly or predominately by chance; and the reward

". . . ploys and diversions were incorporated into the design of slot machines in an attempt to disguise the true purpose of the device."

(something of value) equal to or greater than the initial consideration.[8] In several jurisdictions, a credit is deemed something of value.

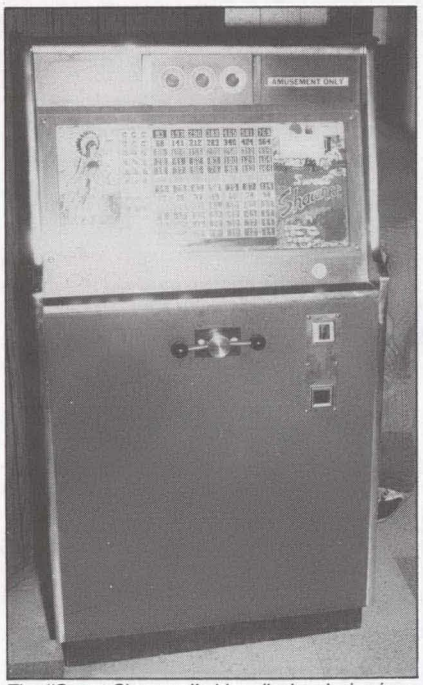
The slot machine has certain distinguishing features which define the nature of the device. Characteristically, a slot machine requires inserting a coin to put the device into a play mode, which is activated by a lever, arm, or button. Once activated, reels or drums bearing several symbols begin to rotate in a timed cycle. The combination of symbols produced when the reels stop is, as a rule, purely by chance. Other features incorporated into the operational aspects of the slot machine, such as multiple coins, retention ratio, meters, and time of play, are also used as identifying characteristics.

Multiple-coin Feature

"Multiple-coin feature" means that the device can accept one or more coins. In most instances, each additional coin inserted increases the payoff ratio for a winning combination. For example, a "Sweet Shawnee" device, which uses an electronic reel, has a multiple-coin feature which allows the player to insert from 1 to 7 coins. For each additional coin inserted, the player increases the payoff ratio for each winning combination. Modern slot machines using this feature are called "progressive slots."

Inserting a coin (or coins) puts the device into the play mode. When the player pulls a lever located on the front of the device, the reels are set into motion, or in this case, an electrical circuit is activated, producing impluses which appear as images in three circular windows located near the top front portion of the device. All reels begin rotating at the same time; however, the length of rotation of these electronic reels varies. The first reel stops after approximately 3 seconds, the second reel after approximately 4 seconds, and the third reel after approximately 5 seconds. This synchronized start and staggered stop sequence produces a random combination of symbols.

Once these images become stationary, a "hold" feature comes into play. The player may hold one or two of the three images displayed by pressing a button, one for each reel



The "Sweet Shawnee" video display device is an electronic slot machine using electronic reels. This device has all the characteristics of a slot machine.

represented. To put the device back into play mode, one or more coins or credits must be inserted. The player then pulls the lever to set the reel(s) in motion (only the reel(s) *not* on hold will rotate).

This hold feature allows the player to retain any image that he believes will be to his advantage on the next play. This feature merely removes one (or two) of the three reels from the next play, reducing the total available combinations from 8,000 to 400 (or 20). The final outcome remains a product of chance, because the images that appear on the remaining reels are selected by the device at random.

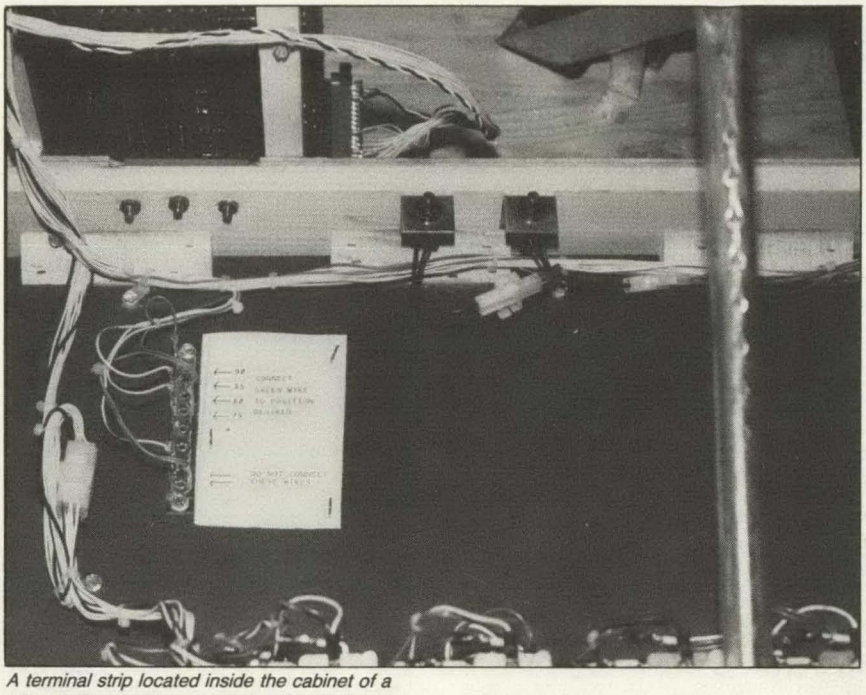
The "Sweet Shawnee II" has an "added chance" feature that comes into play if the player has a winning combination. By pressing this feature button, the player has the chance to receive nothing, double, or triple the original payoff, or he/she can also opt to collect the original credits won by not activating the chance feature.

Retention Ratio

All slot machines are designed and manufactured to retain a predetermined percentage of all coins inserted into the device. This retention ratio, commonly called the "house percentage," applies only to games of change.

A slot machine generally retains from 3 percent to 15 percent of all coins it accepts. However, each device can be set to retain greater percentages if the owner or operator so desires. [9]

The "Sweet Shawnee II" device is no exception. Its electronic circuitry provides the means by which the owner can regulate the house percentage by adjusting two dials located on a printed circuit board inside the device. Each dial bears the digits 0 through 9. Setting the first dial on 0 provides the owner with a 50-percent retention ratio, while a setting of 9 gives the owner a 5-percent retention ratio. The second dial has the same function as the first, but applies to the "feature" aspect of the device by increasing or decreasing the frequency of payoffs.

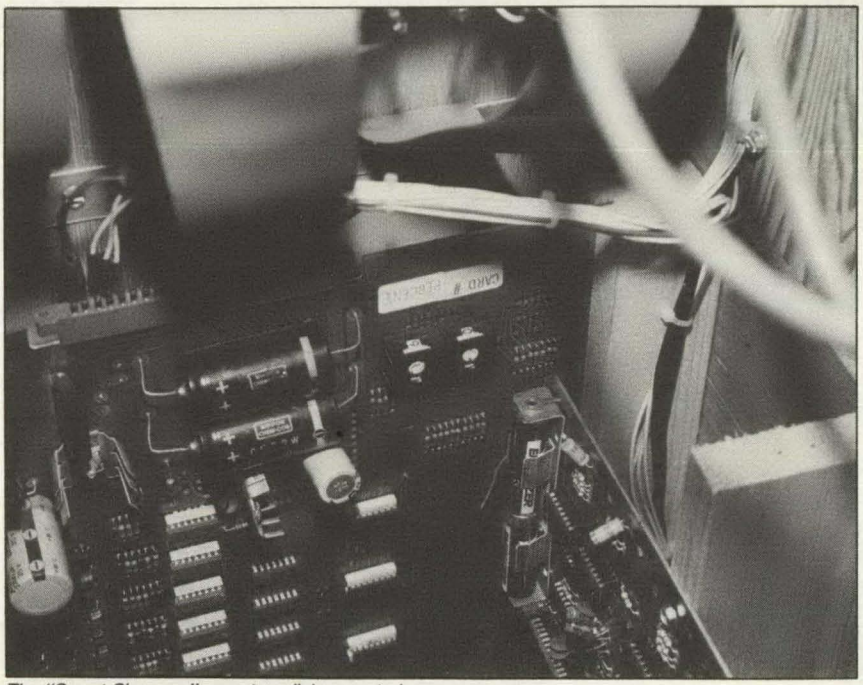


A terminal strip located inside the cabinet of a "Sweet Shawnee" device is another method used to regulate the retention ratio.

Some manufacturers use a "bit switch" or a "dip" switch to regulate the retention ratio by varying the number of winning combinations on which the device will payoff. [10]

Another method of modifying the retention rato is by using a "PROM" (a fixed program, read only, semiconductor memory), which modifies the program of the device relative to the number of designated winning combinations. A "terminal strip" can also be used to regulate the retention ratio or to regulate the cost of each play.

Electronic video display devices and other devices that award credits for winning combinations foster a misinterpretation of the retention ratio concept. The retention ratio is the percentage of all coins inserted and retained by the device over an extended period of play. This new version of gambling device uses a meter to record credits won by the player. Additional plays or bets can be made



The "Sweet Shawnee" uses two dials mounted on a circuit board to regulate the retention ratio or house percentage.

Table 1

Poker Probabilities

Possible Poker Hands in a 52-Card Deck

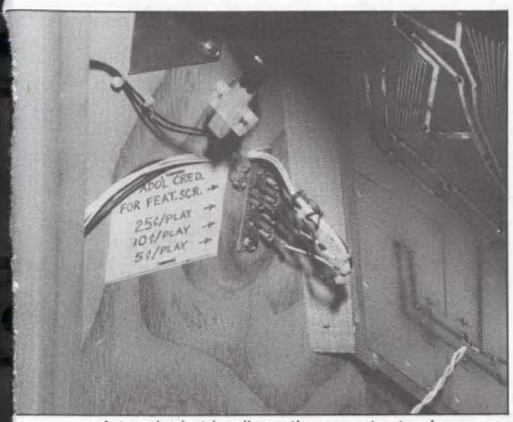
Straight Flush (including 4 royal flushes)	40
Four of a Kind	624
Full House	3,744
Flush	5,108
Straight	10,200
Three of a Kind	54,912
Two Pairs	123,552
One Pair (84,480 of each, Aces to Deuces)	1,098,240
No Pair:	
Ace High	502,860
King High	335,580
Queen High	215,180
Jack High	127,500
Ten High	70,380
Nine High	34,680
Eight High	14,280
Seven High	4,080
Subtotal	1,302,540
Total	2,598,960

Source: Richard L. Frey, According to Hoyle *(Greenwich, CT: Fawcett Pub. Inc., 1970), p. 31.*

A majority of the noncasino video display draw poker devices will only pay off on aces or better, which reduces the total number of winning combinations for which credits are awarded.

"All slot machines are designed and manufactured to retain a predetermined percentage of all coins inserted into the device."

by the player, using these credits in lieu of depositing additional coins. These accumulated credits are included in the calculation of the retention ratio. Payoffs in credits are an alternative to payoffs in coins, and as such, they hold less interest for casinos.



A terminal strip allows the operator to change the cost of play from 5¢ to 25¢ per play and award additional credits for the feature score.

Video gambling devices, like their casino counterparts, have a profit potential directly proportional to the retention ratio. The retention ratio is based upon the "law of probability" and a payoff of less than true odds for winning combinations. In poker, there are 2,598,960 possible winning poker hands in a 52-card deck, including the hands where a high card may be declared the winner. (See table 1.) The video poker device establishes its profit potential by not paying off on all possible winning combinations. For example, the "Quick Draw Poker" device awards credits only for a pair of aces or better, creating a retention ratio of approximately 28 percent. When the player bets four or more credits, two wild jokers are put into play. This decreases the retention ratio to approximately 14 percent, because winning combinations appear more often. A video poker device that only pays off on aces or better will have 282,660 winning combinations for awarding credits out of 2,598,960 possible combinations. The rule of play established by the video device guarantees a predetermined retention ratio over an extended period of play. (See table 2.)

Table 2

Draw Poker

Odds Against Improving A Hand On The Draw

Hands before you draw	Cards drawn	Improved hand	Odds against player
One Pair	3	Two Pairs	5 to 1
		Three of a Kind	8 to 1
		Full House	97 to 1
		Four of a Kind	359 to 1
Three of a Kind	2	Full House	15.4 to 1
		Four of a Kind	22.5 to 1
Two Pairs	1	Full House	10.8 to 1
4 Card Flush	1	Flush	4.2 to 1
Open Straight	1	Straight	4.9 to 1
Inside Straight	1	Straight	10.8 to 1
Open Straight Flush	1	Straight Flush	22 to 1
Inside Straight Flush	1	Straight Flush	46 to 1

Source: C.R. Emerson, "Video Poker—Draw To Win," Gambling Times, *May 1982, p. 70.*

The odds against a player improving a poker hand on the draw illustrates the fact that the final result of each hand is based upon chance.

Time of Play

As a rule, if play on a gambling device is performed according to the parameters of the device, the duration of each play or event would be very short, approximately 5 to 10 seconds. After inserting a coin into a slot machine which puts the device into a play mode, the player then pulls a

"One of the characteristics of an amusement device is the immediate right to replay."

lever or presses a button to set the reels in motion. The reels will stop at the end of a timed cycle, ending that event of play. Once the timed cycle is activated, a player cannot alter or extend the time of play, regardless of alleged skills or capabilities.

Meters

The original slot machines did not have meters to record the number of coins deposited or paid out for winning combinations. The expected return for those devices was calculated mathematically. This was accomplished by computing the total number of possible combinations available for each device, then calculating the total number of winning combinations and multiplying each winning combination by the number of coins awarded for that combination. The total number of coins awarded for winning combinations was then subtracted from the total number of possible combinations. The resulting ratio was the house percentage over an extended period of time of play.

Meters were added to the newer versions of electronic slot machines when credits were awarded for winning combinations instead of coins. Operators of video gambling devices claim that a knock-off meter is a necessary business function which insures employee honesty.

A primary function of a knock-off meter is to record credits removed from the credit meter when a player is reimbursed for the unused credits. This meter provides an accurate method by which the operator may be reimbursed for what was paid to the player. In most States, paying players for unused credits constitutes gambling and is, therefore, illegal.

Another reason offered to justify the use of a knock-off meter is when a player wants to stop playing but does not want to lose the credits he has accumulated. The operator will give the player the option of playing off these unused credits at a later date. This procedure would necessitate a knock-off meter to be compared with the coins-in meter or the actual number of coins in the device. Theoretically, the difference would indicate the number of coins the operator had put into the device to restore the number of credits previously displayed on the video screen credit meter.

This is an invalid reason for using the knock-off meter, since it would require more accounting records than are traditionally found in this type of device. For example, if four players accepted the future play option, one on each successive day, the knocked off credits would be recorded on the knock-off meter accumulatively. The operator inserts coins to restore the credits owed the first player on the fourth day, with the expectation of being reimbursed by the owner or route man. Yet, how does the owner or route man know how much to reimburse the operator based only upon the two meter readings (or actual coin count), inasmuch as the knock-off meter only displays the total credits removed for the four players and not each player individually? Additional records would be needed to record the payoff process accurately.

One of the characteristics of an amusement device is the immediate right to replay. The future play aspect, in the above situation, would tend to exclude these devices from being classified as amusement devices.

Video Device Variations

Many video display devices currently being manufactured have the capability of paying off in coins, tokens, credits, or tickets with minor adjustments or the addition of a dispensing mechanism. A "Hold and Draw" video draw poker device, for example, combines a credit and cash payout system. A player may continue to play using the credits or press a "collect" button and receive cash equal to the number of remaining credits. This same model is also available without a coin hopper but has a credit meter to record credits won by the player.

Several electronic video gambling devices attempt to duplicate the more popular casino-type games, such as draw poker, five-card stud, blackjack, and keno. However, manufacturers may offer variations of a particular game to make their device appear more unique. For example, one device offers a double-up version of draw poker. This double-up feature functions only when the player has a winning combination. The player then has the option of taking a chance of winning double the amount won or nothing on the turn of a card (image). In an attempt to become more competitive, manufacturers are offering the player the option of playing one to four different games on the same device, i.e., draw poker, blackjack, acey-deucy, and a three-reel slot machine configuration.

Currently, manufacturers of video gambling devices are using a dual program concept. One program incorporates the elements of a gambling device, i.e., consideration, chance, and reward; the second program eliminates the "reward" element by limiting the number of hands per coin/credit and awarding a fixed number of "points" for that same coin/credit. When the points and/or hands are played, another coin/credit must be used to begin another series of hands. A player may insert multiple coins but only one coin/credit may be

A "Hold & Draw" video device has a coin hopper to return coins to players for winning combinations.

used for each series of hands.

The unique feature of this concept is the method used to change from one program to the other. When in the amusement mode, a series of buttons are pressed, in predetermined sequence, to change from the "amusement" mode to the "gambling" mode. A power interruption (unplugging the device) automatically changes the device back into the amusement mode.

It is obvious that this concept is designed to foil law enforcement in their efforts to investigate gambling violations. This concept also raises another issue: Is a device a gambling device per se when there are interchangeable programs using a "gambling" and "amusement" format? Part II of this article will compare amusement and gambling video display devices. **FBI**

(Continued next month)

Footnotes

[1] R.N. Geddes and D.R. Mead, *Slot Machines on Parade* (California: The Mead Co., 1980).

[2] G.A. Harris, "The Fabulous Early Slots," *The Antiques Journal,* January 1975, pp. 14–17.

[3] Supra note 1.

[4] Title 15, U.S.C., secs. 1171–1177, Gambling Devices Act of 1962.

[5] A mechanical reel and a reel simulated by electrical impulses (an electronic reel), although physically dissimilar, perform a similar function and produce the same results.

[6] W. Koenig, "Gambling: A Good Bet For States?" *USA Today,* Washington, DC, March 1, 1983.

[7] T. Sheahan, "The Video Machines," *Gambling Times,* November 1982, p. 38.

[8] *Commonwealth* v. *Two Electronic Poker Game Machines,* Pa. Sup. Ct. J133–83, April 25, 1983, p. 8.

[9] The majority of slot machines in use today will not exceed that retention ratio to any great extent. This payoff concept is based on good business practices. For example, a device that has a 5-percent retention ratio will be played more often than a device with 30- or 40-percent retention ratio. Therefore, the gross revenue will be greater over the long run than the device with infrequent payouts. A casino control commission regulates the house percentage, approximately 15 percent, in States that have legalized gambling.

[10] A "bit switch" is a series of on/off switches which activate different features of the device. A "dip switch" is a series of two-position switches (on/off) which, when used in a predetermined sequence, activates different features of the device.

Maintaining Control

A Step Toward Personal Growth

"Emotional stress, the real danger in police work, is alive and flourishing within police organizations."

By
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Quantico, VA

Stress has become a household word for most law enforcement officers and their families. Daily newspapers, periodicals, and police journals provide frequent references to the topic of police stress. The unique sources of stress inherent within police organizations, such as responsibility for people, loss of control, postshooting trauma, and undercover work, generate emotional stress among individual officers and their families. Emotional stress, the real danger in police work, is alive and flourishing within police organizations.

Stress has been defined by the late Hans Selye as the wear and tear on the human body caused by living.[1] However, the focus of this article is not the phenomenon of stress itself with its accompanying physical, mental, emotional, chemical, and hormonal changes. Rather, this article discusses the responsibility of individual officers to cope effectively with stress in a positive manner.

Three Stages of Coping

Successfully dealing with stress can be divided into three separate stages of individual growth, development, and maturity. These stages are:

1) Stage I—Innoculation and training;
2) Stage II—The active use of individual coping techniques; and
3) Stage III—The evaluation process.

Considerable time, effort, and energy have been expended on stage I. Generally speaking, officers across the country have been introduced to the concept of stress and how to keep stress within their tolerance limits, and they have, for the most part, demonstrated an eagerness to understand and use stress to their advantage. Stage I is a relatively routine, developmental learning stage, but it should not be overlooked or neglected since it represents the foundation upon which the additional stages are built.

The active use of individual coping techniques represents stage II of the developmental process. This stage prompts individual officers to use the various coping devices and techniques that were previously learned and practiced. This stage is action-oriented and requires maximum effort on the part of individual officers. Stage II involves self-motivation and commitment. These cannot be overemphasized. "Stress management is essentially a personal skill; to be used for and by an individual . . . . Coping cannot be done by someone else; it must be internalized as a part of each individual's personal makeup."[2]

Based on my law enforcement experience, most police officers have demonstrated an eagerness to learn to cope positively and successfully with the stress of police work. However, at the same time, there appears to be a reluctance, or fear to use new or different coping techniques. This apprehension is normal and healthy in any new learning situation. Individual members of police organizations will respond differently to the same stressor. This is because we are dealing with individual personalities. Variables such as capabilities, flexibility, ambition, aggressiveness, and previous coping experience determine how individuals will react.[3]

The final stage of growth, development, and maturity is actually an evaluation process. The evaluation undertaken by individual officers involves a careful examination of the

Special Agent Schaefer

cumulative results of stages I and II. Again, it is up to each individual officer to do a self-assessment. Compare your personal results with the plateaus of learning to provide yourself with a visual picture of how successful your individual coping techniques have been to that particular time. (See fig. 1.) Now is the time to assess whether to continue with your current program. If you determine that you are not satisfied with your progress, consider using new and additional coping techniques until you feel comfortable with your results. This might require altering your perception toward one or more areas of your lifestyle.

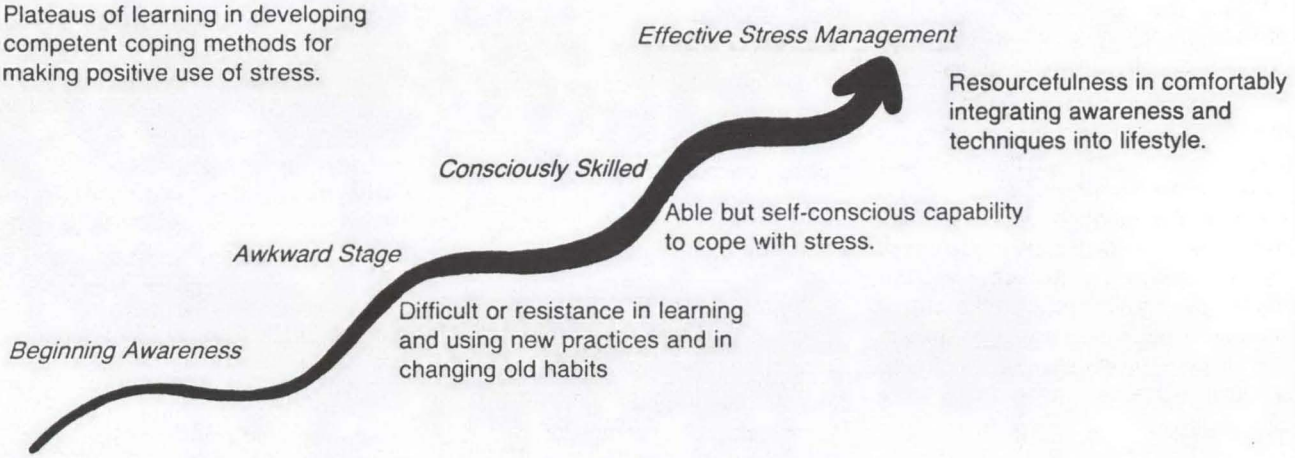
Perception

Does the following statement sound familiar to your lifestyle? "I'm an old man, and I've had many troubles, most of which have never happened." [4]

We in the law enforcement community expend a great amount of energy worrying about negative happenings. How often do these events pass without ever seriously touching or affecting our lives? Unfortunately, members of police organizations often unconsciously find themselves adapting poorly to stress. Police officers are "creatures of habit," and as such, find themselves responding negatively to their work on a daily basis. By the very nature of the job, police work itself tends to breed some of this negativism. At the scene of a heinous accident or crime, for example, we find our unconscious mind attempting to cope with the severe negativism by use of the "comic defense." The use of this key ego defense mechanism, which employs humor to relieve the tension, is often an alternative to getting sick, crying, or perhaps running away. We have little or no control over negative events that we might be exposed to daily, weekly, or monthly in law enforcement. However, we do have control of ourselves. "By and large most events are neutral. You give them meaning. You make them

Figure 1

Plateaus of learning in developing competent coping methods for making positive use of stress.



what they seem. Your expectations, knowledge, and anticipations of a situation will have a critical bearing on the event's impact." [5]

This can be summed up by emphasizing that the majority of the stress that we, as members of the law enforcement subculture, suffer from is self-induced. We can often reduce our stress level by simply thinking positively and altering our perception or the manner in which we comprehend things. Work hard at developing an overall positive and healthy outlook on life. "Stress is the product of an entire lifestyle, whether personal or organizational. It is not the product of an occasional crisis." [6] Get into the habit of beginning each day with a positive attitude. Whenever you lose that positive charge, immediately make a conscious effort to reverse your thought patterns. Mrs. Rose Kennedy aptly summed up what has been said about perception during a recent television interview on her birthday when she said, "Birds sing after a storm, why can't we?"

Lack of Control

Police officers are continually called upon to confront situations over which they exercise little or no control. "Lack of control is a major cause of stress on the job." [7] Typical examples might involve an attempted suicide or hostage case. Police officers are called upon daily to make split-second, life-or-death decisions. How can you maintain a feeling of control when you realize that you will be dealing with variables such as personality?

The following statement might provide guidance when you are having difficulty thinking positively and maintaining control of a situation, at least in your mind:

> "I feel determined to strive to use whatever power I have to change the unpleasant stresses of life that I can change, to dislike but realistically accept those that I cannot change and to have the wisdom to know the difference between the two." [8]

This might appear to be the ideal, but it can be a powerful tool to assist officers in maintaining control through the use of a positive attitude. Another way of expressing the same type of optimism might be, "Life is not so bad, celebrate what you have." We tend to fall prey easily to the "why me?" syndrome. Accentuating the positive is one of the best and healthiest coping techniques available to police officers.

"Accentuating the positive is one of the best and healthiest coping techniques available to police officers."

The Stress Management Puzzle

Members of police organizations will find that successfully coping with stress can be as simple as putting the pieces of a puzzle together. The good news is that it is not a 1,000-piece puzzle. The stress management puzzle consists of only five pieces. (See fig. 2.) Successful stress management demands a balance involving the five parts of the puzzle. A lost, damaged, overused, or underused piece to the puzzle will detract from its effectiveness. Examine the five pieces of the stress management puzzle, while keeping in mind the fact that no one piece of the puzzle is important by itself. The puzzle only has meaning when all five pieces are used equally.

Members of police organizations should be comfortable and confident within both their work and social environments. This permits individual officers to keep stress within their own particular tolerance limits, thereby maximizing performance. Attitudinal changes, comic defense, and perception, although they can never be overemphasized, have already been discussed. These can provide officers with the necessary distraction and support when severe stress exists in the work, social, or family environments. Members of police organizations must learn to adapt as quickly and as positively as possible to stressful situations. Prolonged, unrelieved periods of stress will eventually lead to stress contagion, and in time, burnout among police organizations.

Members of police organizations will be likely to experience some difficulty when they examine the second piece of the stress management puzzle. The second piece of the puzzle is concerned with emotions, which can be described as internal feelings. This is where a problem arises for many police officers. Police organizations encourage officers to camouflage their true emotions and replace them with the "macho image," which is readily accepted. The emotion that should have been vented or expressed is suppressed by officers and essentially buried alive, where it begins to eat away at the officer from the inside.

We need to seek alternative methods which encourage the venting of emotions in a positive manner. Understanding and keeping in touch with your emotions can prevent you from sinking into a depression. Do not hesi-

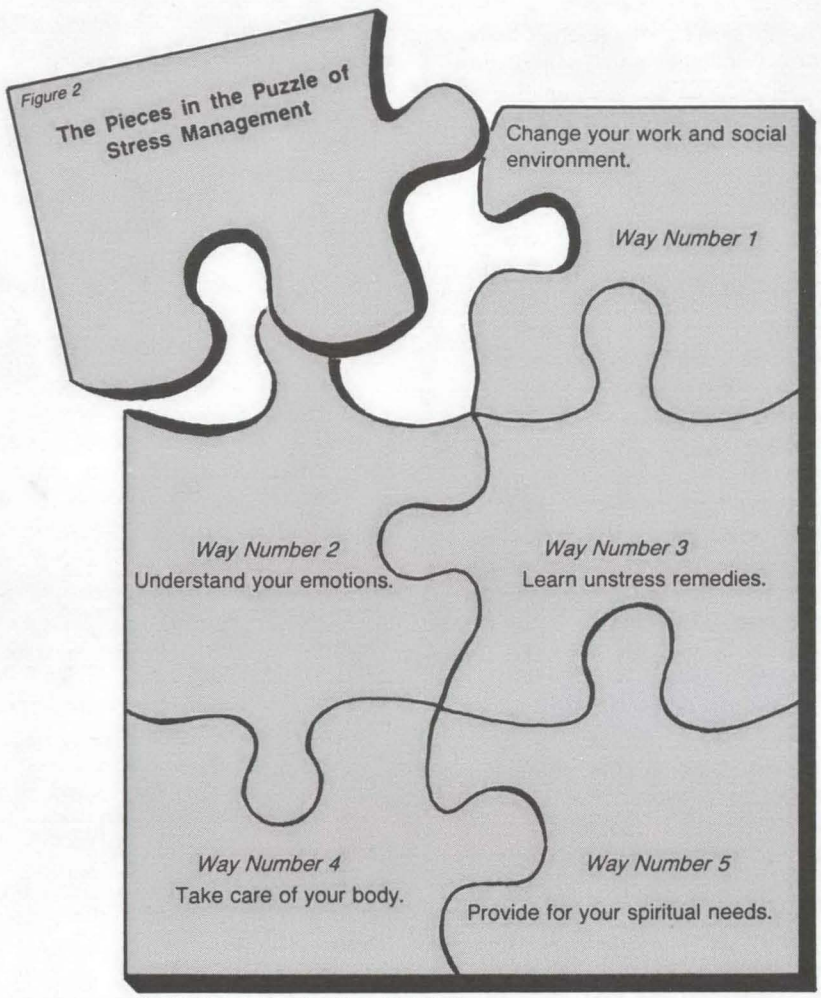
tate, when you feel your emotions heighten, to take some overt action to defuse or debrief yourself. This might involve face-to-face discussions with a partner, spouse, or anyone with whom you can feel comfortable from the aspect of debriefing, especially one who will not be judgmental of your emotions.

The third piece of the puzzle and probably the key to an easy and successful solution lies within the learning and application of "unstress remedies." "Unstress is a new word for most people and suggests relaxation, peace, and well-being."[9] All too often we neglect ourselves and put all of our effort and energy into the other pieces of the puzzle. The following list contains a number of "unstress remedies," as well as other healthy means, by which we can more appropriately cope with stress:

1) Eat three meals a day, including breakfast;
2) Avoid sugar, salt, animal fats, and processed white flour;
3) Pursue a regular program of physical activity and/or other leisure pursuits;
4) Nurture and maintain friendships;
5) Get enough sleep and rest;
6) Practice abdominal breathing and relaxation;
7) Schedule time and activities alone and with others to maintain a well-rounded lifestyle of living and working;
8) Stop smoking;
9) Limit alcohol and caffeine intake;
10) Identify and accept emotional needs;
11) Pace yourself to allow for an even flow of demands;
12) Recognize the early behavior or physical signs of stress and take action against the stressor;
13) Allocate your time and energy to allow for periods of rest and stimulation; and
14) Take appropriate supplement, if needed, for proper nutrition.[10]

Figure 2

The Pieces in the Puzzle of Stress Management



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The fourth piece of the stress management puzzle, "take care of your body," is often taken for granted. We tend to ignore the human body's early warning system when it is activated. We almost begin to think of ourselves in terms of being indestructible which is certainly not the case. Complex machinery in our society is usually equipped with some type of a visual or audio early warning system. When the alarm is activated, we immediately stop the machinery until we can determine the nature of the problem. However, when that intricate piece of machinery called the

"We should not look upon stress as all bad or as an enemy, but rather as a challenge."

human body activates its early warning system, we tend to either ignore the warning or take it very lightly.

Members of police organizations tend to sideswipe and mask persistent stressors or symptoms, using alcohol, tobacco, or drugs. "Alcohol and drugs can only temporize; they do not solve the stress problem."[11] The better our physical health at the onset of stress, the better we will be able to resist the physical and psychological stressors to which we are exposed. Healthy bodies breed healthy minds and vice versa.[12]

The following six signs seem to do the best job of telegraphing a message that the body's early warning system has been activated and some type of corrective action should be initiated:

1) Changes of personality;
2) Isolation from support groups;
3) Unusual sleep patterns;
4) Continued somatic complaints (headache, backache, stomachache);
5) Excessive use of self-medication (alcohol and/or drugs); and
6) Nothing seems pleasurable, such as eating, hobbies, sex, etc. (anhedonia).

The final piece to the stress management puzzle considers our spiritual needs. Our spiritual beliefs can provide reassurance and boost our confidence and morale, especially during extremely stressful times. Examine the role of religion, prayer, and meditation in your current lifestyle to determine if you are maintaining a balance in the stress management puzzle. For some, spiritual needs only emerge in times of crises, but still others believe that self-meditation brings them closer to a Supreme Being on a daily basis, enabling them to cope with life's stressors. Perhaps focusing on your inner self rather than the surface events will provide some reassurance and satisfaction. Responsibility becomes the issue. We must learn to accept responsibility for our own actions and well-being.

Conclusion

The holistic approach provides members of police organizations with an excellent tool with which to build life's foundation. Balance is the key to successfully coping with stress. What you do in any one part of the five-piece stress management puzzle should enhance and complement the remaining parts. Overemphasis on health, exercise, diet, spiritual, or emotional needs will throw us into periods of disequilibrium. The running, health, or religious fanatic will in all probability not cope well with stress since he is concentrating almost totally on only a small segment of the puzzle.

One word of caution for members of police organizations. We are coping with stress at this very moment on an individual basis; however, our stress responses are not always appropriate. Take the typical stressful situations at work or home. Think about how you typically cope with these situations. Perhaps you start smoking, overeating, projecting blame, biting your nails, or drinking to excess. This is counterproductive behavior. We need to engage in "unstress activities" that are productive. Stressful events disturb our equilibrium or balance. Exercise, a productive "unstress" activity, can help us to restore equilibrium to our bodies. "Unstress activities," such as excessive drinking, smoking, or overeating, might temporarily postpone or mask the symptoms of the stressor, but they do nothing to restore our bodies to their original state. In fact, such activities often knock the equilibrium scale further out of balance. Counterproductive behavior does not help us put any of the five pieces of the stress management puzzle together so that they will stay together. We must make a commitment to develop an action plan leading to positive, productive coping techniques. "Be it diet, exercise, creativity, work, study, health care, or whatever, we are far more productive and effective if we maintain a regular, ongoing discipline than if we develop off-and-on occasional habits . . . constant care is better than crash programs." [13]

Members of police organizations need not accept stress with a helpless feeling. We should not look upon stress as all bad or as an enemy, but rather as a challenge. We can take charge and harness the energy of stress to improve our own physical, mental, emotional, and spiritual well-being as members of the police subculture. **FBI**

Footnotes

[1] Hans Selye, *The Stress of Life* (New York: McGraw-Hill Book Company, 1978), p. 1.

[2] E.M. Gherman, *Stress and the Bottom Line—A Guide to Personal Well-Being and Corporate Health* (New York: American Management Associations, 1981), p. 13.

[3] Wayne C. Richard and Ronald D. Fell, "Health Factors in Police Job Stress," *Job Stress and the Police Officer; Identifying Stress Reduction Techniques,* edited by W.H. Kroes and J.J. Hurrell (Washington, DC: U.S. Department of Health, Education, and Welfare, 1975), p. 74.

[4] Wayne W. Dyer, *Pulling Your Own Strings* (New York: Hearst Corporation, 1979), p. 33.

[5] Supra note 2, p. 217.

[6] Ibid., p. 207.

[7] Keith W. Sehnert, *Stress/Unstress—How You Can Control Stress at Home and on the Job* (Minneapolis: Augsburg Publishing House, 1981), p. 42.

[8] James P. Spradley and Robert L. Veninga, *The Work Stress Connection—How to Cope with Job Burnout* (New York: Ballantine Books, 1982), p. 88.

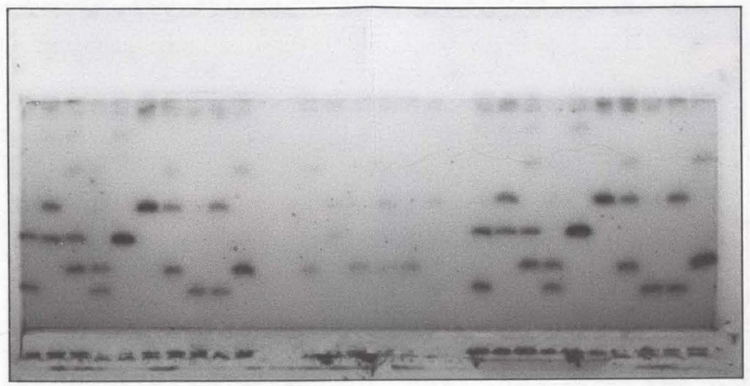
[9] Supra note 7, p. 14.

[10] Supra note 2, p. 252.

[11] Ibid., p. 242.

[12] Jere E. Yates, *Managing Stress—A Business Person's Guide* (New York: American Management Associations, 1979), p. 99.

[13] Supra note 7, pp. 17–18.



Phosphoglucomutase, a blood and semen protein, as seen by isoelectric focusing.

biochemical marker phenotypes of the ABH (ABO), PGM, GLO I, Pep A, and G6PD systems.

Saliva

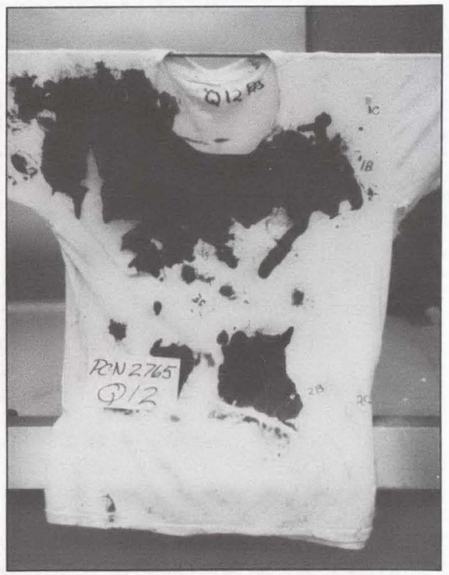
Saliva examinations are usually performed on items such as cigarette butts, envelopes, stamps, items related to oral sodomy cases, and on known saliva specimens. The latter are often essential to confirm one's "secretor" status. A secretor is an individual who is capable of releasing ABH blood group substances into body fluids such as semen, saliva, and vaginal secretions. These substances reflect the donor's ABO blood type. Approximately 80 percent of the U.S. population are secretors. Secretor status can usually be determined in liquid blood samples using the Lewis blood group system.

The test for the presence of saliva relies upon the detection of alpha-amylase, a starch-degrading enzyme. This enzyme is found in very high proportions in saliva relative to other commonly encountered body fluids or substances. When sufficient amylase is located on an item, the ABH grouping tests are performed to attempt to locate any blood group substances that may be present.

Other Examinations

Occasionally, the Serology Unit is asked to examine items for the presence of urine, fecal material, or human protein. The test for the presence of urine relies upon the detection of urea, a chemical compound found in high concentrations in urine. Fecal examinations involve a chemical test for the presence of alpha-amylase, microscopic examinations for partially digested plant fragments, and visual and olfactory inspections of questioned stains. The presence of human protein is detected immunologically. No examinations are performed to identify the presence of tears, perspiration, vitreous and aqueous humor (eye fluid), body tissues, or on cultures of veneral disease microorganisms. The unit also does not conduct ABO tissue examinations.

It is the goal of the FBI serologist to identify specifically the body fluid or mixture of body fluids present on submitted items and to indicate whether those body fluids could have originated from a particular individual or individuals. At present, no serologist, including those in the FBI Laboratory, can state unequivocally that a stain was deposited by one individual to the exclusion of all others.



Homicide evidence following initial processing.

Policies

The FBI Laboratory is authorized to accept and examine evidence submitted in criminal cases from any duly authorized law enforcement or prosecutive agency in the United States and its territories, as well as other agencies of the Federal Government. The FBI does, however, encourage the use of State and local crime laboratories in one's own jurisdiction if the required services are available. Services of the FBI Laboratory are available free of charge to any requesting agency. The services include all examinations conducted, the reporting of results, the travel and court-

The FBI Serology Unit

Services, Policies, and Procedures

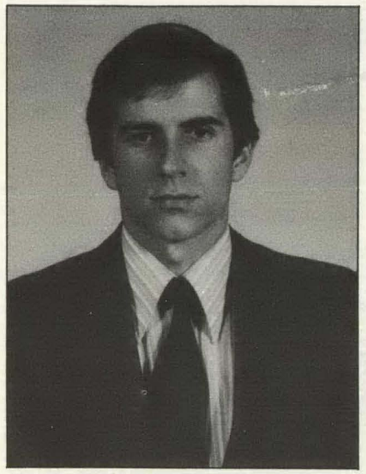
By
RANDALL S. MURCH
Special Agent
Laboratory Division
Federal Bureau of Investigation
Washington, DC

The Serology Unit of the Scientific Analysis Section, FBI Laboratory, is one of the largest and most productive applied forensic serology laboratories in the United States. Special Agent examiners in this unit annually receive requests to conduct serological examinations in more than 2,300 cases involving approximately 25,000 items. These requests come from all 50 States and several U.S. territorial governments and often coincide with requests for examinations by the FBI forensic experts from such disciplines as microscopic analysis, chemistry-toxicology, firearms, and elemental analysis.

This article will briefly explain the types of examinations conducted by the Serology Unit, the policies related to the submission, examination, and reexamination of evidence in the FBI Laboratory, the availability of FBI examiners for testimony in criminal trials related to evidence they have examined, and the collection and packaging of evidence for serological examination by the FBI Laboratory.

Services

The Serology Unit is staffed and equipped to perform biochemical analyses on blood and other body fluids, such as semen and saliva, that have been deposited on items of evidence. These analyses are usually related to investigations of crimes of violence, such as homicide, sexual assault, assault and battery, kidnaping, and bank robbery. Occasionally, cases related



Special Agent Murch

to other nonviolent criminal activities, such as bank burglary and extortion, are received.

Blood

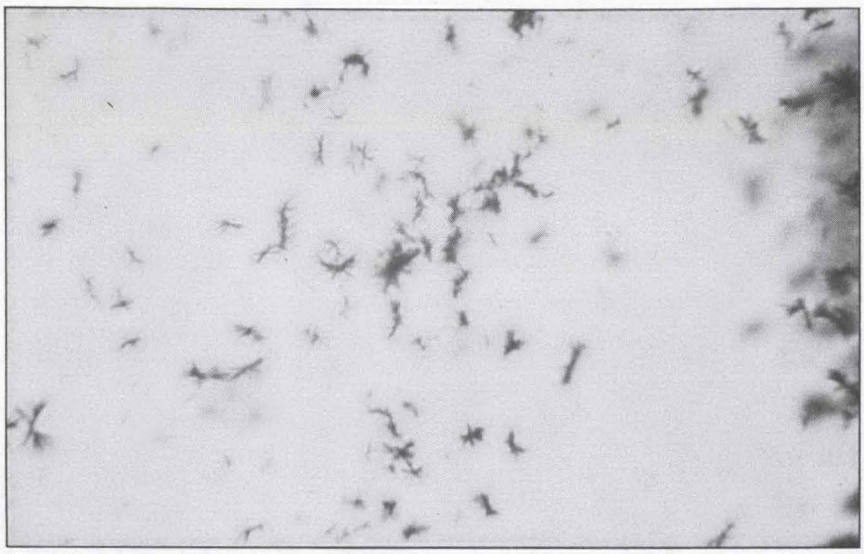
The biochemical analyses that are performed on blood and bloodstains include those for the presumptive presence of blood, the confirmed presence of blood, the origin of bloodstains (either human or animal family), and the identification and discrimination of genetically determined substances (markers) which usually appear in a limited number of forms (phenotypes).

The use of genetic markers by the serologist allows for the separation of the population into distinct groups based upon the particular phenotypes possessed by its members. For blood and bloodstains, the markers used in the Serology Unit include ABO, Rhesus (Rh), Lewis (Le), phosphoglucomutase (PGM), esterase D (EsD), glyoxylase I (GLO I), erythrocyte acid phosphatase (EAP), adenosine deaminase (ADA), adenylate kinase (AK), haptoglobin (Hp), transferrin (Tf), group-specific component (Gc) carbanic anhydrase (CA II), peptidase A (Pep A), and glucose-6-phosphate dehydrogenase (G6PD).

Semen

Examinations of sexual assault evidence most often involve the identification of semen, the male reproductive fluid. In the FBI Serology Unit, examinations for the presence of semen can include presumptive tests for acid phosphatase and choline, two chemical compounds found in high concentrations in semen; the microscopic search for spermatozoa, the male reproductive cells; the identification of prostate antigen, a semen-specific protein; and the identification of

FBI Serology Unit



Hemochromagen, a microcrystalline test for blood.

room testimony of the examiners who have been directly involved with the items submitted, and the handling of evidence while under the FBI Laboratory's control.

Examiners are also available free of charge to provide exculpatory testimony on behalf of the defense, provided the FBI Laboratory originally examined the items in question and the defense attorney provides in advance a subpoena for the examiner's testimony, a letter stating the facts of the case and why the testimony is needed, and an affidavit in support of the request stating specifically what will be asked of the examiner. Negative testimony on behalf of the defense is not provided free of charge and the same documentation requirements exist as for exculpatory testimony.

The FBI Laboratory reserves the right to authorize the travel and testimony of its examiners for trials in which testimony on behalf of the defense will be given. FBI examiners are not available as rebuttal witnesses in cases in which they did not participate, nor do FBI examiners testify at preliminary hearings or grand jury proceedings.

No examination of physical evidence will be conducted on any item that has previously been subjected to the same type of technical examination by another crime laboratory. This requirement is designed to eliminate duplication of effort and ensure that the integrity of the evidence is maintained. An exception may be granted by the Laboratory when there exists compelling reasons for reexamination. These reasons should be set forth in individual letters from the director of the laboratory that conducted the original examination, the prosecuting attorney, and the investigating agency that collected and submitted the evidence for laboratory analysis. No requests for examination will be accepted by the FBI from other crime laboratories that have the capability of conducting the requested examinations unless extenuating circumstances exist and the request is approved by the Laboratory.

The FBI will not examine evidence in civil cases or criminal matters if it is indicated that a civil case may evolve because it is necessary to destroy the evidence during the course of the examination.

Collection and Submission of Evidence

When a crime occurs and evidence for serological (or other) analyses at the FBI Laboratory is collected, careful consideration should be given to:

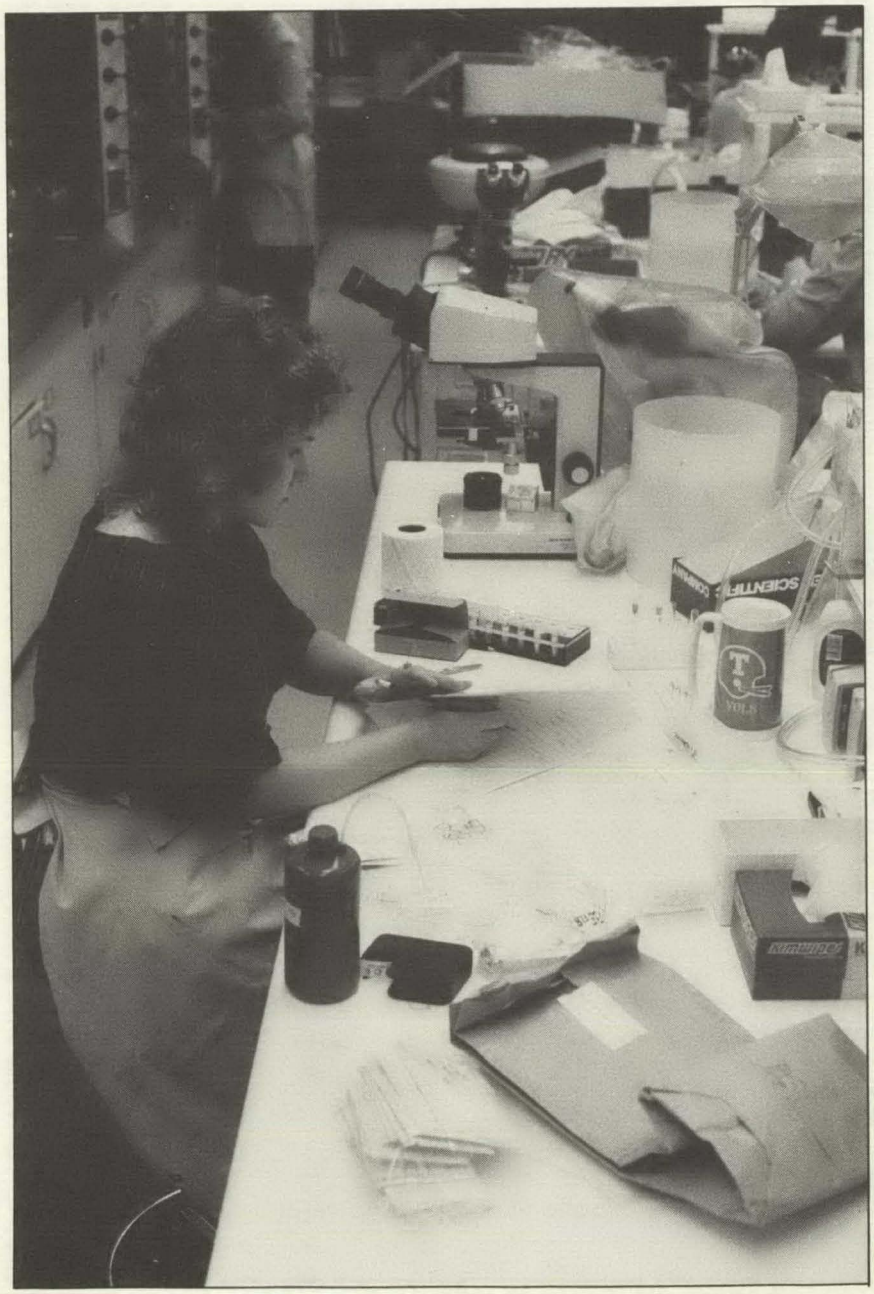
1) The importance and relevance of each item to the investigation and eventual prosecution of the perpetrators;
2) What examinations are to be performed on each item;
3) The collection of each item so as to best preserve the deposited biological fluid;

Human spermatozoa.

4) Packaging and marking the item properly; and
5) The acquisition of all appropriate available known specimens for comparison and elimination purposes.

The investigator should be selective in collecting physical evidence for serological examination and should submit only those items that may provide information about the nature of the crime and link the victim to those responsible. If not already apparent, he should inform the FBI serologist as to the particular importance of the various items. Any peculiarities of the case that may influence the outcome or the direction of the investigation should also be included in the letter accompanying the submitted items. The letter should also include a concise but informative description of the facts of the case and the type of examination desired on each item. Valuable time and information may be lost if the contributor fails to make his intentions clear and the serologist first conducts unwanted examinations and then must go back and perform those desired by the requesting agency.

The collection of evidence should be undertaken to allow laboratory examiners the best possible access to the biological fluids of interest and to maximize the information retrieved from them. Again, this responsibility falls upon the investigating or crime scene search officer. In most cases, the entire item should be submitted, with care being taken to preserve the position and integrity of the stain. The item should also be submitted without the prior removal of any portion of the specimen or stain for prior testing. Any alteration may allow for only limited testing during subsequent FBI examinations, reducing the amount of information obtained. If large or un-



wieldy items are encountered, representative samples of sufficient quantity may be submitted.

All items submitted to the FBI Laboratory should be clearly identified as to the donor or origin, preferably on the packaging material or on an attached evidence tag. The identity of an item or its origin is of particular importance when the contributor or prosecutor telephones the Laboratory to request additional examinations, discuss the progress of the examinations, or desires an explanation of the results contained in the Laboratory report.

The forensic information contained in biological fluids does not remain unaltered indefinitely. In fact, the molecules and cells that carry this information can be destroyed by chemical processes with time. These degradative processes are accelerated when appropriate preservation and packaging methods are not employed. Generally, this means that in order to preserve the biological and biochemical information, one should expect to maintain body fluid stain evidence under either air-dried and frozen, air-dried and refrigerated, or air-dried (nonhumid) conditions until submission. Liquid blood samples should be refrigerated and submitted as quickly as possible, even if the remaining items cannot be sent at the same time. Refrigeration of the submitted items while in transit is not required.

Stained items should be contained in paper envelopes, paper bags, or other containers that allow for the exchange of air but prevent the buildup of moisture. Liquid blood samples should be submitted in sealed blood test tubes without chemical preservatives (anticoagulants acceptable), and wrapped to prevent breakage in transit. Sexual assault evidence, such as vaginal, oral, or anal swabs, should be thoroughly air dried and placed in envelopes or other containers that allow air to pass. Sealed test tubes and test tubes containing water are unsuitable. Items with hard, nonporous surfaces should be collected and packaged to prevent the removal of the questioned stains by friction with other items or the packing material.

Further information concerning the requirements for submitting specific item types can be obtained by referring to the FBI Laboratory's *Handbook of Forensic Science* or "Examination of Biological Fluids," *FBI Law Enforcement Bulletin,* June 1972, (revised March 1980). Each item should be packaged separately.

The collection and submission of known body fluid specimens are important aspects of the process of investigating a crime where body fluids have been deposited. These specimens are used to determine whether a suspect or a victim could have deposited body fluid stains on questioned items. If known specimens are not collected and submitted, the serologist, and perhaps the jury, cannot determine whether the parties involved can be included or excluded from the stains of interest.

When it is suspected that bloodstains are present, liquid blood samples from all parties involved should be submitted on a *timely* basis. If a victim (or suspect) is deceased, blood samples should be collected during the autopsy and submitted immediately. In sexual assault matters, liquid blood and saliva samples should be collected from those involved or suspected of being involved. In cases where the deposition of saliva alone is of interest, both liquid blood and saliva specimens should be included with the other submitted items. Saliva specimens should be collected on clean, sterile filter paper discs, air dried, and placed in paper envelopes prior to submission. Each specimen should be packaged separately. The individual from whom the specimen is being collected should not be allowed to eat, drink, smoke, or place any object in his mouth for 30 minutes prior to the sample being taken.

All evidence submitted to the FBI Laboratory for either laboratory or laboratory and latent fingerprint examinations should be addressed to the Director, Federal Bureau of Investigation, Washington, DC 20535, marked to the attention of the FBI Laboratory. Evidence submitted only for latent fingerprint examinations should be addressed similarly but marked to the attention of the Identification Division.

FBI

Police Homicides by Misidentity

By
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Quantico, VA

Ever-increasing levels of street crime throughout the Nation have caused law enforcement services to change dramatically during the past several decades. Methods, procedures, and equipment unknown a few years ago are now commonly used by law enforcement organizations at all levels. One such procedure, the use of covert operational tactics, places large numbers of nonuniformed officers on the streets in a variety of assignments, creating a potentially serious hazard.[1] In small- to medium-sized agencies, officers may recognize each other during the typical tour of duty. In large agencies, however, plainclothes officers run serious risks of being mistaken for a criminal while performing their duties.[2]

Consider, for example, the composition of our law enforcement agencies. The rank and file now contains officers from many different ethnic and cultural backgrounds. Such diversity facilitates attempts to infiltrate certain criminal enterprises, gather intelligence, act as cover for other officers in covert field operations, and handle the more usual duties effectively. Yet, this very advantage poses a danger to the individual officers who do not conform to the stereotypic police image, especially when they choose to carry smaller, less conspicuous weapons instead of the traditional revolver while working undercover assignments.[3] Their lack of conformance to the "image," compounded by the sudden display of an automatic derringer or "Saturday night special" in a tense situation, can understandably cause even the most reasonable beat officer to take aggressive action. This article will discuss identification procedures that may be used to help avert situations in which a nonuniformed officer could be accidentally shot by a fellow officer.

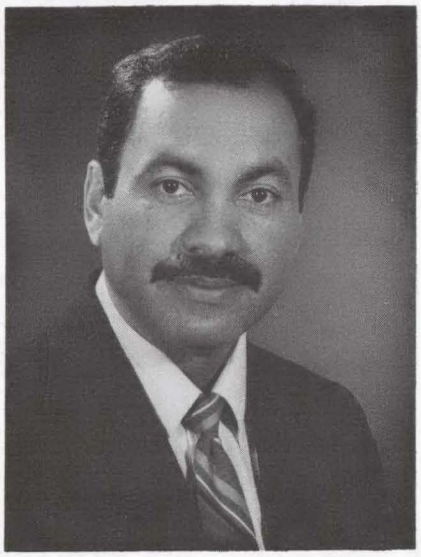
Scope of the Problem

Officers have been seriously injured or killed by fellow officers as a result of misidentity, although not many such incidents have been reported. While some of these tragedies have been documented, it has been without the benefit of instruments that could accurately detail the circumstances. New York City, for example, experienced 10 armed confrontations between police officers during the period 1970 to 1972; in 1973, three such confrontations resulted in the death of two officers.[4] In 1981, the Austrian Federal Criminal Police experienced such a tragedy when a plainclothes detective in hot pursuit of a bank robber was shot and killed by a uniformed police officer who mistook him for the perpetrator. More recently, in 1982, the Houston, TX, Police Department reported that an undercover policewoman was shot to death by a uniformed police officer because she was not immediately recognized during a drug raid.[5]

As long as there is a demand for plainclothes officers on the streets, confrontations such as those noted above can occur in any jurisdiction in the country.[6] Consider the following scenario:

John Doe, a plainclothes investigator, has just completed a tour of duty at midnight. On the way home, he stops at a convenience store to make a routine purchase. Prior to entering the front door, a "sixth sense" tells him that something inside is not exactly right. As he cautiously enters the establishment, he notices the employees are not where they're supposed to be. Suddenly, they burst from behind a display case in a panic—pointing to the rear door. A cashier then blurts out, "A gunman just took all the money from the cash register and ran out the back door." Officer Doe quickly instructs the victims to call for

". . . agency-level procedures should be established whereby plainclothes officers can effectively identify themselves. . . ."



Special Agent Vasquez

assistance while he pursues the subject outside the premises. He spots a suspect approximately 100 yards from the rear of the store in a wooded area. The officer quickly identifies himself and detains the suspect at gunpoint. Although this entire incident has lasted only 2 to 3 minutes, the officer's clothes are now somewhat disarrayed, and both he and the suspect show signs of fatigue and heavy perspiration. The first uniformed officer to come on the scene finds two figures in a dark wooded area and commands both to "freeze." In order to neutralize a potentially dangerous confrontation, what action, if any, can or should the plainclothes officer take at this point?

In all probability, the number of similar incidents around the country will never diminish. Therefore, agency-level procedures should be established whereby plainclothes officers can effectively identify themselves under such circumstances. To date, no one standard method is used; rather, law enforcement agencies use a variety of identification techniques and procedures, including lightweight vests, baseball-type caps, lapel pins, and identification cards clipped to outer garments.[7]

After the tragic incidents in New York City in 1973, the department issued certain guidelines to be followed by officers, including the use of colored headbands (colors changed daily) to be worn during street confrontations.[8] In addition, training sessions emphasize certain procedures for the "challenged" and the "challenging" officer. Since these changes were implemented by the New York City Police Department, no officer has lost his life in that jurisdiction as a result of a confrontation with another officer.

Study Design

To measure the feasibility of establishing identification procedures at the agency or departmental level, a survey was initiated by the Institutional Research and Development Unit (IRDU) at the FBI Academy, Quantico, VA, in 1982. Based on a review of pertinent literature and journals and interviews with selected law enforcement administrators, a preliminary survey questionnaire was developed and administered to 500 students of the FBI's National Academy Program. The data generated by the pilot questionnaires were used to develop a final questionnaire which was then administered to 710 law enforcement officers in different sessions of the FBI National Academy.

The respondents participated in the project during their second week of training. Figure 1 outlines percentage statistics both on the types of law enforcement agencies and the geographical regions represented by sample. The target group included representatives from every State, as well as foreign agencies (4.8 percent of the total sample).

A significant number of respondents were in positions of supervisory and management rank within their respective agencies. (See fig. 1.) The entire group averaged 14.5 years of law enforcement experience, significantly more than the 11.5 years average law enforcement experience level determined by a recent nationwide study.[9]

Study Findings

All participants were asked whether their agency had a standard method by which plainclothes, undercover, and specialized personnel identified themselves in street confrontations. Almost half of the agencies indicated they did *not* use and set procedure whatsoever; the remaining agencies were almost equally divided into those using certain methods rou-

Figure 1

Description and Location of Respondent Agencies

Type agency	Percentage of sample
Municipal Police/Authority	58.9
Sheriff Department	13.6
County Police/Authority	6.2
State Police/Authority	11.2
Federal Civilian/Military	4.9
Other	5.2
Geographic region	
New England	5.3
Mid-Atlantic	13.7
South Atlantic	16.5
East South Central	6.1
West South Central	9.6
East North Central	16.0
West North Central	6.7
Mountain	6.7
Pacific	14.6
Other	4.8

Respondents by Rank/Title

Rank/Title	Percentage of sample
Chiefs of Police	6.2
Deputy Chiefs	3.5
Sheriffs	0.8
Chief Deputy Sheriffs	1.0
Deputy Sheriffs	0.7
Major	2.4
Inspector	1.1
Captain	12.3
Lieutenant	33.8
Sergeant	23.5
Detective	5.5
Corporal	0.8
Patrolman—Trooper	1.4
Public Safety Director	0.3
Other	6.7

tinely and those using some procedures *only* for special events, such as dignitary protection and planned raids. (See fig. 1.)

The respondents in this survey also rated the "workability" of 14 identification methods (isolated from the pilot study) on a scale from 1 (very little) to 7 (very high). Respondents were advised that for the purpose of this study, "workable" was defined as "practical and capable of being easily performed without further endangering the situation, while at the same time providing a readily recognizable procedure for use by plainclothes officers day or night."

There were 14 identification items evaluated in the study, and numerical ratings (mean) were given by the participants. (See fig. 2.) Although they were given the option of adding any other items to be rated, no one did so.

As figure 2 demonstrates, extremely high ratings were not given to any of the items. Although a few received considerably higher ratings than the others, many were apparently not considered workable. The display of badges, use of verbal commands, and wearing of lightweight jackets received the highest ratings. By contrast, the wearing of sweat wristbands and headbands and the use of various hand signals were considered to be least workable.

The workability of different procedures, however, necessarily varies from one agency to the next. Each agency will, at different times, have an individual set of uncontrollable conditions present during street confrontations, such as inclement weather conditions, total darkness, extreme noise levels, and circumstances requiring immediate aggressive action.

"The burden of identification must *always* rest with the officer challenged."

Conclusion

Based on the results of this study, it is believed that identification procedures implemented by agencies or organizations should be used, but only as a supplementary measure. Of primary importance in a confrontation is the plainclothes officer's duty to identify himself properly to the uniformed officer on the scene. The burden of identification must *always* rest with the officer being challenged. For the most part, the supplementary identification procedures discussed in this report only have the potential to provide plainclothes officers with an edge of safety assurance when they respond to violence-related calls or officer-assistance situations.

The data generated by this research should induce law enforcement agencies across the country to review their current identification guidelines and procedures. If administrators are knowledgeable in the alternatives available, they can take steps to insure their officers' safety on the streets.

Law enforcement services have become so diversified that the potential for interdisciplinary life-threatening situations is constant. Officers from one jurisdiction may be totally unaware of the identity of other plainclothes officers on the street. All possibilities that will minimize incidents of misidentity must be explored. The final question remains: Is it possible for today's plainclothes officer to remain anonymous to the general public, perform duties at desired levels, yet be *visible* to fellow officers?

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Figure 1 (cont.)

Total Sample Responses to Survey Questions:

Do you have organizational use of a standard method by which plainclothes, undercover, or specialized personnel identify themselves in street confrontations?

Responses	Percentage of sample
—Affirmative	23.7
—Yes, but only for organized raids, dignitary protection, etc.	29.6
—Negative	46.7

Percentages of Responses By Specific Agency Type on Use of Standard Identification Procedures

	Municipal	Sheriff	County	State	Federal	Other
Yes	36.1	23.7	29.7	20.6	23.3	30.8
*Yes, but	30.0	38.1	33.7	35.1	32.3	30.8
No	34.0	38.1	36.7	44.3	44.5	38.5

*Yes, but only for organized raids, dignitary protection, etc.

Footnotes

[1] Massad F. Ayoob, "Proper Employment of the Off-Duty Gun in Confrontations," *Law and Order,* May 1979, pp. 61–64.

[2] Peter J. Pitchess, "Survival for 'Non-Uniform Officers,' " *Journal of California Law Enforcement,* October 1975, pp. 52–54.

[3] Ronald J. Adams, Thomas M. McTernan, and Charles Remsberg, *Street Survival Tactics for Armed Encounters* (Evanston, IL: Califre Press, 1980), pp. 118–23.

[4] Lt. Thomas M. McTernan, New York City Police Department, Personal Communication, January 7, 1982.

[5] Lt. Billy Ripley, "A Fatal Mistake in Houston: Plainclothes Narc Detective Killed by Uniformed Officer," *Crime Control Digest,* September 1982, pp. 8–9.

[6] Sgt. James J. Green, "Plainclothed Police Personnel: An Identification Problem," *FBI Law Enforcement Bulletin,* April 1975, pp. 16–21.

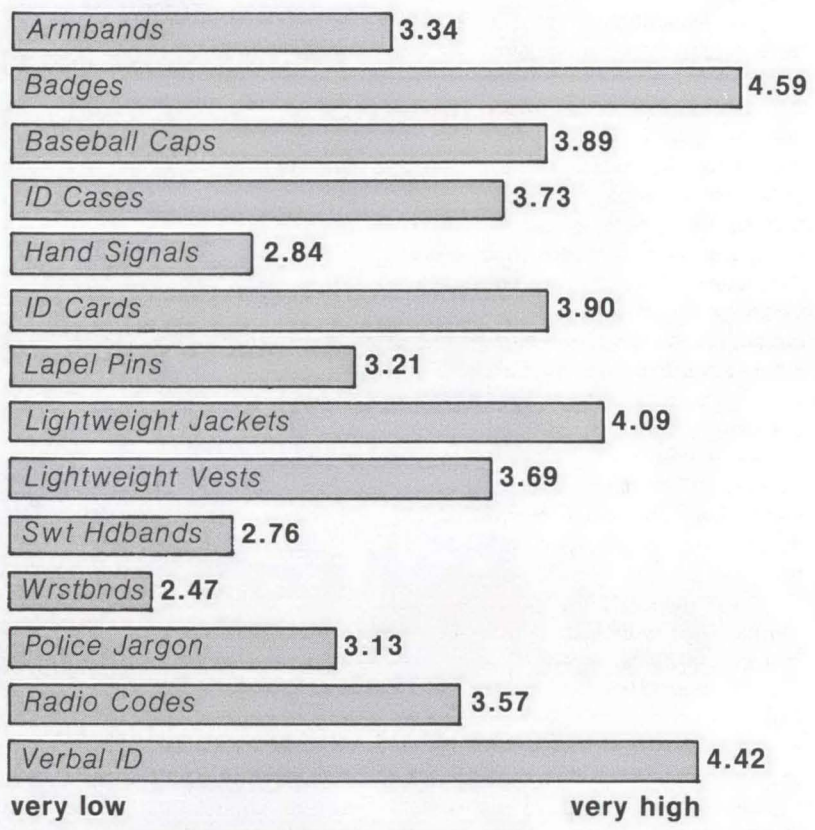
[7] Sgt. John J. Breslin, Jr., "Street Crime Unit," *Law and Order,* May 1979, pp. 40–44.

[8] Gerald W. Boyd, *The Will to Live—Five Steps to Officer Survival* (Springfield, IL: Charles C. Thomas, 1980), pp. 110–21.

[9] John C. LeDoux and Robert R. Hazelwood, "Police Attitudes Toward Rape," in *Practical Rape Investigation: A Multi-Disciplinary Approach,* eds. Robert R. Hazelwood and Ann Wolbert Burgess (New York: El Sevier Science Publishing Co., scheduled to be released in 1985), p. 8.

Figure 2

Workability Ratings



Electronic Tracking Devices

Following the Fourth Amendment (Conclusion)

" . . . the nature of the place or property into which the government intrudes can be highly significant in determining the extent to which fourth amendment protections are applicable."

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Law enforcement officers of other than Federal jurisdiction who are interested in any legal issue discussed in this article should consult their legal advisor. Some police procedures ruled permissible under Federal constitutional law are of questionable legality under State law or are not permitted at all.

Part I of this article reviews and analyzes two recent Supreme Court cases, *United States* v. *Knotts*[30] and *United States* v. *Karo*,[31] in which the Court sought to determine and define the fourth amendment's application to the use of electronic tracking devices (beepers) by law enforcement. In *Knotts*, the Court held that monitoring a beeper in public places, or places open to visual observation, is not a fourth amendment search. On the other hand, the *Karo* Court held that monitoring a beeper inside private premises, a place not open to visual surveillance, is a search which, in the absence of an emergency, requires a warrant.[32]

Several significant questions were not clearly resolved by those two cases. Part II considers these remaining questions in light of the relevant caselaw and suggests guidelines for law enforcement agencies in the use of beepers.

REMAINING ISSUES

Installation of a Beeper

In *Karo*, a beeper was installed in a container which, at the time of installation, belonged to the government. The Supreme Court held that the defendants had no legitimate expectation of privacy in the property at that time. Further, the Court noted that the same would have been true had the property been in the possession of a consenting third party (an issue that had been left open in *Knotts*). In either event, there would be no fourth amendment intrusion of which the defendants could complain.

However, the Court did not have occasion to consider the applicability of the fourth amendment to the installation of a beeper inside or on property which, at the time, may belong to a nonconsenting party. If the installation of a beeper under these circumstances is a search, the manner in which it is accomplished could affect the admissibility of evidence derived therefrom. The nature of the property may be an important factor in resolving this question.

In *Katz* v. *United States*,[33] the Supreme Court held that the fourth amendment protects people and not places. It is nevertheless true that the nature of the place or property into which the government intrudes can be highly significant in determining the extent to which fourth amendment protections are applicable. And so it is that a residence, because of the tradi-

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tionally high expectations of privacy associated with private dwellings, is accorded the highest level of fourth amendment protection—the warrant requirement—while "open fields" are accorded none at all.[34] Between these two extremes are found the three general types of property to which beepers are most frequently applied—movable containers, vehicles, and aircraft.

Containers

The Supreme Court has held that because of the high level of privacy generally associated with personal luggage and other movable containers whose contents are concealed from observation, searches of such containers must be authorized by a warrant.[35]

It seems clear that the installation of a beeper inside a personal container to which that level of protection attaches will likewise, in the absence of an emergency, require a warrant for its justification. Apart from an emergency, there may be special circumstances which give the government lawful access to the container and its contents. For example, in *United States* v. *Sheikh,*[36] during a lawful border search, a beeper was attached to a package of contraband for the purpose of determining its destination. Citing the long-established authority for the conduct of border searches,[37] the Federal appellate court held that the installation was lawful, even without a warrant.[38]

Vehicles

The Supreme Court has not yet decided whether the installation of a beeper in or on a vehicle constitutes a fourth amendment search, and the lower Federal court holdings have been inconclusive. Although one Federal appellate court has held that the mere installation of a beeper on the exterior of a vehicle is not a search,[39] and at least one Federal district court has taken the opposite view,[40] most of the remaining courts have skirted the issue. For example, in *United States* v. *Michael,*[41] the court declined to decide whether the installation of a beeper to the exterior of a vehicle was a search, concluding that in any event the diminished expectation of privacy in the vehicle, coupled with the minor intrusion necessary to attach the beeper, rendered the warrantless installation reasonable based on reasonable suspicion. Other courts have taken a similar approach, although some would require probable cause to justify the warrantless installation.[42]

The Supreme Court has traditionally viewed vehicles as being distinct from other kinds of property. The nature of vehicles and their use in our society serve to reduce the level of privacy normally associated with other property and create a corresponding reduction in fourth amendment protection.[43] Thus, warrantless searches of vehicles have been upheld by the Court based on probable cause[44]—a circumstance that would not ordinarily allow the warrantless search of other kinds of property. It is unlikely, therefore, that courts will require a warrant for the mere attachment of a beeper to the exterior of a vehicle. It should be noted if the installation involves an intrusion into the interior of a vehicle, there is a greater likelihood that courts will consider the installation to be a fourth amendment search[45] requiring a warrant or, at the very least, probable cause.

" . . . probable cause is the requisite standard to support a beeper warrant."

Aircraft

Aircraft have been treated by the courts in much the same manner as automobiles and other vehicles for fourth amendment purposes, and the installation of a beeper *inside* an aircraft has generally been treated as a search.[46] This is perhaps reflected in the fact that in the cases to date, installations of beepers inside aircraft have usually been accomplished under the authority of a court order or with the consent of an appropriate party.[47] Attachment of a beeper to the exterior of an aircraft should not require a warrant.

Effect of Illegal Installation

A significant question remaining with regard to the installation of a beeper is whether an invalid installation—assuming the installation to be a fourth amendment search—should result in suppression of evidence located as a result of subsequent monitoring. In *Karo,* the Supreme Court held that a court order is required to monitor a beeper which has been taken inside private premises and it is clear that an invalid court order, or none at all, would taint the subsequent monitoring under those circumstances. The same approach has apparently been assumed by the lower Federal courts even when the subsequent monitoring occurs in public places—i.e., places where the Supreme Court in *Knotts* held there is no fourth amendment search. These courts have viewed the subsequent monitoring, even in public places, as potentially tainted by an initial illegal installation.[48]

At least one case suggests a different result. In *United States* v. *Butts,*[49] monitoring of a beeper which had been installed inside an aircraft under the authority of a court order was continued for a short period after the court order had lapsed. Noting that the Supreme Court in *Knotts* had left unanswered the questions whether installation of the beeper violated the fourth amendment, and if so, how such allegations should be dealt with, the court concluded:

> "The action of the officer in installing the beeper did not result in discovery of any evidence at issue. Both the installation of and the failure to remove the beeper were unknown to Butts; therefore, neither . . . could have influenced Butts' decision to fly the aircraft in the public airspace. The signal from the then unwarranted beeper did nothing more than enhance the customs officials legal right to observe the aircraft's public movements. No Fourth Amendment right was infringed." [50]

It was perhaps significant in *Butts* that the court did not consider the failure to remove the beeper to be a deliberate or "bad faith" action. The court noted that the failure could have been attributed to "illness, accident, inadvertence, or bureaucratic bungling." [51] A deliberate action of that kind might have been treated differently.

Notwithstanding the divergence of views among the courts regarding the fourth amendment's application to beeper installations, two considerations suggest the wisdom of assuming that such installations are, as a rule, fourth amendment searches necessitating acquisition of a warrant. First, as noted herein above, some courts consider any evidence acquired as the result of using an improperly installed beeper as having been tainted by the initial illegality and subject to exclusion. And second, as the Supreme Court noted in *Karo,* even when a warrantless installation is permissible, it cannot always be anticipated when the vehicle or other property to which the beeper is affixed will be moved into private areas where warrantless monitoring is prohibited. Thus, what begins as a lawful, warrantless surveillance can quickly become an unconstitutional search. The government recognized this risk in *Karo* and contended that requiring a warrant to monitor a beeper once it has been withdrawn from public view would have the practical effect of requiring a warrant in every case. The Court responded:

> "The argument that a warrant requirement would oblige the Government to obtain warrants in a large number of cases is hardly a compelling argument against the requirement." [52]

The Warrant Requirement

Having established the necessity for a warrant to monitor a beeper withdrawn into private areas, the Court in *Karo* offered some advice as to the point in time at which the warrant should be obtained. After holding that the installation of a beeper in a container of chemicals with the consent of the owner is not a fourth amendment search with respect to a prospective owner, the Court stated:

> "Despite this holding, warrants for the *installation and monitoring* of a beeper will obviously be desirable since it may be useful, even critical, to monitor the beeper to determine that it is actually located in a place not open to visual surveillance." [53] (emphasis added)

Acquisition of a warrant to install and monitor a beeper raises several

significant questions regarding the characteristics of such a warrant. What is the appropriate standard for issuance? How can the particularity requirement of the fourth amendment be satisfied? What, if any, time constraints are applicable? And finally, what if the beeper is monitored beyond the territorial jurisdiction of the court which authorized the surveillance? These questions will now be considered.

The Standard for Issuance

The standard established by the fourth amendment for the issuance of a warrant is probable cause, although the Supreme Court has approved the issuance of warrants on a lesser standard for certain kinds of administrative searches.[54] In *Karo* the government suggested that reasonable suspicion, rather than probable cause, should be adopted for installation and monitoring of beepers. The Supreme Court declined to decide whether a lesser standard than probable cause would suffice to support a beeper warrant, but noted that even under the facts of *Karo* probable cause had apparently existed.[55]

The Federal appellate courts have consistently used probable cause as the appropriate standard.[56] One case which provides an illustration of probable cause for a beeper warrant is *United States* v. *Ellery*.[57] DEA agents were notified by the proprietor of a chemical company that he had received an order to ship 5 kilograms of norephedrine hydrocholoride (HCL) to a residential apartment. An affidavit was filed seeking a warrant to install a beeper in the package. Included in the affidavit were statements to the effect that (1) the affiant had substantial experience in investigations involving illegal manufacturing of controlled substances; (2) no legitimate laboratory, manufacturing, or business enterprise appeared to exist at the mailing address; (3) HCL lacked any common household use; and (4) HCL could be used to manufacture amphetamine, a controlled substance. The affidavit also asserted that a high risk of detection existed if normal surveillance techniques were used. The magistrate issued a warrant which the Federal appellate court upheld as "founded on sufficient probable cause." [58]

In view of the specific admonition of the fourth amendment that "no Warrants shall issue but upon probable cause" and the general adoption of this standard by the lower courts which have considered the issue, it is safe to assume that probable cause is the requisite standard to support a beeper warrant.

Particular Descriptions

In *Karo,* the government argued that it would be impossible to meet the particularity requirement of the fourth amendment by describing in a beeper warrant the "place" to be searched, because that is precisely the information sought to be discovered by the surveillance. The Supreme Court resolved the issue by declaring:

> ". . . it will still be possible to describe *the object into which the beeper is to be placed*. . . ." [59] (emphasis added)

The Court concluded that "this information will suffice to permit issuance of a warrant authorizing beeper installation and surveillance." [60]

The Court's willingness to accept what can be viewed as a reduced standard of "particularity" may have been prompted by a desire to bring within judicial control an investigative technique that while "less intrusive than a full scale search" [61] nevertheless presents "far too serious a threat to privacy interests in the home to escape entirely some sort of Fourth Amendment oversight." [62]

Time Limits

The fourth amendment does not specifically impose a time limit on the lifespan of a search warrant. However, in its interpretation of the fourth amendment, the Supreme Court has viewed the imposition of time constraints on search warrants as an additional protection—along with the explicit requirements of probable cause and particularity—against the issuance of "general warrants."

For example, in *Berger* v. *New York*,[63] the Court struck down a New York wiretap statute as violative of the fourth amendment based, in part, on the absence of a termination date to the electronic interception. The statute authorized a court-ordered wiretap for up to 2 months with the possibility of further extensions on a showing that such extensions were in the "public interest." The Court viewed the 2-month authorization as "the equivalent of a series of intrusions, searches, and seizures pursuant to a single showing of probable cause." [64]

The recognition that some time restriction is essential in the execution of search warrants may also be seen in the fact that a search authorized under a standard Federal search warrant issued pursuant to Rule 41 of the Federal Rules of Criminal Procedure must be executed within "a specified period of time not to exceed 10 days . . . ." Similarly, a court-ordered wiretap under Federal law may not

"An application for a beeper warrant should incorporate a specific time frame during which the warrant will be executed."

exceed 30 days, unless an extension is authorized by a further showing of probable cause.[65]

The Supreme Court in *Karo* indicated that a warrant to install and monitor a beeper should indicate the length of time that such surveillance is requested.[66] Unfortunately, the Court did not suggest what might constitute a reasonable length of time, and so some reference to lower Federal court cases becomes necessary.

Significantly, none of the Federal courts to date has suggested that the 10-day limit for a standard Federal search warrant should be applied to a warrant authorizing beeper installation and monitoring. A review of cases involving beeper warrants discloses authorizations ranging from 72 hours[67] to 90 days.[68] Rather than applying a fixed standard, the courts have chosen to consider the time limits in the context of the facts which arise in specific cases.

For example, in *United States* v. *Cady,*[69] instead of focusing on the 90-day outer limit established in the beeper warrant, the court chose to consider the *actual* time that the monitoring occurred (17 days) and concluded that it was reasonable. The court concluded:

> "Seventeen days within which to locate a movable conveyance, to enter it surreptitiously and install a beacon, and to monitor its movements . . . is clearly not an unreasonable time allowance or one within which the probable cause underlying the warrant became stale." [70]

The same approach was taken by a different court in *United States* v. *Long,*[71] wherein a warrant authorized the beeper surveillance for 90 days when in fact the actual surveillance spanned 1 week. Focusing on the *actual* rather than the *potential* surveillance, the court upheld the warrant.

It is perhaps noteworthy that both *Cady* and *Long* involved beepers which had been installed inside aircraft and which were under surveillance in public airspace. It seems reasonable to assume that stricter standards for beeper warrants may be applied when the surveillance intrudes into private dwellings.

An application for a beeper warrant should incorporate a specific time frame during which the warrant will be executed. In the absence of a clearly established standard, a time frame not to exceed 30 days may be a good rule of thumb to follow for the initial execution of the warrant. Specific circumstances may suggest the need in a given case for a longer period of time, and obviously extensions of the original warrant could be obtained when justified. The 30-day rule corresponds to the accepted standard for court-ordered wiretaps—a far more intrusive search—and reduces the risk that the warrant will be struck down for failure to establish reasonable time constraints.

Jurisdiction of a Beeper Warrant

It is a generally accepted rule that search warrants are to be executed within the territorial jurisdiction of the issuing court. For instance, Rule 41 of the Federal Rules of Criminal Procedure states in pertinent part:

> "A search warrant authorized by this rule may be issued by a federal magistrate or a judge of a state court of record *within the district wherein the property or person sought is located* . . . ." (emphasis added)

This language of Rule 41 has generally been construed to mean that a "search warrant can only be operative in the territory in respect to which the issuing officer is clothed with judicial authority." [72] Because beepers are affixed to movable containers or conveyances, there is always a risk that the surveillance may move beyond the territorial jurisdiction of the issuing court, which raises a question regarding the authority of the warrant.

In light of the unique problems associated with beeper surveillance, the courts have declined to hold that the authorizing court orders are subject to all of the same procedural requirements as standard search warrants. In *United States* v. *Lewis,*[73] a warrant was obtained from a magistrate in Houston, TX, to install a beeper inside a container of chemicals. The beeper was then monitored as it moved from Houston to Livingston Parrish, LA, a different judicial district. The Federal appellate court rejected a defense contention that the original warrant was invalidated as the result of the travel. The court stated:

> "To require a warrant from each jurisdiction into and through which the drum might travel or come to rest, would be to put an almost impossible burden upon the government for no valid purpose. This objection is devoid of merit." [74]

It is unclear in *Lewis* whether the court viewed the territorial limitation as inapplicable or simply concluded that failure to comply did not rise to the level of a constitutional violation.[75] In any event, it does not appear likely that monitoring a beeper which has been moved beyond the jurisdiction of the court that issued the authorizing warrant will present any significant legal problems for law enforcement.

CONCLUSION

In *Knotts* and *Karo,* the Supreme Court effectively answered most of the questions regarding the application of the fourth amendment to the installation and monitoring of beepers. To the extent that some questions remain, their answers cannot change the ultimate conclusion to be drawn by law enforcement. In *Karo,* the government contended that requiring a warrant to monitor a beeper which has been removed from public view will have the practical effect of requiring a warrant in every case. The point is well taken.

However, recognizing the need for flexibility in applying the warrant requirement to this unique investigative technique, the courts have declined to impose the same strict standards ordinarily associated with the traditional search warrant. The apparent object is to establish some degree of judicial control over this form of electronic surveillance without unreasonably hindering legitimate law enforcement activity. Accordingly, application of the warrant requirement to the monitoring of beepers which have been removed from public view should not deprive law enforcement officers of this highly effective—and frequently essential—investigative tool.

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Footnotes

[30] 75 L.Ed.2d 55 (1983).
[31] 82 L.Ed.2d 530 (1984).
[32] Id. at 543–544.
[33] 389 U.S. 347 (1967).
[34] *United States* v. *Oliver,* 80 L.Ed.2d 214 (1984).
[35] *See, e.g., United States* v. *Chadwick,* 433 U.S. 1 (1977); *Arkansas* v. *Sanders,* 442 U.S. 753 (1979).
[36] 654 F.2d 1057 (5th Cir. 1981), *cert. denied,* 455 U.S. 991 (1982).
[37] *See, e.g., Torres* v. *Puerto Rico,* 442 U.S. 465 (1979); *United States* v. *Ramsey,* 431 U.S. 606 (1977); *Almeida-Sanchez* v. *United States,* 413 U.S. 266 (1973).
[38] *Supra* note 36, at 1071.
[39] *United States* v. *Moore,* 562 F.2d 106 (1st Cir. 1977), *cert. denied,* 435 U.S. 926 (1978).
[40] *United States* v. *Neet,* 504 F.Supp. 1220 (D. Col. 1981).
[41] 645 F.2d 252 (5th Cir.) *en banc, cert. denied,* 454 U.S. 950 (1981); *see also United States* v. *Strmel,* 574 F.Supp. 793 (E.D. La. 1983).
[42] *See, e.g., United States* v. *Shovea,* 580 F.2d 1382 (10th Cir. 1978), *cert. denied,* 440 U.S. 908 (1979); *United States* v. *Frazier,* 538 F.2d 1322 (8th Cir. 1976), *cert. denied,* 429 U.S. 1046 (1977).
[43] *See, e.g., Carroll* v. *United States,* 267 U.S. 132 (1925); *Chambers* v. *Maroney,* 399 U.S. 42 (1970); *United States* v. *Ross,* 456 U.S. 798 (1982).
[44] *Id.*
[45] *See, e.g., United States* v. *Martyniuk,* 395 F. Supp. 42 (D. Oregon, 1975), *modified on other grounds, United States* v. *Hufford,* 539 F.2d 32 (9th Cir.), *cert. denied,* 429 U.S. 1002 (1976); *United States* v. *Strmel,* 574 F.Supp. 793 (E.D. La. 1983).
[46] *See, United States* v. *Butts,* 729 F.2d 1514 (5th Cir.1984); *United States* v. *Bruneau,* 594 F.2d 1190 (8th Cir.), *cert. denied,* 444 U.S. 847 (1979); *United States* v. *Miroyan,* 577 F.2d 489 (9th Cir.), *cert. denied,* 439 U.S. 896 (1978).
[47] *See, United States* v. *Erickson,* 732 F.2d 788 (10th Cir. 1984); *United States* v. *Long,* 674 F.2d 848 (11th Cir.), *cert. denied,* 455 U.S. 919 (1982); *United States* v. *Cady,* 651 F.2d 290 (5th Cir.), *cert. denied,* 455 U.S. 919 (1981); *United States* v. *Bruneau, supra* note 46; *United States* v. *Miroyan, supra* note 46.
[48] *See, e.g., United States* v. *Taylor,* 716 F.2d 701 (9th Cir. 1983); *United States* v. *Cooper,* 682 F.2d 114 (6th Cir. 1982) (*per curium*), *cert. denied,* 103 S. Ct. 112 (1983); *United States* v. *Ellery,* 678 F.2d 674 (7th Cir. 1982), *cert. denied,* 103 S. Ct. 150 (1983).
[49] 729 F.2d 1514 (5th Cir. 1984).
[50] *Id.* at 1518.
[51] *Id.* footnote 5, at 1518.
[52] *Supra* note 31, at 543.
[53] *Id.* footnote 3, at 540.
[54] *See, e.g., Marshall* v. *Barlow's Inc.,* 436 U.S. 307 (1978); *Michigan* v. *Tyler,* 436 U.S. 499 (1978); *Camara* v. *Municipal Court,* 387 U.S. 523 (1967).
[55] *Supra* note 31, footnote 5 at 544.
[56] *See, e.g., United States* v. *Butts,* 729 F.2d 1514 (5th Cir. 1984); *United States* v. *Cooper,* 682 F.2d 114 (6th Cir. 1982) (*per curiam*); *cert. denied,* 103 S. Ct. 112 (1983); *United States* v. *Ellery,* 678 F.2d 674 (7th Cir. 1982), *cert. denied,* 103 S.Ct. 150 (1983); *United States* v. *Taylor,* 716 F.2d 701 (9th Cir. 1983); *United States* v. *Erickson,* 732 F.2d 788 (10th Cir. 1984); *United States* v. *Long,* 674 F.2d 848 (11th Cir.), *cert. denied,* 455 U.S. 919 (1982).
[57] 678 F.2d 674 (7th Cir. 1982), *cert. denied,* 459 U.S. 868 (1983).
[58] *Id.* at 678.
[59] *Supra* note 31, at 543.
[60] *Id.* at 543.
[61] *Id.* at 541.
[62] *Id.* at 542.
[63] 388 U.S. 41 (1967).
[64] *Id.* at 59.
[65] Title 18 U.S.C. § 2518 (5).
[66] *Supra* note 31, at 543.
[67] *United States* v. *Cooper,* 682 F.2d 114 (6th Cir. 1982) (*per curiam*), *cert. denied,* 103 S. Ct. 112 (1983).
[68] *United States* v. *Cady,* 651 F.2d 290 (5th Cir.), *cert. denied,* 455 U.S. 919 (1981).
[69] *Id.*
[70] *Id.* at 291–292.
[71] 674 F.2d 848 (11th Cir.), *cert. denied,* 455 U.S. 919 (1982).
[72] *United States* v. *Strother,* 578 F.2d 397, at 399 (D.C. Cir. 1978).
[73] 621 F.2d 1382 (5th Cir. 1980), *cert. denied,* 450 U.S. 1981 (1980).
[74] *Id.* at 1389.
[75] *See, e.g., United States* v. *Cassidy,* 532 F. Supp. 613 (M.D. N.C., 1982) (court held that violation of the territorial jurisdiction limits in Rule 41 is not by itself of constitutional magnitude requiring suppression of evidence.

WANTED BY THE FBI

Photograph taken 1973 *Photograph taken 1975*

James Nelson Worthey

James Nelson Worthey, also known as Willie Cunningham, Willie Lyman, William S. Scott, Willie Wadler, Carmen Wadley, Willie F. Wadley, Willie Fred Wadley, Willey F. Wadley, James Nepolean Worthey, James Nelson Worothy, "Pretty Willie," and others

Wanted for:

Interstate Flight-Murder

The Crime

James Nelson Worthey is wanted in connection with the April 8, 1974, murder of a Buffalo, NY, woman who was shot in the head with a .32-caliber semiautomatic gun.

A Federal warrant was issued on February 20, 1976, in Erie County, NY.

Description

Age	36, born November 14, 1948, Akron, OH.
Height	6'1".
Weight	170 pounds.
Build	Medium.
Hair	Black.
Eyes	Brown.
Complexion	Medium.
Race	Black.
Nationality	American.
Occupations	Laborer, machinery operator, pimp.
Scars and Marks	Small scars on one hand, wrist and outer palm; small scars around right eye; deformed left foot (hammer toe).
Social Security Numbers Used	473-14-8822; 296-48-1704; 396-48-7504.
FBI No.	761 426 H.

Caution

Worthey is being sought in connection with the murder of a female victim who was shot in the head with a .32-caliber semiautomatic gun. He reportedly possesses a number of handguns and should be considered armed and dangerous.

Notify the FBI

Any person having information which might assist in locating this fugitive is requested to notify immediately the Director of the Federal Bureau of Investigation, U.S. Department of Justice, Washington, DC 20535, or the Special Agent in Charge of the nearest FBI field office, the telephone number of which appears on the first page of most local directories.

Classification Data:

NCIC Classification:

231308P0161110082016

Fingerprint Classification:

23 L 9 U OIO 16 Ref. 25 9 25

S 1 U OIO 1 2 2

I.O. 4952

Right index fingerprint

Because of the time factor in printing the FBI Law Enforcement Bulletin, there is the possibility this fugitive has already been apprehended. The nearest office of the FBI will have current information on this fugitive's status.

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FBI LAW ENFORCEMENT BULLETIN

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The Bulletin Notes

Trooper Keith Eremea, Arkansas State Police, rescued a young woman threatening to commit suicide by jumping off a bridge the night of August 29, 1984. Trooper Eremea, using patient reasoning, was able to talk the woman into his arms and safety from her perch on the railing of the bridge 100 feet above the river during an electrical storm. The Bulletin joins Trooper Eremea's associates in the Arkansas Law Enforcement Officers Association and his superiors in the Arkansas State Police in praise of his lifesaving police service.

Trooper Eremea