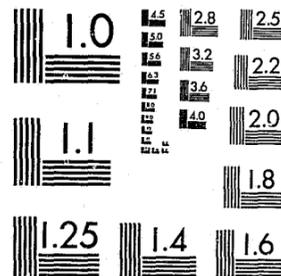


National Criminal Justice Reference Service



This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504.

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U. S. Department of Justice.

National Institute of Justice  
United States Department of Justice  
Washington, D. C. 20531

2/1/83

83187-  
83190

# Innovations In South Carolina Law Enforcement 1981

Wednesday, October 14, 1981

Wade Hampton Conference Center  
Columbia, South Carolina

Sponsors

College of Criminal Justice  
University of South Carolina

Division of Public Safety  
Office of the Governor

U.S. Department of Justice  
National Institute of Justice

83187

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this copyrighted material has been granted by USC/College of Criminal

Justice

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the copyright owner.

#### ACKNOWLEDGEMENTS

#### SPONSORS:

College of Criminal Justice, University  
of South Carolina, William J. Mathias, Dean

Division of Public Safety Programs, Office  
of the Governor of South Carolina, Richard  
E. Riley

#### PROJECT JUDGES:

Donald C. Campagna, Chief  
Georgetown Police Department

John F. Conroy  
Charleston Police Department

Giles Daniel, Sheriff  
Greenwood County

Harold Jennings, Chief  
Greenville Police Department

Walter Newman, Director of Public Safety  
North Augusta

Richard P. Tidewell, Director  
Division of Public Safety Program  
Officer of the Governor

#### CONFERENCE DIRECTOR:

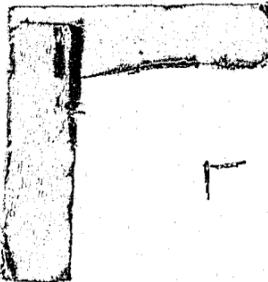
Dr. James G. Fraser, Director  
Office of Agency Research and Service  
College of Criminal Justice

#### CONFERENCE COORDINATOR AND BOOK EDITOR:

Patricia S. Watson, Lecturer  
College of Criminal Justice

#### CLERICAL STAFF:

Brvnn Diane Long  
Donna Pawley  
Cindy McHale  
Pam Bartley



## FOREWORD

It is always hoped that a new and innovative project will be successful. It is not only by the success of the project itself that the benefits of its development can be measured, however. There is inherent in the process of seeking a solution, examining a number of possible alternatives, developing a plan, and organizing the manpower to put the plan into operation, a remarkable side-effect. Being a part of an organization which is willing to branch out into new areas and to pick up on new ideas, has a psychological effect on the individuals who are a part of that organization. These extra benefits to be obtained from experimentation have been documented in a number of studies beginning with the Hawthorne experiment carried out with employees of the Westinghouse Corporation. The mere fact that an experiment was being conducted and employees were involved had beneficial side-effects including greater productivity and enhanced job satisfaction. If the project is successful as well, that is an added bonus; but there is much benefit to be derived simply from the process of its development. We have found this invariably to be true in talking with the people involved with the innovative projects presented at each Innovations Conference, beginning in 1979. There is a desirable spill-over effect regardless of the relative success of the project; either in the attitude it fosters among the people involved, or in an unexpected return from the project itself.

The College of Criminal Justice is pleased to sponsor this third conference on Innovations in South Carolina Law Enforcement, along with the Division of Public Safety Programs of the Office of the Governor. It is the purpose of the College, not only to develop highly competent professional people to play an effective role in the criminal justice system, but to provide support and assistance to agencies seeking to develop new programs through

its Office of Agency Research and Service.

While we congratulate the winners in this year's competition, we know that law enforcement agencies which are innovative in their approach to solving the problems they face today are really all winners. In trying new ideas, they indicate a willingness to meet the challenges faced by all law enforcement agencies in a time when budgets are not only limited, but frequently being reduced. They are meeting this challenge with innovative projects which reflect not only their creativity, but their dedication to the future of this state.

Pat Watson  
October, 1981

#### JURY'S FINAL SELECTION

Crime Prevention Program  
Clemson University Public Safety Department

Alternative Patrol Vehicles  
Georgetown Police Department

Youth Baseball League  
Greenville Police Department

Phone Teletypewriter Network  
North Augusta Police Department

CRIMS - Crime Record Information Management System  
Sumter Police Department and  
Sumter County Sheriff's Department

Safety Sam - Crime Prevention Program  
Spartanburg Police Department

#### ABOUT THE PROJECTS

In addition to the six projects which were chosen for presentation at Innovations In South Carolina Law Enforcement 1981, we have included in this booklet abstracts of other projects which have been developed by South Carolina law enforcement agencies. The Conference staff believes that increased exchange of information concerning all worthwhile projects undertaken by any agency can only be a benefit to the law enforcement community as a whole. All of the project developers are anxious to share information concerning their projects and each has provided the name of a person within the agency who may be contacted for further details.

Both the judges and the Conference staff were impressed by the range of innovation being attempted in the State, from extremely simple low-budget efforts to expensive and highly technical programs.

We appreciate the willingness of all the departments represented to share their projects and ideas with other law enforcement agencies throughout the state.

CONTENTS

PROJECT	PAGE
✓ [Clemson Crime Prevention Program Clemson University Public Safety Department..... 83188	1
Alternative Patrol Vehicles Georgetown Police Department.....	19
Police-Youth Baseball League Greenville Police Department.....	23
Phone Teletypewriter Network North Augusta Department of Public Safety .....	34
Safety Sam Project Spartanburg Police Department.....	37
✓ [CRIMS - Crime Record Information Management System Sumter Police Department and Sumter County Sheriff's Department] 83189	45
Beaufort Baby-Sitting Clinic Beaufort Police Department.....	55
✓ [City Center Survey City of Columbia, Columbia Police Department, Downtown Action Council and Club, U.S.C. College of Criminal Justice..... 83190	57
Modified Patrol Strategies Florence Police Department.....	64
Operation "Bite" Georgetown Police Department.....	67
Development of Annual Report Greenville County Sheriff's Department.....	70
Sheriff's Radio Broadcasts Lexington County Sheriff's Department.....	72
Personnel Testing Program Spartanburg Police Department.....	77
Problem Solving/Decision Making U.S.C. College of Criminal Justice .....	79

Note: The selections on Problem Solving/Decision Making and the City Center Survey were not competitively selected, but are presented as subjects of growing concern to law enforcement personnel.

CLEMSON CRIME PREVENTION PROGRAM

By J.D. Ferguson Jr., Director  
Clemson University Public Safety Department

83188

INTRODUCTION

Clemson University is a South Carolina land-grant institution, founded in 1889. The main campus comprises 600 acres and represents an investment of approximately \$195 million in permanent facilities. The University offers 78 fields of study in nine undergraduate colleges and 57 areas of graduate study.

Clemson students come from all 46 South Carolina counties, 47 states, Puerto Rico, The District of Columbia, the Virgin Islands, Guam, and 42 foreign countries (about 200 students). South Carolina residents comprise 77 percent of Clemson's enrollment and the remaining 23 percent come from out of state. The 1980 fall semester had 11,579 students attending Clemson-- 10,891 on campus and 688 attending off-campus programs. Of the 10,891 figure 9,414 were classified undergraduates, and 1,477 were graduate students. Approximately 6,300 students live on campus. Additionally, the faculty and staff possess various backgrounds with different economic, social and political positions.

MISSION

The Public Safety mission for Clemson University is very complex, multifarious, and extremely challenging. Therefore, in an effort to illustrate the numerous responsibilities, the following brief facts are presented.

Police Investigations vary from arson, fraud, and child abuse cases to college pranks and petty larceny incidents. Also, fire calls range from vehicle fires to fire alarms from high rise dormitories and single-family dwellings. The Fire Department provides emergency medical services.

Special events such as football games, bring crowds of 65,000 individuals into campus, and there are numerous visitors on campus daily for a variety of reasons.

#### PLAN

The Public Safety Department realized there were many benefits in implementing a crime prevention program, and the potential for cooperation and assistance from the University community was very favorable. The University President, Vice Presidents for Student Affairs, Academic Affairs, Business and Finance, deans and department heads all expressed endorsement and support in this venture.

Therefore, a master plan was developed. The plan would be divided into two main sections with various goals for each:

- A. Prevent thefts of University property, and
- B. Prevent thefts of personal property from students, faculty and staff.

Subsequently, these plans would be implemented with specific objectives:

- (1) Have various officers attend the State Criminal Justice Academy's Crime Prevention School. These officers would be identified as Crime Prevention Specialists and serve as leaders in assisting others in crime prevention skills.
- (2) Provide all department members with some in-service crime prevention training. This training to be conducted by a recognized crime prevention expert, Ray Isgett of the State's Office of Criminal Justice programs.
- (3) Provide a format that would have sufficient input by the department members and the particular groups and projects they represented.
- (4) Select programs and projects that would be cost effective and provide positive results. This, in turn, would create the environment for other programs to be implemented with favorable acceptance.
- (5) Select one positive theme with an acronym that would connect all crime prevention projects and be displayed on every poster, pamphlet and crime prevention item produced by the department.

The identification, selection and development of main themes with specific objectives were very important in implementing the following crime prevention programs.

#### THEMES

The main theme that connects all our programs involves the acronym P.A.W. which represents "People Are Watching." We were very fortunate to have as the University's mascot a tiger, and so many individuals who identify with a tiger paw. Therefore, on every crime prevention item there is a tiger paw and the word "Operation" above and "People Are Watching" below. Additionally, the department's name and telephone number are listed. (See Appendix A) This logo draws attention, and we believe conscious and subconscious support, because of its design and natural appeal.

#### PROJECTS

One University protection project implemented was Operation Identification. Between May 1980 and July 1981, 20,300 items have been marked with a State (NCIC) crime prevention number. Also, crime prevention stickers with the State crime prevention seal have been affixed to entry and exits of the buildings and on various items. During a comparable time period, University property thefts have been reduced by 72.5% and \$21,000 in stolen property recovered. We return periodically to various departments to mark new items as they are received. The support and success of this project increases monthly as the department receives requests to mark new equipment.

The cost is minimal, since we use State seals and student police employed at minimum wage, are directed by certified officers to perform this service.

A second project implemented to prevent theft of University property was a seminar for book store and canteen employees. During the semester break we conducted two seminars for these employees in an effort to prevent shoplifting and other thefts from these departments. Although the success of the training cannot be accurately evaluated, some success is indicated by the fact that several shoplifters have been reported and apprehended in these areas. The cost of the program was minimal due to the use of films from the Criminal Justice Academy, other law enforcement agencies, and using in-house officers and investigators, along with local members of the 13th Circuit Solicitor's Office, to conduct the training.

A third project implemented to prevent armed robberies during special events is a special money escort program. Due to the nature of this project, special details are not given.

A crime that was very costly and presented serious potential for harm was activation of false fire alarms. Realizing the serious nature of these incidents, we developed a crime prevention project to reduce them. Again, at a minimal cost by using University resources and Department personnel, posters, pamphlets and a video-tape were developed to attack this problem. In 1979 we experienced 205 false alarms. The Communications Department worked closely with the Fire Department and produced a video-tape which was used in the Housing Department's training seminars and displayed in the University Union during Fire Prevention Week. The results were evident by the reduction of false fire alarms by 30%. In one problem dormitory, false fire alarms were reduced from 117 to 65. The video created peer pressure to prevent false alarms and an awareness that led to the arrest and prosecution of violators. (Appendix E)

As the cost of books increases, so does the potential for thefts. This theory prompted the department to develop a simple book theft prevention

program centered around using book markers to present our crime prevention materials. Therefore, we use uniformed officers in the library and dining hall areas to pass out book markers and talk briefly about book thefts. In addition to promoting crime prevention, we believe this project has been successful in department public relations. The student receiving something from an officer other than a parking ticket makes for very positive relations.

The hours when officers pass out book markers varies, and it is usually done during times when there is sufficient manpower available. However, they are in radio contact should their services be needed elsewhere. Subsequently, the only extra cost for the project is the production of the book markers, which is minimal.

A voluntary bicycle registration project involves registering an individual's bike, marking it with a number that corresponds with his registration cards (two registration cards are completed, one by name and one by decal number) and a P.A.W. decal that is also applied to the bike. (See Appendix A) In the short time that this program has been in effect, we have observed a reduction in bike thefts of 48%. There has also been an increase in our recovery of stolen bikes, and apprehension of criminals has increased due to students' identifying a P.A.W. decal and reporting this to the police. This program has also been carried out by the student police force.

The bike project was the most expensive crime prevention program (approximately \$100 a year) because decals had to be purchased from a vendor off campus. However, we believe the expense involved is cost effective since we are able to return recovered (marked) bicycles to their owners rather than transporting and storing them. Also, officer time in processing stolen case reports and supplemental reporting has been greatly

reduced. Additionally, we do not charge for this registration service. A registration cost to students could reduce the success of the program.

Last year there was a misconception about obscene phone calls on the part of members of the Housing Department. This misconception caused numerous female students to believe nothing could be done about obscene phone calls. Therefore, we developed an Obscene Phone Call Awareness and Education project. A pamphlet was developed and dorm counselors were given instructions during housing in-service training seminars. The results of this project were very successful. During the first year, more than 200 cases of obscene phone calls were cleared, and obscene calls were reduced to approximately four complaints per semester. (See Appendix B)

Investigators and police officers on duty were used in the project and the pamphlet expenses were very minimal. Using University graphics and printing, the cost is approximately \$75 per year.

#### FUTURE PLANS

Theft of items from vehicles and hubcap thefts present a problem because of the number of parking lots and their locations on campus. Therefore, one project for 1981 involves marking hubcaps and items in vehicles with an NCIC number. Also, a pamphlet presenting these and other crime prevention topics will be distributed. During the fall we will select a good weekend and use the football stadium ticket booth areas as the sites for conducting the vehicle crime prevention project. (See Appendix A)

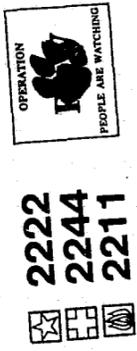
Additionally, all students will be informed that our investigator will be checking jockey lots, flea markets, and other locations for hubcaps with our NCIC number. Hopefully, this will remove Clemson University as an area for stealing stereos, CB radios, hubcaps and reduce the market for buying and selling stole goods. The exact expense for this project

is undetermined at this time. However, it is anticipated to be approximately \$700 per year. The major cost is an investigator's time working weekends checking known stolen goods locations.

#### SUMMARY

In summary, we believe our programs are functional because we selected posters, projects, pamphlets, and ideas that were productive in other universities and communities and modified them for our use. Also, we were fortunate in having the University resources such as artists, writers, photographers, communication specialists, and input from students, faculty and staff. The enthusiasm and support of members of our Public Safety Department and other members of the criminal justice system contributed in achieving such a high level of accomplishment and success.

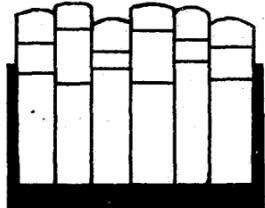
**It's 3 a.m.**  
**and the**  
**phones**  
**ring again!**



**SOUTH CAROLINA CRIME WATCH  
OPERATION I.D.**



**WARNING**  
Vehicles have been permanently equipped to assist law enforcement agencies in their positive identification  
**ALL ENGRAVED ITEMS CAN BE TRACED**



**BOOK MARK  
REMINDER**  
Book Theft is  
A Problem!

- Often books are left unattended in public places.
- \* Books are easily resold.
- \* Books are increasing in value.
- \* Often owners cannot be identified.

**YOU CAN:**

- Mark all books with your name and Social Security number in a specific place.
- \* Keep books with you. Do not leave them in public places, on coat racks or lockers.
- \* Report book thefts immediately. Often recovery may be made at the resale counter.



Clemson University  
Police Department  
2222

**UNIVERSITY  
POLICE  
REMINDE THEE**



**T**is  
better  
for thee  
to mind  
closely  
thy  
valuables  
lest they  
become but  
fleeing  
things in  
thy life



Clemson University  
Police Department  
2222

### How to Cope With the Crank Phone Caller

The phone rings. It's 3 a.m. No, it's not Mom calling to say Dad just deposited \$500 in your overdrawn checking account. Instead you are greeted by a string of obscenities, heavy breathing or silence.

You have just become another victim of the crank caller. Some authorities estimate that over a million crank calls were made last year. Most of these calls are the ring and hang up variety. A growing number are either obscene or threatening.

Now that you've become a victim of the crank caller, here are a few ideas to prevent a repeat call.

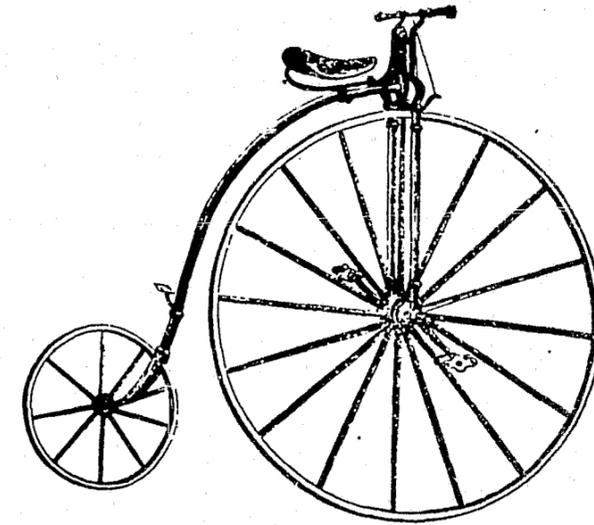
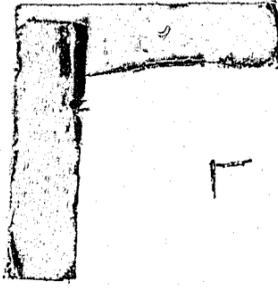
1. **Hang up.** As soon as you hear an obscenity, improper questions or no response to your sleepy "hello?"—Hang Up!!
2. **Don't talk to strangers.** Be careful when the caller says he/she is taking a survey. If you have any concern about the legitimacy of the survey, ask the person for his/her name, firm name and telephone number. Say that you will call back after you verify the authenticity of the survey.
3. **Don't play detective.** Don't extend the call trying to figure out who is calling. This or any type of reaction is exactly what the caller wants and needs.
4. **Keep cool.** Don't let the caller know you are upset or angry.
5. **Don't panic when the phone rings.** It may just be a wrong number. If it is a crank call, follow these suggestions.
6. **Don't try to be clever.** A witty response may well be interpreted as a sign of encouragement.
7. **Don't try to be a counselor.** The annoyance or obscene caller certainly needs professional help, but he/she will only be encouraged by your concern and will continue the late night calls.
8. **Don't tell everyone about your calls.** Many calls of this type are actually made by friends, family members, even your closest girl friend or boy friend.
9. **Place ads with caution.** When placing an ad in a newspaper, use a newspaper or post office box number if possible. If you must use your phone number, do not list your address. Crank callers are avid readers of the classified ads.
10. **Never volunteer your number to an unknown caller.** This is an invitation to call again. If your number is the wrong number, the caller does not need to know your number.
11. **Report obscene or annoying calls to the Police Department or your R.A.** Using the crank phone call log, make a record of the call. By reporting the call to the above authorities, you have begun the process to stop these 3 a.m. calls.

THE INFORMATION RECORDED HERE MAY GIVE VALUABLE CLUES TO THE IDENTITY OF A CALLER AND COULD ESTABLISH A PATTERN THAT COULD HELP IDENTIFY THE SOURCE OR THE REASON FOR THE CALLS.

Call	Date	Time	Type of Call	Voice	Phone Numbers		
					Law Enforcement	Telephone Company	Nearest Neighbors
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

APPENDIX B2

CRANK PHONE CALL LOG



**Don't help a thief  
To help himself . . .  
To your bike.**

**BICYCLE SECURITY**

**If you want to keep your bike:**

1. Remember, the recovery rate for stolen bicycles is very low, so observe every possible precaution for its security.
2. Use the free bicycle identification service sponsored by the University Police Department.
3. Use thick, hard locks, chains and cables.
4. Park your bike in a well-lighted place at night.
5. Report suspicious activities. A thief often carries tools such as hacksaws or bolt cutters and may loiter around bike racks looking for a good quality bike with cheap locking devices.
6. Anchor both wheels and the frame to the bike rack.
7. NEVER leave your bike unlocked. The average bike theft takes less than a minute.
8. Check your bike regularly.
9. Promptly report all thefts to the University Police Department, 2222.

**Lock your bike the right way:****Chains**

Should be at least  $\frac{3}{8}$ " thick and made of hardened alloy steel.

**Cables**

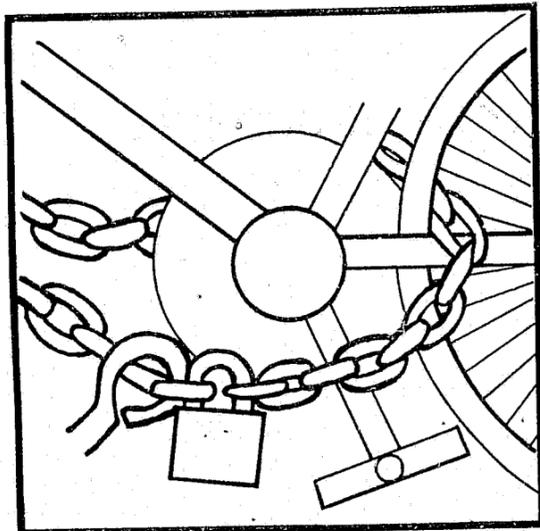
Should be at least  $\frac{1}{2}$ " thick.

**Locks**

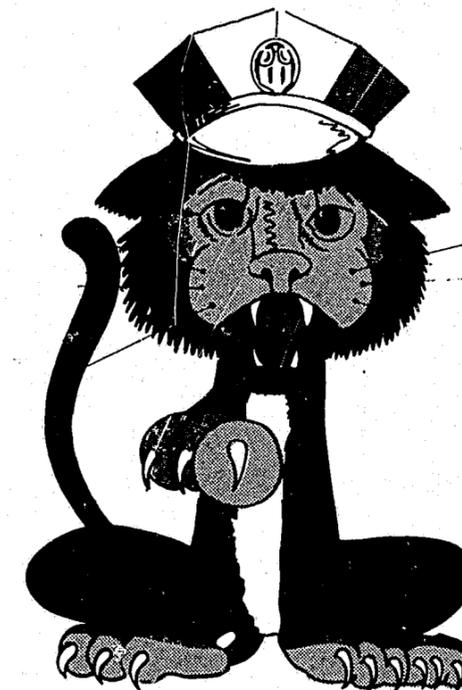
Should be  $\frac{7}{16}$ " hardened alloy steel padlocks. This type has the greatest resistance to cutting or tampering. Combination locks are NOT recommended.

**Position**

Wrap the chain around both wheels and the frame, positioning the lock as high off the ground as possible to reduce leverage with bolt cutters.



# We Need You



# To Help Prevent Crime

### Public Safety Needs Your Help

The Department of Public Safety needs your help with its efforts to prevent crime on the Clemson University campus. Responsible for the enforcement of University regulations and laws, parking control and safety on campus, the department can effectively carry out its duties only with the cooperation and assistance of all members of the University community.

Police service is provided 24 hours a day, seven days a week and is based at the Police Station on Klugh Avenue. The department also provides a number of services to the University community including a crime prevention program, 24-hour law enforcement patrol of the campus, lost and found, unlocking vehicle doors, lending battery jumper cables, ambulance service, escort for medical attention, operation identification program, bike registration program, and speaking engagements.

To better serve the community, the Department of Public Safety has been totally reorganized, and numerous improvement projects are under way. We welcome your comments and evaluation of our service.

Crime prevention is the responsibility of each member of the University community, and unless you as a member share your responsibility, the crime rate will increase. You can protect yourself and help us by practicing the precautions listed in this folder.

-14-

Jack D. Ferguson, Jr.  
Director

### Protect Your Auto

An automobile is an ideal target for a thief. It's self-propelled and fully equipped for a fast getaway. Auto parts, especially hubcaps, are also easy to steal, and there's always a readily available market. Don't become the middle man in this market!

The University Police can help you get a permanent N.C.I.C. (National Crime Information Center) identification number for your possessions. Let the police engrave this number on your hubcaps, and practice the following precautions.

- Never leave the keys in your car.
- Always lock the doors and roll the windows up tightly.
- Avoid leaving property where it is visible on the seats.
- Don't carry the car's license number, description of vehicle, name or address on a key chain.

- Install CBs and tape players with lock mounts so they can be removed easily and placed in the trunk.
- Never leave the title or registration in the glove compartment; leave them at home or carry them in your wallet. Thieves steal these documents and forge them to fit the description of a stolen vehicle.
- Before entering your auto, check for signs of a possible break-in.
- When you leave your car parked, check it daily.

### Protect Your Possessions

Many of the personal possessions you bring to campus are easy prey for thieves. Stereos, bicycles, TVs and money are portable items that can disappear quickly if left unprotected.

- Keep a record of brand names, values, models and serial numbers in a safe place. Use the attached form to record this information and let the University Police keep a copy on file.
- Engrave your N.C.I.C. number on all items and add this to the above list. Engravers are available through the University Police.
- Keep your door closed and locked even if you are just "going next door"; it only takes eight seconds for someone to walk in your room, take something and walk out.
- Don't leave your wallet, purse or keys on top of the dresser, bed or in plain view. Keep them out of sight, preferably in a locked drawer.
- Record all credit card numbers.
- If you leave campus for a few days, get a friend to check your room.
- Notify University Police -- 656-2222 -- of anyone acting suspiciously.
- Report all thefts and property losses to the police -- 656-2222.

### Protect Yourself

Your personal safety is our main concern. Crime on campuses has been a steadily increasing problem affecting students and faculty alike. We have tried to make this one of the safest campuses in the country; however, a safe environment can only continue through an active concern on the part of the community and its interaction with the police.

- Never walk or jog alone at night.
- Walk where there is plenty of light and other traffic.
- Don't overload yourself with books or packages.

- Install CBs and tape players with lock mounts so they can be removed easily and placed in the trunk.
- Never leave the title or registration in the glove compartment; leave them at home or carry them in your wallet. Thieves steal these documents and forge them to fit the description of a stolen vehicle.
- Before entering your auto, check for signs of a possible break-in.
- When you leave your car parked, check it daily.

### Protect Your Possessions

Many of the personal possessions you bring to campus are easy prey for thieves. Stereos, bicycles, TVs and money are portable items that can disappear quickly if left unprotected.

- Keep a record of brand names, values, models and serial numbers in a safe place. Use the attached form to record this information and let the University Police keep a copy on file.
- Engrave your N.C.I.C. number on all items and add this to the above list. Engravers are available through the University Police.
- Keep your door closed and locked even if you are just "going next door"; it only takes eight seconds for someone to walk in your room, take something and walk out.
- Don't leave your wallet, purse or keys on top of the dresser, bed or in plain view. Keep them out of sight, preferably in a locked drawer.
- Record all credit card numbers.
- If you leave campus for a few days, get a friend to check your room.
- Notify University Police -- 656-2222 -- of anyone acting suspiciously.
- Report all thefts and property losses to the police -- 656-2222.

### Protect Yourself

Your personal safety is our main concern. Crime on campuses has been a steadily increasing problem affecting students and faculty alike. We have tried to make this one of the safest campuses in the country; however, a safe environment can only continue through an active concern on the part of the community and its interaction with the police.

- Never walk or jog alone at night.
- Walk where there is plenty of light and other traffic.
- Don't overload yourself with books or packages.

# HOW HOT'S YOUR SPOT?

FIRE SAFETY AND YOU

## Avoid Hazards in Your Room

### Decorations

Decorations of all types, including curtains, should be constructed of flame retardant material. Christmas trees may be placed in rooms no sooner than 14 days prior to the Christmas holidays, and they must be removed before you leave for the holidays. Trees over four feet high must be treated with a flame retardant.

### Electrical Abuse

Use of electrical "octopuses" to obtain a maximum number of outlets can result in the overload of circuits and fire. Improper use of extension cords is a major cause of residential fires. Avoid using them.

### Appliances

Coffee percolators, electric hair curlers and other approved electrical equipment should never be left unattended. They should be unplugged after use and not stored until they are cool enough to touch. Make sure you do not overload the circuit or improperly use extension cords.

### Television Sets

TV sets give off heat. Make sure there's enough space between the back of the set and the wall to prevent overheating.

### Open Flames

No candles or open flame devices, except cigarette lighters, are allowed in residence halls.

### Hazardous Storage

All waste should be disposed of as soon as possible. Surplus material should be stored in a safe place, not in corridors or stairways.

### Flammable Liquids

Gasoline, ether, paint, glue, etc. must not be stored in residence halls. The only flammable liquid permitted is standard containers of lighter fluid.

### Obstacles

Storage of bicycles, chairs, desks and other items is prohibited by law in all exit ways. Blocked exits have caused "chain reaction" pile-ups of fallen people during fires.

## Know Your Extinguisher

### Water (cools)

Water extinguishers are for Class A fires—ordinary combustibles such as wood, cloth, paper and rubbish. To operate pressurized extinguisher, gently pull the pin—press on the handle and direct the nozzle toward the base of the flame.

### CO<sup>2</sup> (smothers)

CO<sup>2</sup> is a gas to be used on Class B and C fires—electrical fires such as burning motors, controls and wiring. It will not freeze. Operating procedures vary, so read the instructions on the extinguisher.

### Multipurpose Dry Chemical (smothers)

This powder-type extinguisher is the most versatile for fighting home fires; it can be used on Class A, B and C fires. To operate, remove the pin and squeeze the trigger.

## In Case of Fire

### Upon Discovery of Fire

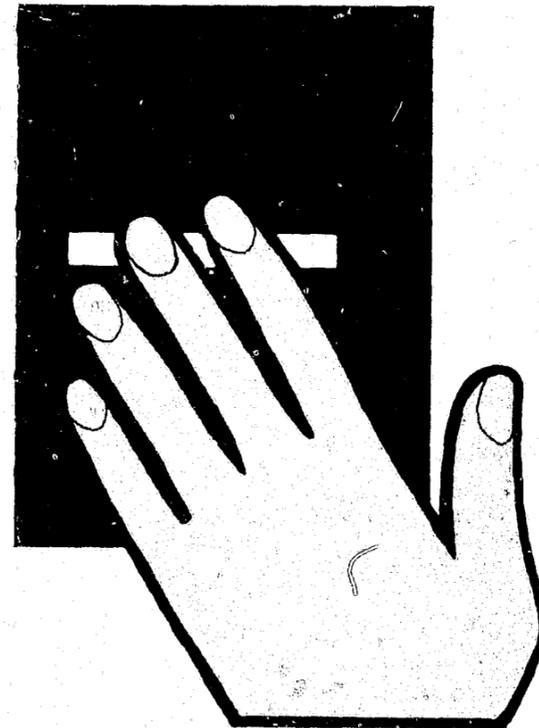
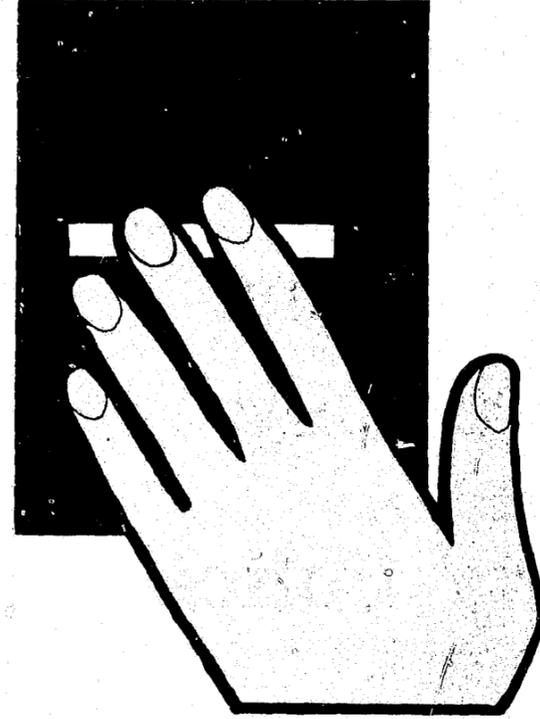
1. If you discover or suspect a fire, go to the pull box nearest the fire and activate the alarm system.
2. Call the Fire Department, 2211, and give the fire dispatcher the location and as much information as you can about the fire.
3. If practical, isolate the fire by closing doors in the vicinity.
4. Use good judgment in any attempt to extinguish the fire. See the back of this folder for information on extinguishing different types of fires. If a large degree of heat and smoke has accumulated, do not attempt to fight the fire. Evacuate immediately.
5. Resident Assistants and assigned fire monitors should try to evacuate the hall.

### Evacuation When Alarm Is Sounded

1. Keep low to the floor if there is smoke in the room.
2. Feel the metal door knob before opening the door. If it is hot, don't open the door. If it isn't hot, brace yourself against the door and open it slightly. If heat or heavy smoke is present, close the door and stay in the room.
3. If you can't leave the room, seal up the cracks around the door using sheets, towels or pieces of clothing. Then hang something out the window to attract the Fire Department's attention. If there is a phone in the room, call the Fire Department and report that you are trapped. Be sure to give your room number and location.
4. If you can leave the room, close all doors as you exit.
5. Go to the nearest exit or stairway. **Do not** use an elevator. If the nearest exit is blocked by fire, heat or smoke, go to another exit.
6. If you enter a fire stair and find it blocked below you, go to a higher floor. Find a window and signal for help.
7. If all exits are blocked, go back to your room. Close the door, wave something out the window and shout for help.
8. If you are trying to escape through a smoke-filled room or corridor, move quickly in a crouching position to the nearest clear exit. Place a wet towel over your head and face. Breathe through the wet towel by taking short breaths through your nose. Cover your eyes with something like a window drape that can be easily discarded if it catches on fire.
9. Upon leaving the building, go to your assigned area and remain there until you are given permission to return to the building. Follow directions of fire and police personnel.

Always try to remain calm.

Never re-enter a burning building to try to save your personal possessions.



**Does  
this  
burn  
you  
up?**

**Call University Police  
2222**



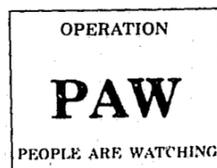


**Counting yours,  
there are about  
27,600 EYES  
on our campus.**

**There are only  
68 in the  
University Police  
Department.**

**If you see  
something  
suspicious,  
give us a  
call.**

**Clemson University  
Police Department  
2222**



**ALTERNATIVE PATROL VEHICLES**

By Spencer Guerry  
Georgetown Police Department

**INTRODUCTION**

The Georgetown Police Department is experiencing a problem shared by most departments today, the problem of handling significantly more calls for service while operating on increasingly tighter budgets. The public expects the police to answer their calls for service and to also reduce the ever-rising crime rates, all on a static budget.

Consequently, police departments are trying to cut operating cost a number of ways. For example, more complaints and incident reports are being handled by phone where possible, rather than dispatching a patrol officer. Other departments have cut services to the community such as bank and funeral escorts. Finally, as a last resort, some departments have cut down the amount of patrolling done by police officers.

For background information, the Georgetown Police Department now answers approximately 15,000 calls for service annually. This represents a 71% increase over three years ago. Criminal arrests are up 44% the same time period, and traffic accidents investigated are up 57%. Also, the patrol division now patrols 23,000 miles per month, which is felt to be an appropriate level for Georgetown.

The number of patrol personnel over the last three years has decreased from a total of twenty-four (24) officers to twenty (20) officers for a city of more than 10,000 persons. So the department had already increased its productivity with fewer personnel.

Therefore, other areas of the budget were investigated to see where costs could be reduced or held at the same level, while not reducing the services provided to the citizens of Georgetown. The largest item in the

Georgetown Police Department's budget other than personnel is vehicle expense, which includes fuel costs and vehicle repair.

To save gasoline, the department has been downsizing its patrol fleet over the last three years, but the better gas mileage of the newer vehicle is always outweighed by the skyrocketing cost of gasoline.

For this reason our department researched the use of a motorcycle as a regular patrol vehicle. The two-wheel motorcycle gets much better gas mileage than an automobile, and offers better maneuverability in congested areas.

The chief disadvantage of a two-wheel motorcycle in regular police patrol is that the officer must have the strength to withstand all the efforts of stopping and starting a 1,000 lb. motorcycle during his tour of duty. This would cause problems in our department because we have four (4) females officers and a number of male officers of small stature. This would mean fewer officers available to ride the motorcycles and a reduction in potential gasoline savings.

The solution that was found was a kit to convert two-wheel motorcycles to three-wheel motorcycles. The advantage of a three-wheel motorcycle over a two-wheel motorcycle is the three-wheel motorcycle's "trike" sits upright, requiring no efforts from the driver in maintaining balance. This allows any size officer to operate the Trike. Thus a department can have the majority of officers on Trikes and realize enough gasoline savings to pay for the Trikes in a year, depending on the cost for gasoline and the level of Trike usage, while not reducing patrol mileage.

In Georgetown, the Trikes will patrol approximately 11,000 miles per month throughout the year while the autos will patrol 12,000 miles per month. Under this arrangement, the trikes, averaging 25 miles per gallon of gasoline, should save almost enough in gasoline (\$13,395.00) to pay for

themselves.

During warm weather we anticipate using the Trikes almost exclusively over the automobiles, while during the cold and wet weather periods, we will use only our automobiles. Therefore, our mileage split is averaged for the year between the Trikes and the cars.

Of course, there have been some problems with the Trikes since we put them into actual practice:

- (1) Training - a training program had to be developed, since none existed for three-wheel motorcycles.
- (2) Officer Acceptance - Like most people, police officers resist change. However, once through the training program, most officers accepted the three-wheel motorcycles.
- (3) Handling Characteristics - the three-wheel motorcycles most definitely are easier to tip over, since they do not lean while negotiating a turn or curve as well as two-wheel motorcycles.
- (4) Auxiliary Equipment - the department has had to purchase helmets for all personnel and will be buying boots in the near future. The helmets were needed from the beginning and we found that our officers' shoes weren't strong enough for use on the Trikes. Also, we had to use walkie-talkie radio units because the bikes' electrical systems could not handle a permanent unit.
- (5) Emergency Equipment - we purchased Honda-750's and we added an electronic siren and a revolving teardrop blue light with collapsible pole to each Trike. It seems the Hondas we have do not have a sufficiently large electrical system, for we could not even add a permanent

radio unit to each motorcycle. We have had to replace the original motorcycle batteries with larger capacity batteries. The additional equipment we added plus the slower patrol speeds can quickly discharge a small battery, as we quickly learned.

1981 - 750 Hondas	\$3,618.00 X 3 =	\$10,854
Conversion Kit	1,550.00 X 3 =	4,650
Emergency Equipment Total	----- =	1,095
Rear Wheel & Tires	125.00 X 3 =	750
Labor for Conversion	250.00 X 3 =	750

The cost for equipment such as helmets, boots, gloves, and hand-held radios will vary, as some departments may already own and use such equipment. Also, the cost of training was approximately \$800 for five (5) days of training.

The three-wheel motorcycle is not the perfect patrol vehicle, and it has its limitations, but its use should be expanded as it definitely has potential for use in South Carolina.

For more information, Call Spencer Guerry, 546-4141, Georgetown Police Department.

## POLICE - YOUTH BUREAU BASEBALL LEAGUE

By Harold C. Jennings, Chief  
Greenville Police Department

In the spring of 1981, the Greenville Police Department established a youth baseball league with the following objectives:

1. To provide structured, supervised, and safe recreation for children who are often left unsupervised by working parents, and whose playgrounds are often streets and abandoned properties.
2. To create a more favorable image of policemen for children whose environment often teaches them contempt and distrust of authority.
3. To help to instill values of teamwork and fair play in youngsters whose environment may be strongly combative.

The baseball league actually had its roots in a 1970 15-week bowling league, again conducted by City Police Officers. The Christ Episcopal Church of Greenville presented a \$750 donation to the Department for Chief Harold C. Jennings to apply toward a program of his choice. With an eye toward crime prevention and improving the image of policemen in the eyes of Greenville's disadvantaged young people, the Department put the Christ Church donation to work in a bowling league for children aged eight to thirteen.

With the passage of weeks came improved skill levels, and the children in the program began to show outward signs of their increasing involvement with the sport: enthusiasm was heightened, smiles were broader and more frequent, and some of the bowling alley personnel even commented on a decline in profanity.

Encouraged by the results of the bowling league, Christ Church

pledged another gift of similar size and purpose. This time the project was a 12-week baseball league involving a larger number of children, officers, area merchants, and public service agencies.

Officers and City Recreation Department Community Center personnel selected four teams of fourteen players, aged eight to thirteen. In all, twelve officers served as coaches (3 coaches per team), four served as umpires, this project was no small commitment - practices and games afternoons lasted three hours or more each, and each team had been promised one practice session and one game per week. Consequently, participating officers found themselves volunteering six or more hours each week of personal time. No duty time was given to the league.

An impressive list of public agencies and area businesses answered an invitation to participate in the program. The Greenville Youth Bureau, a division of the S. C. State Department of Youth Services, co-sponsored the league with their donation of balls, bats, gloves, bases, and score-books. The City Parks and Grounds Department mowed, trimmed, and lined out the old Meadowbrook Ballpark field for use by the league. Coca-cola pledged a hat for each child. Discounts and outright donations from other businesses made possible a T-shirt for each player, complete with a number on the back and a Police patch on the front.

Each team had a Police sponsor. The "broadcloth" team (the eventual champion ) was sponsored by the Detective Division; three other teams were sponsored by the three Uniform Patrol Platoons. As the season progressed, officers began to find time to attend games to cheer their sponsored teams. To the satisfaction of all concerned, a growing number of parents also began to brave the hot summer sun to see their children in action.

The highlight of the season was to have been a trip to Atlanta to

see an Atlanta Braves baseball games in August. This outing was cancelled because of the baseball player's strike, and the group spent a day at Carowinds Amusement Park instead. Transportation, admission to the park, and two meals accounted for the remainder of the Christ Church donation. It was a fitting celebration to end a summer unlike any these children ever knew before.

The Department believes that considerable good will was generated toward the Police when churches, public agencies, and private businesses all work in concert in a community-centered enterprise under Police leadership. Such was the case with our baseball league.

More importantly, each participating officer will testify that lives were touched in this program. The boys who became players in this league had been left out of other City and County leagues, either for want of transportation, fear of competition, or other personal reasons.

In May, players were quick to criticize and condemn their teammates who struck out or committed fielding errors; by July, a sense of teamwork had been instilled and most players offered only encouragement to one another.

The players had also become proud of their sponsoring units. For the rest of the summer, they wore their T-shirts and Police patches with pride.

Richard P. Cannady of the Safety/Crime Division prepared the following detailed report on the activity and cost with the idea that it might be helpful to other departments interested in developing such a program. Officer Cannady will be happy to provide any further information he has on request.

## BASEBALL LEAGUE

### HISTORY

On May 19, 1981, five officers met to discuss the possibilities for a summer youth project which would involve children from underprivileged areas within the City of Greenville with patrol officers from the Greenville Police Department. Many good ideas were discussed by the five officers, and it was decided that we would organize our own softball league. On June 10, 1981, the first game was played and games were completed by July 22. The grand finale of the year was on August 18, when all the players and coaches enjoyed the day at Carowinds.

### OBJECTIVE

The objective of the Police Youth Bureau Softball League is to involve underprivileged children with police officers through the use of a competitive sport.

### GOAL

The goal of this involvement shall be that the children shall develop better feelings and understanding toward the police officers. Benefits for these children will come as they grow older and have come to know police officers as someone who is willing to help rather someone to throw people in jail.

### TEAM SELECTION

It was decided that four teams would be involved within the league. Each team would be allowed to carry a 14-player roster. Each team represented one of the Uniform Patrol shifts and one team represented the remainder of the Police Department. The teams even adopted the nicknames of the platoons that they represented and the breakdown was as follows:

### Team # 1

Representing: Traffic Division, Municipal Court, Detective Division, etc.  
Nicknamed: "Broadcloth"  
Area: Woodland/Pearce Homes and Greenline  
Coached by: Jim Austin and Joyce Cruel

### TEAM # 2

Representing: Lt. Berry's Platoon  
Nicknamed: "Minutemen"  
Area: West Greenville and Anderson Street  
Coached by: Terry Christy, E.F. Blackburn and D.L. Sikkelee

### TEAM # 3

Representing: Lt. Johnson's Platoon  
Nicknamed: "Blue Machine"  
Area: Southern Depot, Birnie Street and Rutherford Road  
Coached by: Lt. W.L. Johnson, Carey Dial and J.L. Atkinson

### TEAM # 4

Representing: Lt. Melton's Platoon  
Nicknamed: "Troubleshooters"  
Area: Fieldcrest, Nicholtown and Piedmont Manor  
Coached by: Joe Gosa and Claude Dawson

Each coach selected his team from the area assigned. Any child in the area who was not already playing ball and was within the age limits was eligible, regardless of race or sex.

### MANPOWER

Since there was not extra money to pay the coaches for the extra time required, each coach was a volunteer from his platoon. The concern within the officers of the department for these children and their future made it easy to recruit coaches. The only thing they received was a promise of a day off sometime in the future, if and when the workload would allow.

### FINANCES

Although some departments may find this to be their heaviest burden, we were very fortunate to have a concerned church in our area. Christ Episcopal Church has always shown an interest in the lives of young people and they have always been a good friend of the Greenville Police Department.

Christ Church served as our main sponsor and donated \$1,000 to the

league. The Youth Bureau also helped with the sponsorship by furnishing the equipment such as balls, bats, bases and etc.

The following is a breakdown of the expense:

Shirts	\$ 107.21
Shirt printing	74.88
Insurance	83.00
Carowinds trip (transportation)	794.91

#### ASSIGNED DUTIES

To assure that all problems were handled, the following assignments were made.

1. PERMISSION SLIPS - Officer Cannady  
Permission slips had to be developed which would relieve the officers and department from liability in the event of an injury. (See Example "A")
2. GAME SCHEDULING - Officer Cannady  
A schedule of all games dates and times had to be developed to assure equal chance to win and develop a record keeping system. (See Example "B")
3. RULES & GUIDELINES - Officer Cannady and Officer Chastain  
Since rules vary in each league, officers had to research rules and develop a set of rules that would work best. (See Example "C")
4. COMMUNITY CENTER CONTRACTS - Lt. Johnson  
Contacting the community centers helped to inform the eligible children in order to recruit players.
5. REFEREES - Officers Cannady, Chastain, Sims and Screw
6. UNIFORMS & EQUIPMENT - Captain Rumler and Officer Chastain  
These needed to be obtained with donations or reduced prices.
7. LOCATION FOR PRACTICE & PLAY - Lt. Johnson  
A place was needed where they could play and practice.
8. CAROWINDS TRIP - Captain Rumler and Officer Cannady & Chastain  
Arrangements for the trip had to be made as cheaply as possible. Transportation and food needed to be handled.

#### PLAYER TRANSPORTATION

The reason many of these underprivileged children were not already on organized teams was a lack of transportation. Chief Jennings offered

a solution to this problem by allowing officers to use their patrol cars. The patrol cars would go into the neighborhood and pick up the players and carry them home after the game or practice. This helped to further identify the children with the police officers.

#### CAROWINDS TRIP

Since the softball league was being used to bring the police and the children together, it was felt that the year should be ended with something more than trophies. Kenny Gilmore was contacted and helped plan an outing that was within the budget.

The problem of transportation was overcome by working with Travelways Tours. Two drivers volunteered to drive without pay. One of these drivers was Officer Cliff Sims, a member of the Greenville Police Department, who drives part-time for Travelways. And food was catered by Carowinds which included lunch and supper.

#### EVALUATION

There is no objective means by which to measure the success of this program, but the department feels that the payoff will come in the future when these children get to the age where they would normally be problems to the police. Strong relationships were built between the players and their coaches that time cannot destroy.

This story is illustrative of the type of relationships that developed. An officer had a player driven home. An older boy yelled, "What happened? You get picked up by the cops?" The other boys standing around laughed. Then one of the players answered, "I'm riding with the cops because I want to. Everytime you have rode with them, you had to!"

GREENVILLE CITY POLICE DEPARTMENT  
GREENVILLE, SOUTH CAROLINA

Dear Parents:

The undersigned is the parent and/or legal guardian of:

\_\_\_\_\_, a member of the Police Athletics  
League \_\_\_\_\_

The undersigned hereby gives permission for said child to participate in any such outings and activities; and the undersigned does hereby release and agree to hold harmless and indemnify the Greenville Police Department and the City of Greenville from any liabilities and claims on behalf of the said child for any injuries or damages arising or which may arise while said child is participating in any such trip, outing or activity or while being transported in connection therewith.

In the event said child should be injured, become ill, or otherwise require emergency medical aid, the undersigned authorizes and consents to such medical aid as may be rendered in good faith by any member of the Greenville Police Department, or any physician or nurse selected by a member of the Greenville Police Department.

The undersigned further authorizes the POLICE DEPARTMENT to exercise such disciplinary procedures including spanking, with respect to such child as may be deemed advisable in good faith to maintain proper order and control of the group or of individuals in the group, for the safety, welfare and enjoyment of all.

Yours truly,

\_\_\_\_\_  
Name of Parent and/or Guardian

CHILD'S NAME: \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

TELEPHONE # \_\_\_\_\_

APPENDIX B

POLICE YOUTH LEAGUE BASEBALL  
SCHEDULE - 1 9 8 1

TEAM #	TEAM	PLATOON
1	Woodlawn Homes	Jim Austin
2	West Side	Lt. Berry
3	Southern Side	Lt. Johnson
4	Fieldcrest	Lt. Melton

1. June 10th	-	1 - 2 3 - 4	2:00 p.m. 3:00 p.m.
2. June 17th	-	1 - 3 2 - 4	2:00 p.m. 3:00 p.m.
3. June 24th	-	1 - 4 2 - 3	2:00 p.m. 3:00 p.m.
4. July 1st	-	3 - 4 1 - 2	2:00 p.m. 3:00 p.m.
5. July 8th	-	2 - 4 1 - 3	2:00 p.m. 3:00 p.m.
6. July 15th	-	2 - 3 1 - 4	2:00 p.m. 3:00 p.m.
7. July 22nd	-	1st place vs. 2nd place 3rd place vs. 4th place	: 2:00 p.m. : 3:00 p.m.

APPENDIX C

BASIC RULES

1. Officers Cannady and Chastain shall act as officials of the games. They shall make decisions as needed when a controversy arises. Anyone appointed to take their place shall act with the same authority.
2. Games shall consist of 7 innings of play.
3. No more than 10 players shall bat in one inning. If the 10th batter comes to the plate, he shall continue running the bases until a base that he has not reached has been tagged or any out has been made. If this batter is walked, a one run credit will be given to the team regardless of the number of base runners.
4. After 4 complete innings of play, if either team is leading by 10 runs or more, the game shall end at that point, or any point afterwards that such a lead is obtained. (If the trailing team has hit first, they shall be allowed to bat in the top half of the 5th inning).
5. Each team shall have a 14-player roster. No new names can be added after the second game. No player will be eligible unless he has a permission slip on file with the Officials.
6. The playing team shall consist of 10 players. Nine regular players and an added short fielder.
7. Rules shall be made as necessary by the officials when controversy arises.
8. If anyone is ejected from a game, that person must sit in the stands for the remainder of the game. Further disturbance may cause that person to be eliminated from future participation in other games.
9. Forfeit of the game may result from unsportsman-like conduct by the coaches.
10. Substitutes may be made at any time.
11. Anyone removed from a game may re-enter the game only if all other players on the team have played. If a player re-enters the game, he must replace either a player who is injured or a player who has played the entire game. (This is to prevent letting the player with the less ability come in for one inning, and replacing him with the better player).
12. Coaches shall notify the umpire and the coach of the opposing team of any substitutions being made.
13. No base stealing.
14. Base runners must remain on base until the ball passes the batter or is hit by the batter.

APPENDIX C (CONT'D)

15. No steel cleats.
16. Sliding into bases is permissible except for first base.
17. The ball shall be pitched underhanded with an arch of one to three feet above the batter's shoulders at the highest point.
18. Strikes shall be called when the ball is over any portion of the plate, without hitting the plate, and falls between any portion of the shoulders and knees of the batter.
19. All regular rules of playing ball shall exist.

## PHONE TELETYPEWRITER NETWORK

By Eric B. Sanders, Captain  
North Augusta Department of Public Safety

More than 13 million persons in this country have hearing and speech impairments which prevent them from requesting emergency aid without the help of another person. Many of these persons have worked diligently to become independent. Frequently, they are employed and prefer to live alone. In other cases, the hearing impaired may be children whose parents are employed during some of the hours that their children are at home.

Regardless of the circumstances, the North Augusta Police Department believes that the handicapped are entitled to the same services provided to the rest of the community we serve. For this reason, the North Augusta Department of Public Safety became involved in barrier free communications as early as 1972.

The resulting program, the Phone Teletypewriter Network makes it possible for participating hearing and speech impaired citizens to communicate with the North Augusta Police Department without enlisting the help of a third party. Without this program, these citizens could not report crimes or summon police, fire and emergency medical personnel during an emergency.

The system was implemented at the department in mid-1973. Walter E. Newman, Director of Public Safety for North Augusta, learned of a communications system designed to help deaf persons communicate with other deaf persons over the telephone. He also realized that this system had application in a law enforcement sense, because if the department could participate in the program many of the obstacles to providing services to this part of our community could be overcome. From this point, Newman contacted the South Carolina Association for the Deaf and learned of a cooperative effort between that organization and the South Carolina Pioneers.

The South Carolina Pioneers is an organization of Southern Bell Telephone employees who have twenty or more years of service with the utility. These people use their communication expertise to develop and promote programs which will improve the ability of handicapped people to communicate. At the time, this organization was donating teletype equipment to the hearing and speech impaired and to certain service organizations which had programs to provide care for these persons.

The department then purchased a coupling device from an electronics firm in California which was capable of converting tones given over the telephone lines to the teletype. These tones are then printed out. The coupler was purchased for \$158 and installed by Southern Bell.

Once installed the system works as follows:

1. The system is activated by a telephone call over a given line by either a hearing impaired participant or the police department.
2. Once the participant has dialed the call, the receiver of the telephone from which the call originated is placed in a cradle on the coupler which is mounted on the teletype machine. This activates the teletype machine.
3. Once the telephone call is received by the party called (in our case, the department), the receiving telephone instrument is placed in the cradle of the coupler, thus activating their teletype machine.
4. At this point the two teletypes are capable of transmitting and receiving messages which appear on their respective print outs and communication is possible between the two parties. Speech and hearing are irrelevant at this point and all that is needed is the ability to perform a very minimal amount of typing and read the message received.

The costs of becoming involved in this program were minimal. The Department paid a one time fee for the coupler of \$158. The teletype

machine was donated by the South Carolina Pioneers, and this organization continues to provide maintenance on the equipment without cost to the department. The only other cost to us was for a telephone line which we have designated for emergency use. Although this line is only used for teletype communications, it is a standard line and capability for voice transmissions was not interfered with.

The department published the number for this service in local telephone directories as well as with the South Carolina Phone Teletypewriter Network of the Deaf. In turn, the department posted a directory of area persons who had identical equipment. This list included North Augusta, Charleston, Columbia, Greenville and Spartanburg residents.

The department currently has communications capability with some nine persons in the immediate area who would not otherwise be capable of requesting police, fire and ambulance assistance at their homes. In addition, we can accept and send long distance requests and/or messages.

Advanced systems are marketed at present and, although the basic operation of the system has not changed over the past eight years, newer TDD models are now portable. These units can be used on any telephone, including public pay phone stations. They are lightweight, no larger than a portable typewriter, allowing the impaired absolute freedom of movement and a sense of security which heretofore was not thought possible. The average cost for these systems is around \$600.

The North Augusta Department of Public Safety is proud to be involved in this program and would encourage all emergency response agencies to give serious consideration to participation.

The North Augusta Police Department saw the lack of services to the handicapped as a problem, one to which there was a solution through the cooperation of the Telephone Pioneers and others. We are glad that we chose not to remain a part of the problem, but to become a part of the solution.

## SAFETY SAM PROJECT

By Larry R. Putnam  
Spartanburg Police Department

Traditional methods for educating pre-school and school-aged children on the importance of safety have met with some success in the Spartanburg community.

School and Police Department safety programs have made a tremendous impact on making children aware of safety, yet in 1980 there were some ten or more traffic-related accidents involving school-aged children. For a city the size of Spartanburg, which is relatively small, that number is both alarming and significant.

In order to heighten department activities in the area of safety awareness, and to better encourage children to practice safety, we began to look for more creative and innovative ways to get the safety message across. The goal was to decrease, where possible, the rate of accidents and subsequent injuries and deaths involving young people.

Until the Spring of 1980, there had been no effective means of placing safety education on a level which would allow a child to immediately identify with these efforts. A bird character, created for this purpose, has been so effective that we are willing to go so far as to say that the character, "Safety Sam," has been a "child saving device." There is no statistical data to back up so strong a statement of confidence in the program as yet. However, we believe it is working and working well. The material presented here will serve as a model or guide for departments which may wish to develop a similar safety program.

### CHARACTER SELECTION

Care should be taken in selecting the character that will be used. Remember that first impressions are lasting ones. The character in itself

can be the key to a successful program. In choosing the character, keep in mind that it should be easily identifiable, non-ethnic, colorful, have a friendly or happy appearance, and a catchy name. All of these things will attract and hold the attention of smaller children.

#### CHOOSING THE PERSON

The qualities of the person chosen for the character are a critical consideration. The success of the program will rest on his/her shoulders. This person should be creative, resourceful, patient, and have an in-depth understanding of children. All of these characteristics will be necessary for a program to be successful.

Children will try the chosen character in every aspect, and he/she should be able to handle every situation calmly and without incident.

Love for the work and the children must show through in every performance.

#### COSTUME DESIGN

Preliminary sketches of the character should be drawn. There are many factors to consider before actual construction begins.

Costume costs can vary from \$200 to \$1,000.

Mobility is extremely important. Safety Sam was constructed with this in mind.

Example: The eyeports were located and sized to give maximum vision. The wings were constructed so they could operate normally. A small slit was made in the under part of the wing, near the wrist. This aids in dressing. The suit should be designed to make running, sitting or lying down comfortable. Footwear should conform to the character's size, but remember the larger sizes are harder to operate. Snaps were used wherever possible, because zippers may stick or break.

Size is important in character design. A very large character, with bulky appendages, may be difficult to transport, especially if the operator

wishes to dress and then go to an appointed program location. Some head designs, as in Safety Sam, may result in a muffled or distorted voice quality. If this should be the case in the selected character, different methods of voice amplification can be used. A one watt power amplifier and styrofoam speaker were mounted in the chest cavity of Sam, and these operate in conjunction with a head set. The volume control was run down the left arm, and a switch was put at hand level for easy volume adjustment. When designing the PA system, keep in mind that it must be removed for cleaning of the suit.

Because perspiration and frequent use are important considerations, the suit should be constructed of a durable, easy-to-clean fabric.

Heat is a factor to be aware of in costume design. Remember, if the design covers a large area of the body, the temperature inside the suit will rise very quickly. Most programs will be conducted inside, and usual building temperatures are from 70° to 80°. Due to your character's activities, the inside suit temperature may reach well over 100 degrees.

#### PROGRAMS AND PROPS

Programs should be designed with the age of the children in mind. Presentations should be fun as well as educational. Remember, the younger child's attention span is short; therefore, a program embodying three or four brief lessons is much more effective than a longer program covering only one topic. Many props can be hand made. These help the character to put his safety points across.

Small children scare easily, so getting too close or moving too fast can have devastating effects on the program.

At the beginning of every program, the Safety Sam theme song is played. This light jingle is used to announce the arrival of Safety Sam. It helps to lighten the mood and to let the children prepare for Safety

Sam's entrance. Costs on this musical production can vary from \$0 to \$500. Program scheduling is also very important. A 30 minute program can be very exhausting, because of the heat, weight of the suit, and the high activity level. In light of these factors, Safety Sam does no more than three shows per day.

#### SPONSORS

Letters were sent to businesses in the community, requesting donations of funds for the Safety Sam program. If your department budget is not set up for projects of this magnitude, sponsors may be a good source of funding.

#### MEDIA

Use of tv and radio public service spots. Write 15, 20, and 30 second commercials on safety. Short tv spots can also be used and can be extremely valuable in building a community identity for the character, especially in the beginning.

#### KICK OFF PROGRAMS

A program designed to premiere your character is a good idea. This event can be coordinated with all elementary schools and kindergartens. Town officials and dignitaries will add a special touch to this affair.

#### MEMORABILIA

At the end of each program, Safety Sam gets everyone to raise his right hand and repeat after him, "I promise to be safe and help my friends to be safe." This makes everyone an official member of the Safety Bunch. The junior police award is then given. This gives the children something to remember him by. Leaving something like this after each performance is always a good idea.

For further information, please contact:

Officer Larry R. Putnam  
Spartanburg City Police Department  
P.O. Box 546  
Spartanburg, SC 29304  
Telephone: 596-2096

#### APPENDIX A



# SPARTANBURG CITY POLICE DEPARTMENT



**JUNIOR**

**POLICE**



APPENDIX C



**The City of Spartanburg  
Police Department  
presents —**

*Safety Sam*



APPENDIX D

The City of Spartanburg Police Department offers the community an exciting new approach to teaching young children safety and Police/Community Relations.

"Safety Sam", a six foot, bright blue bird, equipped with his own theme song and safety tips, is available to visit schools and community groups upon request.

The bird's personality is that of Officer Larry Putnam. Officer Putnam's total interest is teaching small children to practice safety. Safety Sam's performances are high spirited and utilize many props that young children find easy to recognize.

Emphasis is placed on street safety, general safety in the home and school, poison substances, as well as other safety categories.

This program is aimed at kindergarten through third grade and is a free community service. Anyone wishing to invite Safety Sam to take part in school or neighborhood programs should call 596-2035.

The services of Safety Sam can be utilized in many ways. Programs can be planned with Safety Sam in mind; he can be a featured guest during a planned program, he can simply be asked to visit a group of children. 20 or more children should be in attendance.

Plan a program for Safety Sam or arrange to have him visit today.



# Safety Sam Coloring Contest

**This Award for Excellence  
is presented to**

NAME \_\_\_\_\_

SCHOOL \_\_\_\_\_

DATE \_\_\_\_\_

GRADE \_\_\_\_\_

*W. C. Bain Jr.*

Chief W. C. BAIN, Public Safety Director

*Cheryl Harleston*

CHERYL HARLESTON, Community Relations Director

*Safety Sam*

SAFETY SAM

*W. H. Carstarphen*

W. H. CARSTARPHEN, City Manager



83189

CRIMS  
CRIME RECORD INFORMATION MANAGEMENT SYSTEM

By Margaret Becker  
Sumter County Police Department  
and  
Sumter County Sheriff's Department

The Crime Record Information Management System was developed through the joint efforts of the Sumter City Police Department and the Sumter County Sheriff's Department. Throughout the development, the approach has been that of shared information. It is essential that each of the agencies maintain its own information separately for statistical purposes. However, both agencies required a common data base for tracking crime patterns or trends across jurisdictional boundaries.

Initially, Sumter Chief of Police L.W. Griffin and Sumter County Sheriff Hazel Reeves set up a committee composed of representatives of both departments. The committee determined both the broad and specific requirements of the system. The broad requirements were:

- A. Provide immediate information to the officer in the field on warrants, stolen property, address index, master name file, and incident information.
- B. Maintain information from multiple jurisdictions in a common data base, as well as supply separate statistics for each jurisdiction.
- C. Provide the ability to do detailed analysis of MO's and crime trends, generate a list of possible suspects, as well as periodic statistical analysis of a particular crime type or area.
- D. Develop information for use by management for immediate operational requirements, evaluation of personnel, and for use in developing mid and long term tactical decisions.
- E. Supply specific support requested by Crime Prevention, Metro Drug and Investigation.

Working with these broad guidelines as a basis, the committee began defining the files and the information to be contained in them. This

second stage required a great deal of cooperation and compromise. The population served by the city is a high density urban area, while that served by the county is primarily scattered and rural. Although there were many common informational needs, the diverse populations served also required separate informational areas for each agency. As a result, the files were designed with both required and optional information. The common portion of the data base is built on the required information and the optional fields have been used by each department to tailor the system to particular needs.

CRIMS has been structured so that each function of the system is independent. Currently there are fourteen interrelated files.

- |                         |                           |
|-------------------------|---------------------------|
| 1. Warrants             | 8. Suspect File           |
| 2. Stolen Property      | 9. Property Loss File     |
| 3. Owner ID Number      | 10. Arrest (Booking) File |
| 4. Calls For Service    | 11. Traffic Accidents     |
| 5. Address - Look-Up    | 12. Drug Traffic File     |
| 6. Microfilm File       | 13. Officer Work Load     |
| 7. Incident Report File | 14. Warrant Location      |

These files can be used together, in any combination, or separately, by divisions of either department. The City is the primary user of the Traffic Accident File, the County the primary user of the Warrants File, and the Metro Drug Unit will be the only user of the Drug File. Currently, the County makes use of the capability to keep track of not only the reporting officer, but also the investigating officer. Statistics can be produced for the County on the total number of cases each officer has for investigation, the length of time he has held them, and the disposition of all of his cases. At present, the City is not using this option. Since both required and optional elements are always present in the common data base, both departments can include functions as they are needed.

The software has been designed to be used either in a centralized environment, with data being entered and retrieved from one central point,

or in a distributed environment by those who use or generate the data. We are using the distributed approach. Calls for service are entered by the Dispatchers from the Communications Room; traffic accidents are entered by a Records Clerk; and warrants by the Warrants Department. The stolen property, additional suspect information, and property loss can be maintained by the secretaries in City and County Investigations. To maintain a consistency in coding, offense reports, suspect information, and bookings for both departments are entered from one central department - Crime Analysis. The standards used to code the reports for entry into the computer are those established by SLED. Data verification, or quality control, is run daily on data entered by all departments.

To permit the use of a distributed approach, data entry and searches are structured so that clerical help, line officers and dispatchers can operate the system. To enter new data into a file or update a previous file, the system provides a "user-friendly" format of "fill-in-the-blanks" screen display. During entry, certain fields are required. The user must enter data in order to proceed. To economize on space whenever possible, data elements have been assigned a numeric code. This code is then verified and accepted or rejected through the use of extensive computer edits. After the data has been verified, the literal translation is displayed on the screen for a final verification by the operator.

Whenever possible, the computer has been used to replace entry and editing that would normally be done by a human operator. Three of the main files are generated automatically from data entered in other files.

- A. Each time a Call For Service is entered, the Address Index (or Look-Up) is automatically updated.
- B. Entry of an individual's name in the Offense, Arrest or Traffic File updates the index of reports on Microfilm File (Master Name Index).

- C. Entry of a officer number in any file updates the Officer Work Load File.

In addition, data entered in one file may update information previously entered in other files. Such functions include:

- A. A Booking Report automatically clears out the Related Incident Report and inserts the date of the booking.
- B. Entry of a court disposition to the Arrest or Booking File updates the Officer Work Load File.
- C. Stolen and recovered property value totals are updated by any entry in the Property Loss File.

Report files are built by the computer for such statistical reports as:

- A. Response time analysis.
- B. Calls distribution by shift and day of week.
- C. Status of calls.
- D. Breakdown of crimes by premise type.
- E. Breakdown of crimes by all time elements (day, hour, shift).
- F. Conviction rate.
- G. Race/age of victims/offenders.
- H. Monthly summary of Part I crimes broken down by patrol area.

In addition, the files are designed to permit MO and Crime Trend

Analysis which will:

- A. Establish all or selected crimes associated with an individual. In addition his current address and physical description will be printed out. This report can also be used to create a temporary criminal history on an individual.
- B. Establish all individuals associated with a particular:
1. Crime
  2. Premise type
  3. Entry/exit location
  4. Weapon type
- C. Establish relationship between a particular area and vehicle.

Further, since all files include

1. Jurisdiction
2. Patrol area
3. Grid or census track
4. Specific street address

it is possible to track a particular crime type through a neighborhood or area even if part of that area is in the City and part is in the County.

The following sections describe the files in the system and the type of reports available from them.

1. The Warrants File has been designed to provide immediate 24-hour on-line access to warrant information. Information is available by individual name or by warrant number. The majority of inquiries are placed by dispatchers in response to radio requests by officers in the field. This capability:
  - A. Provides the officer in the field immediate information on both outstanding and served warrants on an individual.
  - B. Decreases officer down-time by eliminating time consuming hand searches of records.
  - C. Decreases the amount of time the individual is detained if no warrants are outstanding.

Management reports are available by crime type, officer and/or division serving the warrant, issuing magistrate, and by those warrants received from out of county or sent out of county.

2. The Stolen Property File has been designed to provide immediate 24-hour on-line identification of stolen property. Information is available by property type and brand name (i.e. Television - RCA). The majority of inquiries are placed by dispatchers in response to radio requests from officers in the field. This capacity provides:
  - A. Immediate listing of property type and brand name listed either as stolen or recovered property.
  - B. Identifying numbers (serial, model, owner ID).
  - C. The case number and officer associated with the stolen or recovered property.

Management reports are available by geographic area, property type, and officer.

3. The Owner Identification File provides 24-hour on-line access to name, address and phone number associated with a given number. The owner ID numbers are assigned by the Metro Crime Prevention Unit to aid in

identifying and recovering stolen property.

Management reports are available by geographic area and individual name.

4. The Calls For Service File provides 24-hour on-line access to calls received in dispatch. Dispatchers enter the calls into the computer as the calls come in. The cards used by dispatch are prenumbered. The numbers on the card become the case number assigned to the Incident Report, Booking Report and Stolen Property Report. This consistent numbering system traces how the department (including dispatch) has handled a case. It also provides us with the capability of quickly developing complete data on all phases of a case for use in court, investigations, and in responding to inquires from citizens.
5. Information on violent crimes is entered automatically in an Address File. The Calls For Service and Address File provides us with the capability of:
  - A. Identifying a call and it's related information from the address alone.
  - B. The Address File can provide:
    1. Listing of all occurrences at a given address
    2. All addresses with 3 or more occurrences within the last 90 days.
  - C. Statistical summaries of
    1. Response time
    2. Status of calls
    3. Geographic distribution of calls
    4. Time distribution of calls

In addition the Officer Work Load File is updated by each call to show first, second and third responding officers.

6. The Microfilm Look-Up File provides immediate 24-hour on-line listing of all Incident Reports, arrest, and traffic accidents associated with a given name. Information available includes complete name, case number, date of occurrence, status, and location of complete

record on microfilm.

7. The Incident Report File provides on-line information on an incident.

This file includes comprehensive information

1. Address of occurrence
2. Complainant
3. Vehicle involved
4. Weapon involved
5. Premise
6. Methods of entry/exit
7. Geocodes
8. Officers involved with the incident
9. Status (active, cleared by arrest, etc.)
10. Related cases

This file is used to generate a daily recan or "hot-sheet" of crimes for:

1. A given period.
2. A given area.
3. A given premise type

In addition, this file updates the Microfilm Name Look-up and the Officer Work Load. This file works in conjunction with the Suspect and Property Loss File to provide a detailed description of the incident. Each of these files can be updated by secretaries in City and County Investigations as new information is developed.

8. The Suspect File provides on-line information on suspects. The file includes complete physical description, address, name, and aliases.
9. The Property Loss File provides information on stolen and recovered property for each case. The total value stolen/recovered and the percent of recovery are updated with each entry.
10. The Arrest File provides on-line information on arrests. This file includes comprehensive information on:
  - A. Person Arrested
    1. Name and alias
    2. Physical description
    3. Social Security Number

- 4. Address
- 5. Fingerprints

- B. Address of Arrest
- C. Status of Case in Judicial System
- D. Arresting Officer

This file also updates the Microfilm Name Look-Up and the Officer Work Load Files. When used with offense, property loss, and suspect, reports can be generated to provide:

- A. A complete criminal history for an individual - including those cases where he was a suspect, but there was never enough evidence for an arrest. Included in the report is a complete physical description.
- B. A list of individuals associated with a particular crime.
- C. Statistical information on how officers are handling their cases.
- D. A list of cases pending before the court and the officer who made the arrest (or investigations).
- E. Uniform Crime Report - This report is generated along the format and guidelines provided by SLED.

The Arrest File also provides the ability to suppress the printing of juvenile names on reports.

- 11. The Traffic Accident File provides on-line information on accidents.

The file includes information on:

- A. Names of drivers
- B. Vehicle types
- C. Vehicle and property damage
- D. Address of occurrence (including intersecting street)

This file also updates the Microfilm Name Look-Up and the Officer Work Load File. Reports can be generated to provide:

- A. Statistical summary of all on and off-street accidents by:
  - 1. Total number of all accidents
  - 2. Time or day of week
  - 3. Vehicle type
  - 4. Location
- B. Statistical summary of injuries, deaths and property damage.

- 12. The Drug Traffic File provides the Metro Drug Unit with the capability of identifying major suppliers by:

- A. Name or alias
- B. Physical description
- C. Vehicle
- D. Drug type

This file is a limited access file available only to the Drug Unit.

Access is through a series of passwords supplied by the Drug Unit and changed on a random basis.

- 13. The Officer Work Load File provides information on:

- A. Activity of each officer
- B. Status of cases assigned to each officer

This file is generated automatically from Calls For Service, Incident File, Arrest File and Traffic File.

The flexibility provided by the required and optional fields make it possible to tailor the software to agencies' specific needs. To date the system has been (or is in the process of being) transferred to two South Carolina agencies, one in West Virginia and one in New Jersey. It is under consideration by agencies in Ohio, New York, New Jersey and Florida.

A large measure of the success of the Sumter project must be attributed to Chief Griffin and Sheriff Reeves. From the onset of the project, they provided the commitment, flexibility and support necessary for the development of a computerized information system. They have made available, on an on-going basis, people from various departments to aid in developing the system.

In addition, they have initiated departmental changes in support of the project. The primary changes were those of using dispatchers to enter the calls for service cards at the time of the call and in using pre-numbered cards in dispatch and in assigning that number to all related reports.

(The use of this uniform numbering system is being adopted by agencies in West Virginia and New Jersey.)

Our approach to shared information has given us a flexible and comprehensive storage, retrieval and analysis of records. Future growth is assured through the use of the interrelated core design. The use of both required and optional information allows multiple agencies to share a common data base while tailoring it to individual needs. The CRIMS system developed in Sumter has an excellent potential for transferability to other small to mid-size agencies with similar needs.

## BEAUFORT BABY-SITTING CLINIC

By J.L. Altman Jr., Chief  
Beaufort Police Department

### INTRODUCTION

A new public safety program was introduced in Beaufort in the fall of 1980. It is co-sponsored by the Police Department and Recreation Department.

Due to the economic situation in the country today, mothers are having to seek work to help support the family. In Beaufort County children as young as seven years of age are required to do full-time baby-sitting. The clinic is an effort to train children to do the best job possible.

### THE PROJECT

The baby-sitting clinic is an eight-hour course, offered in one and one-half hour segments two nights a week. The sessions are designed with a fast-moving, full schedule to hold the attention of the younger participants. It is free and open to boys and girls ages 10 to 18 (though some of the youths attending were nine-year-olds).

Instructors include a physician, emergency technician, law enforcement personnel, firemen and a member of the drug and alcohol commission.

Courses include basic child care for small children, including feeding, bathing, safety (babies in cribs, toddlers about the home and in regular beds, diapering, toys, highchairs, doors/locks, stairs, pins, small objects and pets.)

Instruction on use of the phone in reporting emergencies to police, fire, ambulance, family doctor, poison, etc. A list of the telephone numbers is provided.

First aid is taught by an Emergency Medical Technician. Emergency

procedures are given for choking, cuts, bleeding, burns, mashed fingers, animal bites, convulsions, fevers and drowning.

One evening the doctor talks on children's illnesses and explains recognize child abuse and neglect, malnutrition and medicines. One speaker discusses how to recognize people under the influence of drugs/alcohol and advises the participants not to accept a ride home with them. The movie "Amy" is shown.

A lecturer from the Beaufort County Mental Health Clinic instructs youth on how to react to stressful situations. A speaker from the Fire Department advises them on what to do when fire is discovered in the home.

Graduation certificates are awarded and signed by the Chief of Police and the City Recreation Director.

The program was well received both by parents and organizations in the community. There have been requests from churches and schools to hold classes for them.

It has also reached children who are baby-sitting and have had problems and allowed these sitters to receive help and counseling.

The program provides trained baby-sitters in the community and improves public safety. If one child's life can be saved by this free program, our efforts will not have been in vain.

CITY CENTER SURVEY

A Joint Project Of:

The City of Columbia  
Columbia Police Department  
Downtown Action Council and Club  
U.S.C. College of Criminal Justice

Authors: Dr. James G. Fraser and Dr. Thomas Cook  
Data Processing: William Lamprey

INTRODUCTION

The Downtown Action Council (an affiliate of the Greater Columbia Chamber of Commerce) contacted the Columbia Police Department in April, 1980, about the conduct of "an informational survey to help identify specific problems". The Department asked The College of Criminal Justice, U.S.C. to join these discussion, and a statement of objectives was callaboratively developed. The purpose of the survey, it stated, would be:

- To assess the safety and security of the Downtown area as perceived by persons who work or live there;
- To establish the pattern of activity of Downtown employees, and to attempt to identify aspects of the Downtown area which negatively affect them;
- To develop the data necessary to consider the following questions:
  - (1) How perceived safety/security compares to the frequency of crimes reported to the police;
  - (2) Whether law enforcement resources should be deployed differently to improve actual/perceived safety in the area;
  - (3) Whether other conditions in the Downtown area need attention, in the view of persons who work or live there.

The experience of the Police Department, and its incident records established basic framework of the survey. The College designed the questionnaire, which the City printed, and the Universitys' data processing services managed the mountain of resulting data. The manpower of the Downtown Action Council distributed and recollected the survey forms and prompted the cooperation of all downtown business.

#### CHARACTERISTICS OF RESPONDENTS

The City Center Survey was administered in the late fall of 1980. Collection of responses continued into the spring of 1981, and analysis of the data was completed in June of 1981. The survey questionnaire consisted of 71 questions.

A serious effort was made to reach all persons working or residing in the area bounded by Assembly, Sumter, Gervais, and Elmwood streets. A total of 2476 valid responses were received, which is a sufficient number to suggest that the result at the time of the survey adequately represented the target group.

Approximately 60% of the respondents were female, and nearly 90% were white. Their median age was 33. Typically they were longtime Columbia area residents who had worked Downtown for a number of years. About 75% described themselves as employees, while less than 25% were owners or managers. Nearly 60% worked in professional or financial services. Another 20% were in retail sales and 16% were in government work at various levels.

The respondents typically worked a standard 9-to-5 day, and a large majority commuted to work by car. Their workday was usually interrupted only by lunch, business-related contacts, and incidental shopping or other small errands. They appeared to have well-established daily routines and did not spend extra time Downtown either before or after work.

#### SURVEY TOPICS.

The survey attempted to characterize the attitudes and opinions of respondents in five major areas: anxiety/fear of crime; assessment of police performance; adequacy of employer crime prevention efforts; traffic and parking problems; and general perceptions of the Downtown area. The response patterns and the implication of these results are discussed seriatim below.

#### ANXIETY/FEAR OF CRIME

Only a small minority of the respondents indicated feeling unsafe or insecure Downtown. The only serious crime that respondents both feared and thought rather likely was robbery. Other serious crimes such as personal or sexual assault were perceived as being quite unlikely. There was little concern about shoplifting or employee theft.

On the other hand, there was considerable concern about minor nuisance-producing behaviors such as loitering or harassment. These behaviors were also perceived as being fairly likely to occur in the Downtown area. In a similar vein, there was widespread concern about vandalism against automobiles.

#### ASSESSMENT OF POLICE PERFORMANCE

Respondents were asked to assess aspects of the performance of the Columbia Police Department: protection of workplaces; effective handling of security problems, prompt response to call; and helpfulness in service roles. In each case the response consisted of agreeing or disagreeing with a statement describing police performance in a positive way, e.g., "The police respond quickly to calls." Agreements outweighed disagreements in all categories by large margins of 3-to-1 or more, sometimes approaching 4 or 5-to-1.

Males rated police performance most highly. Females (and especially black females) were less inclined to do so. But responses from all groups clearly favored the police.

This strong vote of confidence given to the Columbia Police Department is compatible with the relative lack of uneasiness about crime reflected in the results described in the preceding section.

#### ADEQUACY OF EMPLOYEE CRIME PREVENTION EFFORT

At the same time, it is clear from the survey that Downtown employers could do a great deal more in the area of crime prevention. Although a slight majority of respondents found crime prevention efforts "adequate" at their workplaces, employees frequently found crime prevention measures less adequate than owners/managers did, and they often had limited knowledge of what owners/managers were doing to prevent crime. Nearly 40% of the respondents reported an absence of crime prevention training or a lack of specific information about security precautions at their workplace.

This is therefore an area where more careful planning and training should be done. Closer cooperation between owners/managers and the Police Department could not only help prevent crimes, but also increase the objectivity of employees' already constructive attitudes about crime and the police.

#### TRAFFIC AND PARKING PROBLEMS

With the large number of respondents traveling to work by themselves in personal cars, there was an understandable concern about parking convenience and vehicle safety/security Downtown. A large majority of respondents either already did or would have been willing to pay a monthly charge for reserved parking. However, general fear of vandalism against cars extended to cars parked in garages as well as cars parked on the street.

There was some tendency to view the areas frequently traversed by foot between parking places and workplaces as unsafe or undesirable areas, especially when they were on Assemble Street. This may be related to the concern about harassment and to the tendency to leave the Downtown area at the same time that other workers do.

Optimal length of parking meters and strictness of enforcement were topics of some disagreement between employees and owner /managers. Employees quite naturally favored longer meters and less strict enforcement. However, it is not certain that shorter meters and stricter enforcement could do very much to stimulate business Downtown. These steps may merely encourage meter feeding by employees.

#### GENERAL PERCEPTIONS OF DOWNTOWN AREA.

Respondents as a group had no particular complaints about the Downtown area. They not only tended to feel safe and secure there, but also found the general arrangement appealing and attractive. The only specific Downtown trait disliked by more than 25% of the respondents was the early closing hours.

On the other hand, the respondents typically found shopping malls at least as appealing as the Downtown area and somewhat more convenient. Convenience of parking was seen as an especially attractive feature of malls. But it is likely that numerous respondents were forced to shop at malls simply because Downtown shopping may not suit their busy daily schedules, particularly at the beginning or end of the day.

#### GENERAL CONCLUSIONS AND RECOMMENDATIONS

The City Center Survey yielded no great surprise, but neither did it merely confirm the obvious. In addition to helping explain why patronage of some Downtown businesses is suffering despite widespread positive feelings about the safety, security, and general atmosphere Downtown, it also suggested several constructive courses of action.

In the areas of safety and security, the survey suggested the implementation of more crime prevention planning and training, especially for the

benefit of employees. This should be a fruitful avenue for cooperation between owners/managers and the Police Department.

The survey did not specifically address the viability of the City Center as a retail business location, but the results can be usefully considered from that perspective. First, it does not appear likely that much of an increase in patronage from Downtown employees can be expected, as their schedules seem to be well established. Secondly, fear of crime would not appear to be a deterrent to shopping Downtown, but it is likely that the places City Center workers find distasteful while walking from parking areas would be equally offensive to potential shoppers. And the expectation of observing loiterers and experiencing verbal harassment reported by workers (particularly women) would certainly be sufficient to repel some potential customers from the area. Freedom from these annoyances offered by adjacent parking in supervised garages was strongly endorsed by employees and probably would be even more attractive to shoppers.

The problem of loitering and congregating near businesses needs to be addressed through novel design approaches by building owners and merchants. While the police can intervene in cases of illegal behavior, they must not infringe on the rights of any law-abiding citizen. Therefore, seeking ways to voluntarily reduce loitering is the best way to solve this problem.

The Downtown area is clearly evolving toward an even heavier concentration of financial and professional service establishments or offices ancillary to government, rather than retail sales. Long-range planning for the City Center should give careful consideration to preserving the sense of safety and security which now exists, and take creative steps to correct the sources of dissatisfaction or concern through appropriate public or private channels. Additional research should be done to determine

what goals and expectations can realistically be set for the Downtown area.

#### EPILOGUE

Subsequent to the release of the survey results, all three of the participating organizations have utilized the results. The Department has found the survey helpful in injecting greater realism into debate of discussion of the downtown area. The DAC has found the results useful in urging its members to consider methods to improve the City Center through positive efforts. The College is currently using the results as a basis for additional research by graduate students to improve knowledge of what creates perceptions of danger or safety. The Complete compilation of numerical data from the City Center Survey exists in tabular form and may be obtained from the

Office of Agency Research and Service  
College of Criminal Justice  
University of South Carolina  
Columbia, South Carolina 29208  
Phone: 777-7097

please allow approximately 10 days, as copies are made as requested. OARS / College of Criminal Justice is prepared to assist a small number of other departments in South Carolina in the conduct of similar surveys.

MODIFIED PATROL STRATEGIES  
By Roger E. Poston, Chief  
Florence Police Department

DESCRIPTION OF THE PROBLEM

Since late 1979 the Florence Police Department has faced steady curtailments in its gasoline allotment due to budgetary restraints imposed by the city. As a result, the Department has had to adjust its traditional method of random patrol.

At first, officers were required to park their vehicles for a portion of an hour unless on call. This worked a hardship, since weather conditions sometimes made it necessary for the officer to idle the car for his comfort.

As budgetary conditions became more stringent during 1980, other means were sought to meet the problem. Certain routine services such as money escorts and assistance to the Salvation Army were discontinued. The number of patrol units on the 7 a.m. to 3 p.m. shift was kept to a minimum. The Department began shifting to compacts and even a subcompact patrol vehicle. The communications center began an intensive screening of calls for service and attempted to handle calls which didn't require an on-scene investigation by phone. Two down-town walking beats were reinstated. These have now been replaced by the use of a Cushman Three Wheeler. Also, three police-type motorcycles were purchased and the previously disbanded Traffic Unit was reactivated.

POSSIBLE SOLUTIONS

The next step was for the 7 a.m. to 3 p.m. shift patrol units to park their vehicles at the district fire stations and to wait inside unless on call. This eased the gas shortage problem but created others. First, the community soon noticed the lack of daytime patrols. Also, the previously pro-active patrol officers became quickly disenchanted with the lack of

activity. This called for close scrutiny by the Department.

Several possible courses of action were considered. First, we could try to curb our routine patrols on one shift only - the 7 a.m. to 3 p.m. shift. Previous experience had shown that limitations imposed on only one shift would provide the necessary savings in gas. We also found that over 52% of the residential house-breakings were during the daylight hours. Also, the Neighborhood Watch Programs were rapidly becoming more important, as the number had more than doubled in the past year in the city.

MODIFIED PATROL

With all this in mind, a new plan for patrol was instituted June 1, 1981. This plan called for officers on the 7 a.m. to 3 p.m. shift to park their cars at preselected sites in their zones and to continue their patrol on foot, returning to their cars to respond to calls. The sites selected for foot patrol were primarily the downtown district, shopping centers, city parks and apartment complexes. These sites were selected on the basis of the pedestrian traffic, incidence of criminal activity and feasibility of foot patrol. Officers were encouraged to meet with the public whenever possible. Patrol units were furnished with crime prevention, bicycle safety and related literature to distribute to citizens and children they encountered. Officers were instructed to visit merchants, recreation areas, community centers and similar locations to contact citizens.

It is hoped that increased police-citizen interaction of a positive nature will improve community relations. As in the Team Police Concept, the idea was to move the patrol officers and the citizens closer together. The benefits should be long-term. Thus far, the program has won public acceptance and appreciation. Cooperation and trust between both the police and the citizens should grow. Another anticipated benefit is the reduction of daytime residential break-ins and larcenies particularly during the

summer when such incidents increase.

As this program has been in effect only a short time, it is not possible to totally evaluate its success or failure. At a time when the Florence Police Department must seek new procedures to meet new demands, it appears that we are at least on the right track.

#### OPERATION 'BITE'

By Spencer Guerry  
Georgetown Police Department

The basis for effective crime prevention is that the citizens of the community, who are the potential victims, must initiate action to reduce the opportunity for a crime to occur. Likewise, when a crime does occur the citizen should report the crime and, where applicable, aid in the apprehension and prosecution of the criminal. To further stimulate this needed citizen involvement, the Georgetown Police Department began "Operation BITE" on May 1, 1981.

"Operation BITE" is an anonymous crime reporting system utilizing an automatic telephone answering device. Citizens call in with information, using our special telephone number, 527-BITE. The telephone number suffix, "BITE," comes from the National Council on Crime and Delinquency (NCCD) and the National Ad Council's "Take a Bite Out of Crime" media campaign.

In Georgetown, we felt the tie-in with the national "Take A Bite Out of Crime" campaign would reinforce to the public "Operation BITE" and our crime prevention program. Additionally, we could utilize the advertising aids offered by NCCD and the Ad Council with minor modifications, thus reducing expenses. For example, a local billboard company agreed to display "Operation BITE's" telephone number on the "Take A Bite Out of Crime" billboards in Georgetown.

Other items to be used are free camera-ready advertisements for publication in newspapers and magazines. These can be modified to suit the local needs, as can public service radio spots available from NCCD and the Ad Council.

The operating procedures are as follows: Citizen calls in with information, and this action activates the "message received light" on the

device. The message tape is reviewed daily by authorized police personnel to determine if a message has been received. A written log is kept of all valid information that is received. The log contains the date calls were received, contents of the calls, what member of the police department received the information and the date.

An important point that is stressed to the public is that individuals do not have to identify themselves and that the information received is kept confidential.

The cost of initiating such a program as "Operation BITE" is minimal. The only equipment needed is an automatic telephone answering device and a separate in-coming telephone line. The answering device was purchased locally for \$176, and will record an incoming message up to three (3) minutes. One problem with the device is that the outgoing message capacity is limited to approximately eighteen (18) seconds, and this is not enough time to adequately explain the service to the citizen calling.

The other costs incurred have been in advertising. While the outdoor billboards were free, the city did have to pay for the printing of the telephone number that is placed at the bottom of the billboard. Also, a number of bumper stickers were printed with the number 527-BITE and McGruff, the Crime Dog. Finally, business cards are to be imprinted with Operation BITE's telephone number and other information, which officers will distribute to the public.

The operation would not be a reality if not for the cooperation of other organizations in the community. General Telephone and Equipment (GTE) issued the requested telephone number. Also, they published the number inside the front cover of the telephone directory along with local emergency numbers as well as in two other directory locations.

Peterson Outdoor Advertising has been very helpful with providing

the billboards. They have displayed six signs in Georgetown since the program's beginning. Local newspapers and radio stations have constantly pushed "Operation BITE" in public service announcements.

To date, "Operation BITE" has resulted in one arrest which cleared up two separate incidents of grand larceny of autos. The stolen items were returned to the owners, and restitution was made for damage to one auto. Other calls have also yielded information which is still being investigated.

Important as the future arrests and convictions to be made from "Operation BITE" are, equally important is the growing awareness of citizens of their role in crime prevention and control. The public can no more place sole responsibility for crime control on the police. Local citizens are being educated to the idea that they must help prevent crime and, when a crime does occur, to aid in the apprehension of the criminal by providing needed information to the police.

For additional information, contact Spencer Guerry, Georgetown Police Department, (803) 546-4141.

## DEVELOPMENT OF AN ANNUAL REPORT

By Johnny Mack Brown  
Greenville County Sheriff

### INTRODUCTION

During 1977, the Greenville County Sheriff's Department began searching for methods to improve internal and external means of communications.

After extensive examination, a system was developed with a two-fold purpose. First, an internal publication was developed and titled "Command Staff Handbook." This handbook consisted of crime statistics, fleet accident rates, clearance rates, salaries, patrol districts, and budgetary information. These handbooks were issued to all supervisors to facilitate the flow of information to all department members. To have well informed department members is a prime concern, particularly when dealing with information generated by the department.

Once the handbook was evenly distributed, we were able to realize a second purpose. This consisted of utilizing the supervisory staff in a contact role with the public. They were encouraged to seek opportunities to address civic and community groups to discuss Sheriff's Department operation. Using their handbooks, they had a ready source of reference material and were able to respond quickly and accurately to the community's questions.

In this manner, the department began to open up channels of communication with the public.

Once this system had been in operation for approximately two years, a need was felt to expand the information and format.

### THE ANNUAL REPORT

Researching other jurisdictions across the country, an expanded format was developed, and patterned after the concept of an annual report.

Information to be published in the Annual Report was greatly increased over that contained in the Command Staff handbook, and the number of copies increased from 30 to 800.

The purpose of the expanded distribution was to allow the Department to give the annual report directly to civic groups, community groups and businesses. This greatly increased the flow of information to the public and was accomplished in an orderly manner.

The first Annual Report was published in 1980 to summarize the year 1979 from the department's standpoint. The second Annual Report was published in 1981 for the year of 1980. It contains not only crime statistics but also articles on various divisions within the Department, special operations, and an assessment of department concerns. This gives the public an in-depth view of department operations and a greater understanding of our capabilities.

As an addition to the supervisor outreach program, the Annual Report has created an interest on its own. The number of copies for 1980 was increased from 800 to 1100 to accommodate the growing demand. The Report serves as its own self contained information unit, allowing the department to communicate its yearly activities to the public and other agencies with ease.

The Annual Report is printed by a private printing company. All other work is done in-house, including all written copy, photography, and layout.

Public reception has been extremely complimentary, and every indication is that it is fulfilling its purpose.

SHERIFF'S RADIO BROADCASTS

Sheriff James R. Metts  
Lexington County Sheriff's Department

In the late 1960's and early 1970's law enforcement agencies became increasingly aware of the public's need for useful, practical information about the law in its relation to the police, on the one hand, and the citizens themselves, on the other. Through a variety of public information and public relations programs, some of the more progressive agencies began to take on an active educational role. Over the years this has become an accepted part of the police public service function, and the public now welcomes the effort of law enforcement agencies to disseminate information about law-related topics. One evidence of this is the success of community crime prevention programs or other similar attempts to reach out to the public. As a consequence, the public is more accepting and understanding of law enforcement and its problems, and is more likely to become actively involved in assisting the police in various ways. However, relatively little has been done in most localities to use the mass media to enhance and expand the educational role of law enforcement.

It was with this in mind that the Sheriff of Lexington County, Dr. James R. Metts, decided to experiment with radio broadcasts. In 1972, shortly after becoming Sheriff, Dr. Metts initiated a weekly talk show on WCAY radio. This show has continued for nearly nine years. The format of the show is open discussion and response to telephone call-ins. The length of each show is 10 - 15 minutes.

In 1981 Dr. Metts decided to expand the outreach effort by initiating additional radio broadcasts. These additional broadcasts are in a short lecture format and deal with topics of interest or importance to the citizenry in the areas of law, law enforcement, crime prevention, or criminal

justice in general. Each week there are twelve such broadcasts on WIS radio and five broadcasts on WSCQ radio. The WIS broadcasts are 90 seconds long, and the WSCQ broadcasts are 150 seconds long. The estimated audience is 20,000 or more adults per broadcast on WSCQ and somewhat higher on WIS. The broadcasts on these two stations, together may reach more than 100,000 adults per week.

Advantages of this method of reaching out to the public are numerous. The main advantage is that a large number of people are reached very efficiently and effectively, representing a broad cross-section of area residents. This provides a useful supplement to the crime prevention information that all citizens or businesses can receive in person by contacting the Crime Prevention Unit of the Sheriff's Department and requesting an on-site visit.

Requests for on-site crime prevention visits have increased considerably since the broadcasts began. Other evidence of the public's appreciation of the broadcasts has included praise from several public officials. One such instance was a letter of testimonial from State Senator Alex Sanders dated June 24, 1981. Senator Sanders wrote:

Dear Sheriff Metts:

I heard your radio program on WIS last night in which you discussed the Miranda, Escobedo, and Mathiason cases. When I first heard this program announced, I thought: "Here come another cop complaining about the law and advocating the repeal of everything from the Magna Carta to the Bill of Rights." I was wrong. I found the discussion of these cases to be excellent and completely accurate. I commend you for a job well done in rendering this public service.

Sincerely,

Alex Sanders.

The following topics were all covered on WIS radio during the first six months of the current series of broadcast:

Juvenile crime	The criminal justice system
Perspectives on law enforcement	Constitutional sources of police powers
Plea bargaining	The death penalty
Classification of crime (I)	Function of court employees
Types of police units	Gun control legislation
Apartment searches	Blue laws
Drug control laws (I)	Factors affecting the frequency of crime
The extent of unreported crime	The Bill of Rights
Child abuse	Status offenders
Public apathy about crime	The First Amendment
Confidence games	Crime and the elderly
Restitution programs	The nature of law
Phone calls by suspects and arrestees	Murder and homicide rates
Police use of deadly force	Handgun legislation
Alcohol control legislation	Noise control legislation
Illegal gambling	Drug control laws (II)
Pornography	Eyewitness testimony
Classification of crimes (II)	Shoplifting
How to make a will	Law regarding buying and selling of houses
Laws regarding contracts	Home improvement frauds
Police professional ethics	The jury system
Types of federal courts	The Fourth Amendment
Laws regarding dirt bikes	Reserve officer programs
In-service training of officers	What to do if raped

How laws change

Legal protection of mental incompetents

Legislation in relation to law enforcement

The following topics were all covered on WSCQ during a recent three-month period:

Crime Prevention tips (I)	Crimes of the future
Law enforcement, change, and progress	Public involvement and cooperation
Factors influencing crime	Laws regarding search and seizure
The Fifth Amendment (I)	Routine police stops
Police informants	Driving under the influence
Arrest powers	Charity frauds
Computer crime	Crime Prevention tips (II)
Types of warrants	Drug abuse
Auto repairs frauds	Court delays
Bonding procedures	Trial procedures
Property rights	Types of defenses
What to do if you have an auto accident	Psychiatric examination of suspects
Laws regarding slander	The Fifth Amendment (II)
Legal costs	Liability of property owners
What to do if your car is stolen	Consumer protection against faulty merchandise

In conclusion, it should be stated that this experiment in using the mass media to expand the educational role of law enforcement has been a success. However, the particular form that such programs ought to take depends considerably on the style and personality of the person involved. Other police administrators should be encouraged to experiment with whatever

media or format they find most compatible.

The script of one of the programs is offered as an example of a typical broadcast.

#### Apartment Searches

If you live in an apartment complex, a recent S.C. Supreme Court decision may interest you.

In a small town in South Carolina, police had an arrest warrant for a suspect. Police could not get anyone to come to the suspect's apartment door and could not find any sign that someone was inside.

Police persuaded the apartment manager to let them in. Officers found no sign of the suspect, but did see and confiscate some stolen goods. The suspect was later arrested. The suspect was convicted, but appealed his case, claiming that the officers had illegally entered his apartment.

The S.C. Supreme Court agreed and overruled the conviction. The Court held that an apartment manager's right to enter a tenant's apartment does not give him the right to consent to entry by law enforcement officers. The police can enter a suspect's residence only when there is reason to believe the suspect is within. The police in this instance had no such claim.

This decision does not preclude a landlord's right to enter an apartment for other limited reasons (usually noted in the rentee's contract).

(Broadcast April 2, 1981 at 10:00 a.m.)

#### PERSONNEL TESTING PROGRAM

By W.C. Bain, Jr.  
Director of Public Safety  
Spartanburg, S.C.

#### INTRODUCTION

The City of Spartanburg Police and Fire Departments are under Civil Service. When we asked the Civil Service Commissioners about developing testing procedures, they were all in favor and they met with the Selection Consulting Center representative, Kenneth Krueger and Associates. This firm expanded and improved our testing procedures to meet changes in hiring and promotional procedures.

#### PHYSICAL TESTING

The Spartanburg City Police Department's Physical Performance Test was prepared by Selection Consulting Center and the police officers themselves. This test was designed to simulate what an officer might have to do during his tour of duty.

The test is broken into 4 categories.

Number One is a 165 yard run/obstacle course to simulate chasing a suspect fleeing a crime scene on foot, running around houses, ditches, under fences, over garbage cans, and anything else the suspect may use to slow the officer down.

Number Two is a drag rescue. This simulates a situation in which an officer has come upon someone unconscious, or an object laying in the road that would weigh about 130 lbs. with the objective that the officer drag the person/object 30 feet.

Number Three is a fence climb. This simulates a situation in which an officer in foot pursuit would have to climb over a fence or a wall to continue his foot pursuit. The wall is eight feet wide, six feet high, and

**CONTINUED**

**1 OF 2**

six feet across at the bottom.

Number Four is a balance beam walk. This simulates a situation where an officer has to cross a creek or ravine and needs to be able to maintain his/her balance. This beam is ten feet in length, and four inches in width and is twenty-one inches off of the ground.

This physical performance test surprised us; some of the older officers did better than the younger officers.

#### ENTRY AND PROMOTIONAL EXAM

The written entry and promotional exam recommended by the Selection Consulting Center was adopted for use by the Spartanburg City Police Department. This test relates to what our officers must explain in their written reports and statements. This test helps us to find out if an applicant can relate to written directions and instructions, and what he will do in certain situations. Nothing in the test requires previous police training to answer correctly.

The oral interview recommended by Selection Consulting Center was adopted for use by our department. This interview involves four broad, separate steps:

1. Completely describing the job in question.
2. Gathering information and data about the applicant.
3. Evaluating and comparing applicant qualifications with the description of the job to be filled.
4. Making a prediction about the future behavior of the applicant on the job.

The oral interview helps the Civil Service Commissioners in their selection of an applicant by telling them what to look for in an applicant's answers and in his conduct as he responds.

## Problem Solving/Decision Making For Police Officers

developed by the

Office of Agency Research and Service  
College of Criminal Justice  
University of South Carolina

and the

Columbia Police Department  
Columbia, South Carolina

#### Principal Authors:

Dr. James G. Fraser and Dr. Thomas H. Cook

Project Coordinator: William Lamprey

#### Contributors:

William Lamprey  
Patricia S. Watson  
Michael Thomas

This project was funded in part by a grant from  
The Governor's Office of Public Safety Programs  
for the

Law Enforcement Assistance Administration  
Grant No. 80-035

### Introduction

There is no questioning of the value of the two categories of learning which we generally label "education" and "training."

That which we generally label as "education" has an identifiable content, consisting of the knowledge organized in various fields, such as mathematics, biology, literature and so on. Our learning from these knowledge fields, or disciplines, provides us with useful concepts that help us better understand the world in which we find ourselves. The value of this understanding is attractively described by historians when they suggest that an understanding of their subject prevents us from re-living the mistakes of the past. All disciplines make declarations of their worth, and you can entertain yourself by seeing how many disciplines' slogans you can recall.

'Training' is generally characterized as developing highly particular skills. The emphasis on achieving specific results is often a basis for asserting greater merit for training than the more nebulous "education." The promise that completion of an instructional sequence will make the trainee able to perform a particular task is thought to be highly motivating.

These two categories of learning are only a small part of the potential array, however. The work most people undertake clearly requires more than just a thorough understanding of things, and much more than the ability to perform a particular feat on command. The middle ground between these admittedly narrow definitions of education and training consists of the processes employed in selecting courses of action (from a repertoire acquired through training and experience) which seem appropriate to the circumstances (as concepts acquired through education permit us to understand it). The length of time spent in this

middle range may be quite long or very short; for want of a better name, we call it the problem - solving/decision - making process. It is the thinking which precedes action, the crucial time during which we have the opportunity to use our best understanding to help us choose the skills we will employ. It would not be very inaccurate to call it simply thinking.

It is amazing how little time is devoted to the development of well-organized patterns of thinking. Our public school days are concentrated mostly on subject learning, with little attention given, until recently, to "subject thinking." By studying a little science, for example, it was thought that our thinking would get somewhat "scientific," though how that was supposed to happen was usually unclear. Mathematics, and Latin, were promoted as methods of 'disciplining the mind,' until efforts were made to help students better understand a mathematician way of solving problems. This effort is the birthplace of "modern math." Perhaps no other event so exemplifies our lack of interest in promoting organized thinking as the present-day status of logic. Once a requirement, and a central component of required courses of study at the secondary as well as college level, it now is just an elective taught in rather esoteric fashion to students probably unable to find another course in that time period.

Training too usually overlooks the subject of thinking by beginning at the point where a particular action is called for and then preparing the trainee to correctly perform it. For the person placed in a situation where particular actions can be anticipated, or where cues to perform are clearly signalled, such training may be adequate. Difficulties develop when the situation becomes confused, the cues get contradictory, or the situation changes, making a formerly appropriate action useless.

Clearly, some situations have a higher likelihood of these problems than others. And it would be encouraging to believe that education as we know it would satisfactorily prepare us to change our reliance from inappropriate to appropriate actions as circumstances change. There is growing concern that this does not reliably occur, however, it is clear that some professional fields have worked out the relationship between training and education. The practice of medicine, fitting together a pattern of symptoms into a diagnosis leading to a treatment decision, is one such example.

With these thoughts in mind, it is interesting to think about the preparation of law enforcement personnel for their occupation, and the kinds of problems which seem most common in the field. It seems readily apparent that the problems do not emanate mainly from officers' inability to perform a particular action correctly, although such failures do occur. Instead, it appears that most problems develop from taking an action which was wrong for the circumstances. In short, doing poor thinking.

Dealing with this problem is not simple. Most people rely on thought processes that they may not even comprehend. Since few of us were overtly taught effective patterns for thinking, we have developed idiosyncratic problem-solving processes. These processes may be highly intellectual or entirely visceral; they may be objective or intuitive. Interwoven with personality, they may be too strongly ego-centered to be discussed, let alone improved. In the material which follows, we review the history of problem-solving/decision-making as a subject of study and speculation. We then offer as a model the "eclectic" approach adopted for this training. Finally, we provide a number of illustrations to suggest what good problem-solving/decision making might look like in

practice, at the line officer's level, or to show some of the content of the training program which evolved from these thoughts. A summary of recent relevant research discussing the usefulness of problem-solving/decision-making training follows these illustrations, along with some concluding remarks.

#### PERSPECTIVES ON PROBLEM-SOLVING/DECISION-MAKING: A BRIEF SURVEY

In the following narrative the term "Problem-Solving" will be abbreviated PS and will mean the process of attempting to reach a goal, resolve a difficulty, or satisfy a need by means of making a logically interrelated group or series of decisions. The term "Decision-Making" will be abbreviated DM and will mean the process of choosing a course of action from a set of alternative possible courses of action. When the entire phrase "Problem-Solving and Decision-Making" is meant, the abbreviation PS/DM will be employed.

Thinkers great and small have been wrestling with topics related to PS/DM since at least the fifth century B.C. A survey of their ideas and insights will be useful in constructing a framework for the development of an eclectic, interdisciplinary model of PS/DM.

Such a model should attempt to overcome the major deficiencies of previous theories and models, while also borrowing freely from many of them. The theories/approaches considered will be classified under five main groupings:

- A. Philosophical approaches
- B. Psychological approaches
- C. Probabilistic approaches
- D. Information/systems approaches
- E. Other approaches.

#### A. Philosophical Approaches.

The oldest explicit attempt to understand the nature of human thought is Philosophy. It is the great achievement of Plato, and es-

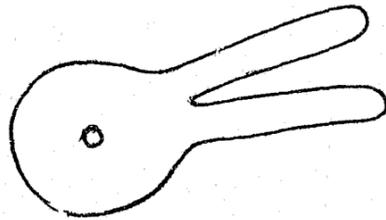
pecially of Aristotle, to attempt to organize philosophy into a coherent conceptual framework. It was Aristotle, Plato's student, who signaled the radical departure from mythology and intuitionism which has still not been fully internalized by some branches of Western culture. For Plato, intuition was supreme, and provided the very premises on which logic must operate in attempting to understand the facts. For Aristotle however, intuition became merely an aid to reason, and subordinate to logic and fact.

The subsequent history of philosophy has consisted largely of the working out of these disagreements between Plato and Aristotle. The most viable modern compromise between the two is Pragmatism. Rather than considering either the logically explained fact (Aristotle) or the brilliantly intuited concept (Plato) as the basic building block of human intellectual progress, pragmatism asserts that progress occurs through the solving of problems, which has both a factual and a conceptual component. According to pragmatism, problems are solved by generating and testing alternative courses of action, much as scientists generate and test alternative hypotheses.

#### B. Psychological Approaches.

Psychology, like philosophy, began with the ancient Greeks. Aristotle played a similar role here to his role in the history of philosophy, by organizing some previously intuitive views partly derived from Plato into a formal doctrine. The cornerstone of this doctrine was the view that certain high-level general concepts called the categories of thought are innately embedded in the human mind. Without these categories Aristotle believed that thought, reasoning, and even language would be impossible.

The search for innate concepts, thought patterns, or intellectual/conceptual structures has continued to the present day. However, modern psychology has increasingly turned away from introspective methods and toward more empirical techniques such as the direct observation of overt behavior. The price one pays by limiting oneself to this approach in the study of PS/DM is that behaviorism cannot study mental processes, but only their beginnings (stimuli) and outcomes (responses or behaviors). In studying PS/DM psychologically one must also consider such theories as gestaltism, which investigates the process of switching from one perceptual or conceptual framework to another. For instance, consider the following diagram:



What do you see, a bird or a rabbit; and how easily can you switch back and forth between the two? Can you see both at the same time? Gestaltists believe that understanding the cueing process governing the switch from one framework to another could shed considerable light on the PS/DM process.

Learning theory is another branch of psychology which offers a useful perspective on PS/DM. The challenge to learning theory will be to study not only how people learn overt behaviors, but also to discover how people learn to think.

#### C. Probabilistic Approaches.

It has been maintained that the appropriate deployment of mathematical probability theory can offer a quantitative approach to PS/DM. The first attempts to carry out this program date to the early eighteenth

century. However until the twentieth century probability theory dealt mainly with deductive problems which could be fully defined in advance and admitted of only one solution.

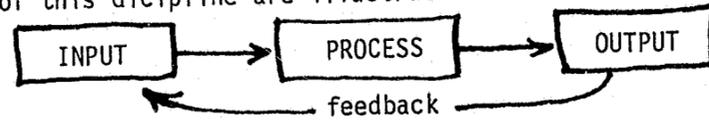
Bayesian probability theory provides one way of recognizing the crucial roles of both experience and hypotheses in the solving of inductive problems. By assigning probability estimates to hypotheses prior to testing and creating a mechanism for the variation of these probabilities as new data are discovered, Bayes provided a much more realistic model of the actual thought processes of successful human decision-makers and problem-solvers.

The twentieth century's unique contributions to the history of probabilistic techniques for PS/DM are game theory and decision theory. These developed out of the attempt to understand economic rationality as well as to formalize the thought processes involved in war games such as those constructed by the brain trust of World War II.

#### D. Information/Systems Approaches.

The twentieth century has also witnessed the rise of the digital computer, which can accomplish complex manipulations of information on a vast scale in an incredibly short time. However, the modern computer must be completely programmed in advance, and cannot operate on information that has not been entered into its mechanical "memory" in a completely clear, unambiguous form. Therefore as a decision-maker or problem-solver it can only consider hypotheses fully stateable in advance, although it can be programmed to "change its mind" very rapidly on the basis of new information. This is how the computer can "learn" to beat competent players at complex games such as chess. In addition the computer can be a valuable aid to human learners and decision-makers because of the accuracy of its "memory" and the rapid feedback it can provide.

Insightful thinking about concepts such as information and feedback has produced the modern discipline of systems analysis. The basic concepts of this discipline are illustrated in the following chart:



By linking several such loops together in chains or tree-like structures, very complex patterns of thought can be constructed. Computers could go through all the steps in these patterns with eyeblinking rapidity, while humans cannot. However, humans can be taught useful techniques of PS/DM by encouraging them to organize information into similar patterns.

#### E. Other Approaches

There are many other approaches to PS/DM. Each person develops his/her own styles and patterns of thinking. However, there are certain very basic principles and steps which must be followed by anyone who hopes to be successful in PS/DM. These are all present in the eclectic/interdisciplinary model advocated by the authors.

#### Recent Relevant Research

There has been considerable interest in the problem solving process in the past, as the Brief Survey demonstrates. In the past two decades a great deal of empirical research has been done, much of it focusing on cognitive processes (Bloom, et.al., 1956), group communication/ dynamics (Bale, Carkuff, Simon), and group decision-making. More recently, the relationship of problem-solving to physiological health has become a production line of inquiry, uniting the work on decision-making/ problem solving with the research on stress (Selye, 1956).

Certain recent occupations and projects provided opportunities for studies relevant to law enforcement. Among the earliest and most interesting of these is the manned space program, which offered unusual

opportunities to observe PS/DM under high stress circumstances. Ruff and Korchin (1964) studied the performance of the Project Mercury astronauts intensively, conducting tests that could probably not be duplicated for complexity or intensity. Based on measured performances under demanding conditions (such as simulated flight at 65,000 feet in a "surprise" faulty pressure suit), Ruff and Korchim actually noticed performance improvement. Simulation played a central role in Mercury personnel preparation and, helped to produce good thinking practice. One astronaut, using non-psychological language, clearly stated the behavior PS/DM seeks to promote:

"in tight situations you have to stop, take stock, decide what you're going to do, and go ahead and do it."

The same officer, describing the type of desired preparation prior to his flight, wanted to learn". . . a rational selection of possible courses of action. Considering these courses ahead of time diminishes anxiety," and mistakes he might have added.

The astronaut's admonishment to "stop (and) take stock" is supported by psychological research on the relationship between the speed of reactions and the likelihood of choosing a good course of action. Renewed interest in this subject is thought to have stemmed from work by W. E. Hick in 1952 (Broadbent, 1971) and subsequent important work in the sixties. Error rates, or bad decisions, were much more frequent when reaction time was short. Acting on an insufficient amount of information is thought to be the cause of the high frequency of error. It may also be that rapid decisions depend too heavily on visceral/ intuitive/emotional inputs, a dangerous dependency in the field of law enforcement.

There is a clearly evident component of creativity in problem-solving/decision-making. Limits to creativity have been given various names, and take a variety of forms. Holyman and Klein (1956) investigated the effects of self-imposed limits of attention, called "focusing-scanning." Limiting information by only looking at a relatively small number of details (the nonfocuser) usually misestimates the problem.

Field dependence-independence, studies by Witkin and his associates (1954), used tests now familiar, such as the Embedded Figures Test. "Field-dependent" people (who performed less well on this test), tended to be characterized by "passivity in dealing with the environment,... fear of their own impulses, together with poor control over them (emphasis added), and a lack of self-esteem, among other characteristics," (Torrance, 1965) not qualities generally sought in a police officer.

Torrance has examined the creative aspect of the PS/DM process extensively. He relies heavily on the dichotomous concepts of convergent vs. divergent thinking. Each has value; convergent thinking assumes a problem has a single correct solution, or best solution, or approved solution. Persons characterized by convergent thinking (Guilford, 1960) tended to be less successful at problem-solving, and inhibited particularly by fear (Dowis & Diethelm). Again, logic suggests that convergent thinking is most appropriate for certain types of tasks. Knowing when to be "convergent" would be extremely useful.

Divergence represents the opposite PS/DM approach. Divergent thinkers seek to identify a variety of "possible" solutions. It is clearly an essential attribute if one is to have choices about how to solve problems. Impulsiveness may be a characteristic of divergent thinkers.

Subsequent work by Torrance focused on evaluative thinking, necessary to the testing of alternatives. In general, these qualities of thought clearly are relevant to police work, made up as it is with wildly varying degrees of dreary routine and the totally unexpected. Recent work by Baddeley (1972) suggests that danger affects performance by focusing attention more narrowly. This could have the effect of making the person who senses danger less "realistic", therefore a poorer decision-maker. From the differences noted in individual reactions to job demands has developed the study of "ergonomic" aspects of work and productivity. As this area develops, it will move more toward the study of the psychological as well as the physiological "fit" of the employee to his job. In applying the findings of research on problem-solving to practical circumstances, the U.S. Air Force has made serious efforts. Particular attention in the PS/DM Program to the work of Klein and Weitzenfeld (1978), which sought to improve skills "... for Solving Ill Defined Problems." Designing experiences to promote the development of these skills, the authors called for more opportunities for modeling problem-solving behaviors, using analogies more effectively, and a variety of other experiences reflected in our "eclectic" model's steps.

#### Conclusion C

From the research, both historic and current, it seems useful to seek to improve PS/DM through specially designed experiences. The benefits projected seemed worthwhile. The observed results seem to bear out these projections. The value of such training in law enforcement seems obvious. It also appears that further work in this area will have important direct results:

- 1) a reduction in stress through more realistic preparation (simulation),
- 2) better "fits" between people and their jobs;

3) a clearer idea of the type of thinking that seems to make officers most productive.

The following page (91) contains material protected by the  
Copyright Act of 1976 (17 U.S.C.): Tapping System Saves Stroke  
Victim's Life, a reprinted article written by the Associated  
Press.

National Criminal Justice Reference Service

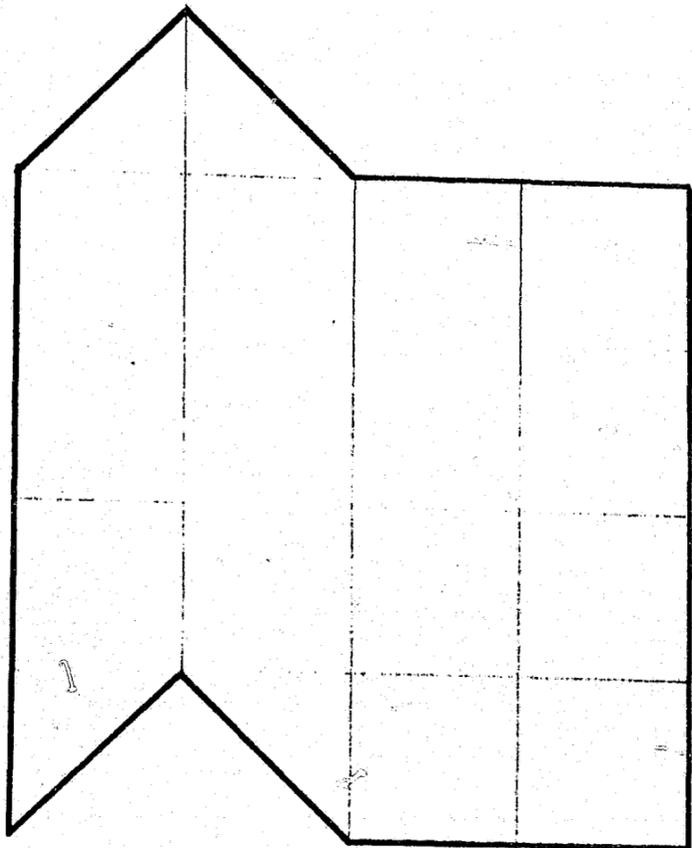
**ncjrs**

Copyrighted portion of this  
document was not microfilmed  
because the right to reproduce  
was denied.

National Institute of Justice  
United States Department of Justice  
Washington, D. C. 20531

## APPENDIX B

The figure below represents a flat piece of material. It must be cut into four exactly equal-sized pieces of exactly the same shape. All cuts must be straight lines. Based on these requirements, outline the four pieces you would make from this material.



## APPENDIX D

### THE GOLDEN BELT

Once upon a time in the ancient kingdom of Problemiã, there was a handsome young prince called Solutio. The prince was engaged to marry the fair princess Brainstorm of the neighboring kingdom of Decisia. Never having met the princess, the prince was traveling incognito to present her with a golden belt of great value.

Solutio had been on the road less than a day when he was captured by a band of brigands led by the notorious outlaw Mind Set. The brigands held Solutio for ransom and sent a messenger to the king. Meanwhile Mind Set asked the prince for a token of the king's good faith. "All I have is this golden belt," said Solutio, "and it is a gift for the fair princess Brainstorm." "Give it to me," growled Mind Set. "No," said the prince, "I'll pay you one ring of the belt every day until the ransom arrives, but then you must give all the rings back." "Oh, alright," said Mind Set, whose mind was still set on having both the belt and the ransom.

Ten days went by, and the ransom did not arrive. Now the brigands had all ten rings. But Solutio, being a clever problem solver, had made the minimum number of cuts in the belt.

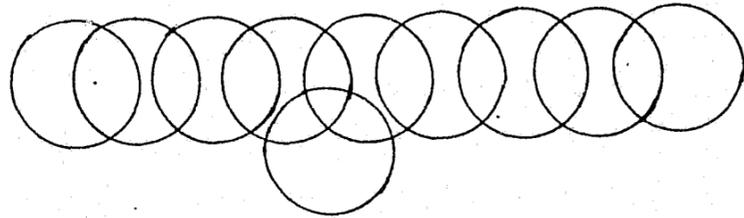
That night the king's soldiers drove off the brigands, rescued Solutio, and retrieved the gold rings. The prince easily reassembled the belt. Everyone lived happily ever after, and the golden belt is still cherished by the descendants of Solutio and Brainstorm. The story of the golden belt is still told to this day.

In order to become king of the recently combined kingdom of Problemiã-Decisia, it is necessary to answer the following question correctly, and explain the answer:

"How many rings did Solutio have to cut in order to pay Mind Set one ring per day?"

APPENDIX D-2

Could you become king of Problema-Decisia? If so, answer the question. A picture of the belt is below:



APPENDIX C

A GENERALIZED MODEL OF PROBLEM-SOLVING AND DECISION-MAKING

- 1.0. Conceptualizing the Problem
  - 1.1. Assessing the Problem
    - 1.1.1. Separating Compound Problems
    - 1.1.2. Defining/Describing Component Problems
    - 1.1.3. Prioritizing Component Problems
    - 1.1.4. Assessing Time and Resources
  - 1.2. Developing Information
    - 1.2.1. Observing Relevant Details
    - 1.2.2. Using Relevant Analogies
    - 1.2.3. Identifying Information Gaps
    - 1.2.4. Observing Subtle Clues and Cues
    - 1.2.5. Finding Patterns
    - 1.2.6. Terminating the Information Search
  - 1.3. Redefining or Redescribing the Problem
    - 1.3.1. Synthesizing Ideas and Information
    - 1.3.2. Reconstructing Events or Situations
  - 1.4. Developing Goals and Objectives
    - 1.4.1. Identifying Desirable Outcomes
    - 1.4.2. Prioritizing Desirable Outcomes
- 2.0. Developing a Plan of Action
  - 2.1. Generating Alternative Plans
    - 2.1.1. Recognizing and Minimizing Mind-Set
    - 2.1.2. Brainstorming Effectively
    - 2.1.3. Developing Preliminary Plans
    - 2.1.4. Clarifying Available Alternatives
  - 2.2. Testing Alternatives
    - 2.2.1. Recognizing Parameters and Constraints
    - 2.2.2. Specifying Criteria
    - 2.2.3. Eliminating Irrelevant Constraints
  - 2.3. Selecting Preferred Plan
    - 2.3.1. Comparing Alternatives
    - 2.3.2. Eliminating Clearly Undesirable/Unfeasible Alternatives
    - 2.3.3. Retesting Alternatives
    - 2.3.4. Selecting Preferred Alternative(s)
- 3.0. Implementing the Plan of Action
  - 3.1. Developing a Detailed Plan
    - 3.1.1. Sequencing Activities
    - 3.1.2. Establishing Check Points
    - 3.1.3. Developing Contingency Plans
    - 3.1.4. Coordinating Task Assignments
  - 3.2. Taking Action
    - 3.2.1. Following Specified Sequence
    - 3.2.2. Using Internal Evaluation and Feedback Processes
    - 3.2.3. (If Necessary) Repeating, Revising, or Omitting Steps
- 4.0. Evaluating Outcomes
  - 4.1. Evaluating Attainment of Goals/Objectives
  - 4.2. Evaluating Solution of Problem
    - 4.2.1. Determining Whether Problem was Correctly Identified
    - 4.2.2. Determining Whether Problem has Changed
  - 4.3. Deciding Whether to Re-enter the Problem-Solving Process
  - 4.4. Final Debriefing
    - 4.4.1. Conducting a Concluding Review or Overview
    - 4.4.2. Reviewing the Problem-Solving Process Itself.

A list of references follows below. Each reference is accompanied by brief background information on that particular author or source.

AUTHORS AND REPRESENTATIVE WRITINGS

1. Abt, Clark (1929 - ). 20th century American systems analyst and game/simulation expert.  
Serious Games. New York: Viking, 1970.
2. Aristotle (384-322 B.C.). 4th century B.C. Greek philosopher, psychologist, and scientist.  
Works of Aristotle, translated and edited by W.D. Ross. Oxford University Press, 1928-52.
3. Babbage, Charles (1792-1871). 19th century British mathematician, economist, and inventor.  
Charles Babbage and his Calculating Engines, edited by Philip and Emily Morrison. New York: Dover, 1961.
4. Bacon, Sir Francis (1561-1626). 16th and 17th century British jurist, essayist, and methodologist.  
The New Organon. New York: Liberal Arts Press, 1960.
5. Bayes, Thomas (died 1761). 18th century British probability theorist.  
Bernoulli, 1713; Bayes, 1763; Laplace, 1813, edited by Jerzy Neyman and Lucien LeCam. New York: Springer, 1965.
6. Beattie, James (1735-1803). 18th century Scottish philosopher and poet.  
Philosophical and Critical Works of James Beattie, edited by Bernhard Fabian. New York: Olms, 1974.
7. Bentham, Jeremy (1748-1832). 18th and 19th century British moralist and legal reformer.  
An Introduction to the Principles of Morals and Legislation, edited by J. H. Burns and H. L. A. Hart. London: Athlone, 1970.
8. Bernoulli, Jacques (1654-1705). 17th century Swiss mathematician.

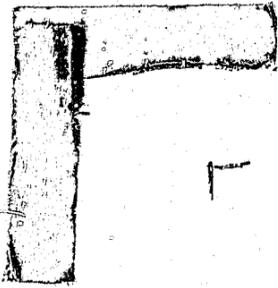
- Bernoulli, 1713; Bayes, 1763; Laplace, 1813, edited by Jerzy Neyman and Lucien LeCam. New York: Springer, 1965.
9. Bertalanffy, Ludwig Von (1901-1972). 20th century German-American biologist and systems analyst.  
General Systems Theory. New York: Braziller, 1968.
  10. Carnegie, Dale (1888-1955). 20th century American motivational expert.  
How to Win Friends and Influence People. New York: Simon and Shuster, 1936.
  11. Carroll, Lewis (Charles Dodgson). (1832-1898). 19th century British mathematician, logician, and children's author.  
Complete Works of Lewis Carroll. New York: Random House, 1939.
  12. Church, Alonzo. (1903- ). 20th century American mathematical logician.  
Introduction to Mathematical Logic. Princeton: Princeton University Press, 1944.
  13. DeBono, Edward (1933- ). 20th century British creative thinking expert.  
About Think. London: Cape, 1972.
  14. Dewey, John (1859-1952). 19th and 20th century American philosopher, psychologist, and educator.  
Creative Intelligence. New York: Octagon, 1970.  
How We Think. Boston: Heath, 1933.
  15. Duke, Richard. (1930 - ). 20th century game/simulation expert.  
Gaming: The Future's Language. Beverly Hills; Sage, 1974.
  16. Duncker, Karl. 20th century German psychologist.  
On Problem Solving, translated by Lynne Lees. Washington, D.C.: American Psychological Assn., 1945.
  17. Franklin, Benjamin (1706-1790). 18th century American diplomat, philosopher, and inventor.

- Benjamin Franklin's Autobiography. New York: Holt, Rinehart and Winston, 1959.
18. Godel, Kurt. 20th century German-American logician.  
On Formally Undecidable Propositions of "Principia Mathematica" and Related Systems, translated by B. Meltzer. New York: Basic Books, 1962.
19. Hogben, Lancelot (1895-1975). 20th century British essayist and popularizer.  
Mathematics for the Million. New York: Norton, 1941.
20. Jevons, William Stanley (1835-1882). 19th century British logician, methodologist, statistician, and economist.  
The Principles of Science. New York: Norton, 1941.
21. Johnson, Donald M. (1909- ). 20th century American psychologist  
Systematic Introduction to the Psychology of Thinking. New York: Harper, 1972.
22. Kant, Immanuel (1724-1804). 18th century German philosopher.  
Critique of Pure Reason. Berlin, 1781.
23. Klein, Gary, 20th century American psychologist.  
General Description of Human Problem Solving. U. S. Air Force, 1976 (with Julian Weitzenfeld).  
"Improvement of Skills for Solving Ill-Defined Problems". Educational Psychologist 13 (1978), pp. 31-41 (with Julian Weitzenfeld).
24. Kohler, Wolfgang (1887-1967). 20th century German psychologist.  
Gestalt Psychology. New York: Liveright, 1947.
25. Kuhn, Thomas (1922- ). 20th century American physicist, philosopher, and historian.  
The Structure of Scientific Revolutions. Chicago: University of Chicago Press, 1962.
26. Laplace, Pierre Simon (1749-1827). 18th century French mathematician and physicist.

- Bernoulli, 1713; Bayes, 1763; Laplace, 1813, edited by Jerzy Neyman and Lucien LeCam. New York: Springer, 1965.
27. Laudan, Larry (1941- ). 20th century American philosopher and historian.  
Progress and Its Problems. Berkeley: University of California Press, 1977.
28. Leibnitz, Gottfield (1646-1714). 17th century German mathematician and philosopher.  
Philosophical Works of Leibnitz, translated by George M. Duncan. NewHaven: Tuttle, Morehouse, and Taylor, 1908.
29. Locke, John (1632-1704). 17th century British philosopher and psychologist.  
An Essay Concerning Human Understanding. London: Bathurst, 1795.
30. Meadows, Dennis (1942- ). 20th century American futurist.  
The Limits to Growth. New York: Universe, 1974
31. Mill, James (1773-1836). 19th century British philosopher, psychologist, economist, and educational reformer.  
Analysis of the Phenomena of the Human Mind. London: Longmans, Green, 1869.
32. Mill, John Stuart (1806-1873). 19th century British philosopher, psychologist, and reformer.  
Collected Works. Toronto: University of Toronto Press, 1963-.
33. Moore, George Edward (1873-1958). 20th century British philosopher.  
Some Main Problems of Philosophy. London: Allen and Unwin, 1953.
34. Morgenstern, Oskar (1910- ). 20th century American economist.  
Theory of Games and Economic Behavior. Princeton, Princeton University Press, 1953 (with John Von Neumann).
35. Newton, Sir Isaac (1642-1727). 17th century British physicist and mathematician.

- Mathematical Principles of Natural Philosophy. London, 1687.
36. Peirce, Charles Saunders (1839-1914). 19th century American philosopher and scientist.  
Collected Papers of Peirce, edited by Charles Hartshorne and Paul Weiss. Cambridge: Harvard University Press, 1960-.
37. Plato (427-347 B.C.). 4th century B.C. Greek philosopher.  
The Theaetetus, translated by M. J. Levett. Glasgow: University of Glasgow Press, 1977.
38. Polya, George (1887- ). 20th century American mathematician.  
How to Solve It. Princeton: Princeton University Press, 1945.
39. Popper, Sir Karl (1902-1975). 20th century Austrian-English philosopher.  
The Logic of Scientific Discovery. New York: Harper, 1968.
40. Priestley, Joseph (1733-1804). 18th century British-American scientist and theologian.  
Autobiography. Teaneck, N.J.: Fairleigh Dickinson University Press, 1970.
41. Reid, Thomas (1710-1796). 18th century Scottish philosopher.  
Works of Thomas Reid, edited by Sir William Hamilton. Edinburgh: Maclachlan, Stewart, 1846.
42. Rousseau, Jean Jacques (1712-1778). 18th century French philosopher.  
Emile: or, On Education. New York: Basic Books, 1979.
43. Rubinstein, Moshe (1930 - ). 20th century American logician and psychologist.  
Patterns of Problem Solving. Englewood Cliffs, N.J.: Prentice-Hall, 1975.
44. Russell, Lord Bertrand (1872-1970). 20th century British philosopher and mathematician.  
Principia Mathematica. Cambridge: Cambridge University Press, 1910-1912 (with Alfred North Whitehead).

45. Salmon, Wesley (1925 - ). 20th century American logician and methodologist.  
The Foundations of Scientific Inference. Pittsburgh: University of Pittsburgh Press, 1967.
46. Simon, Herbert (1916- ). 20th century American systems analyst and economist.  
Models of Thought. New Haven: Yale University Press, 1979.
47. Skinner, Burrhus Frederick (1904- ). 20th century American psychologist.  
Science and Human Behavior. New York: Free Press, 1965.
48. Stewart, Dugald (1753-1828). 18th and 19th century Scottish philosopher and psychologist.  
Elements of the Philosophy of the Human Mind. New York: Garland, 1971.
49. University of South Carolina College of Criminal Justice.  
Problem-Solving/Decision-Making for Police Officers. Unpublished Workbook, 1981.
50. Von Neumann, John (1903- ). 20th century American economist.  
Theory of Games and Economic Behavior. Princeton, Princeton University Press, 1953 (with Oskar Morgenstern).
51. Waddington, Conrad Hal (1905-1975). 20th century British biologist and systems analyst.  
Tools for Thought. New York: Basic Book, 1977.
52. Watson, John B. (1878-1958). 20th century American psychologist.  
Behavior. New York: Holt, 1914.
53. Whewell, William (1794-1866), 19th century British scientist, methodologist, and historian.  
On the Philosophy of Discovery. London: Parker, 1960.
54. Whitehead, Alfred North (1861-1947). 20th century British mathematician and philosopher.



**END**