

PROCEEDINGS
OF THE
CONFERENCE ON

SECURING INSTALLATIONS AGAINST CAR-BOMB ATTACK

ARLINGTON, VIRGINIA
MAY 15-17, 1986

DTIC
ELECTE
FEB 22 1995
S G D

SPONSORED BY:

**DEFENSE
RESEARCH
INSTITUTE**

EDITED BY:

MICHAEL WM. DAVIS

19950131 018

DISTRIBUTION STATEMENT A

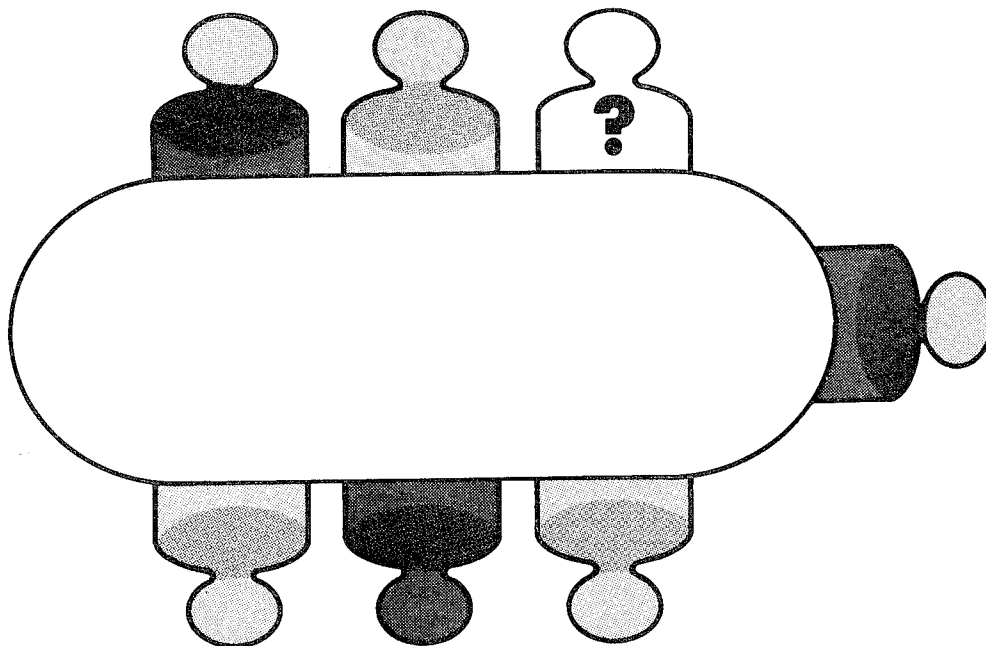
Approved for public release;
Distribution Unlimited

**THE
PERIMETER
ENHANCEMENT
GROUP, INC.**

119 SO. SAINT ASAPH
ALEXANDRIA, VA 22314
(703) 836-1106/7
FAX: (703) 549-8887
TELEX: 292835 NTC UR

SPECIALISTS IN COUNTERMEASURE DESIGN AND SELECTION

**FORMING A TEAM, BUT MISSING YOUR RIGHT HAND
FOR SECURITY CONSIDERATIONS IN-PUT?**



Consider Us for Assistance in:

- Feasibility Study
- Site Evaluation
- Threat Assessment
- Vulnerability Analysis
- Vulnerability Assessment by Penetration
- Weapons Effects Analyses
- Conceptual Design
- Master Plan Development
- Integrated Procedures and Systems Design
- Guard Force Considerations
- Specialized Training
- Countermeasure Enhancement
- Project/Program Management/Oversight

TABLE OF CONTENTS

VOLUME 1

ACKNOWLEDGEMENTS.....	vii
DEDICATION.....	ix
OPENING REMARKS.....	xi
CONFERENCE SCHEDULE.....	xvi

THE CAR-BOMB THREAT

THE 'CAR-BOMB' THREAT

MICHAEL DAVIS AND JOHN M. LARIMER, CPP, THE PERIMETER ENHANCEMENT GROUP.....	1

HISTORICAL TERRORIST CAR BOMB ATTACKS: THE COPYCAT SYNDROME

DR. JAMES MOTLEY, DEFENSE SYSTEMS INC.....	7

CAR-BOMBS: A STRATEGIC TOOL, BUT FOR HOW LONG ?

HARVEY McGEORGE, THE PUBLIC SAFETY GROUP.....	147

NOTES: BY DR. ROBERT H. KUPPERMAN, GEORGETOWN UNIVERSITY.....	161

REFLECTIONS ON NORTHERN IRELAND

COL G. A. HEWISH MBE, BRITISH LIAISON OFFICER, ENGINEERS LTC C. L. ELLIOTT, DEFENCE FELLOW, SOUTHAMPTON UNIVERSITY.....	165

DAMAGE CAPACITY OF CAR-BOMB DEBRIS: NO TEXT BOOK SOLUTION

DR. PHILLIP NASH, SOUTHWEST RESEARCH INSTITUTE PATRICIA K. BOWLES, SOUTHWEST RESEARCH INSTITUTE.....	191

INTELLIGENCE GATHERING FOR EARLY WARNING IN DEFENSE OF THE FIXED U.S. INSTALLATION ABROAD

WILLIAM J. MULLIGAN, VARICON INTERNATIONAL.....	197

TECHNICAL AND LEGAL CONSIDERATIONS OF CAR-BOMBS

HARVEY McGEORGE, THE PUBLIC SAFETY GROUP.....	201

COMMITMENT TO COMBAT TERRORISM

PHILLIP G. HOUGH, UXB.....	217

REFERENCE: REPORT OF THE DOD COMMISSION ON BEIRUT INTERNATIONAL AIRPORT.....	229

PERSONNEL IDENTIFICATION

ID CARDS AND BADGES - WHAT ARE WE REALLY SEEING ?

WILLIAM NORMAN, CPP, AND ROBERT D. BURGNER.....	237

PROFILES, PATTERNS, AND SYNDROMES: BEHAVIORAL SCIENCE FOR SECURITY PROFESSIONALS

EDWIN A. SCHMIDT, CPP, GEORGE WASHINGTON UNIVERSITY (SUBMITTED BY WILLIAM NORMAN, SECURITY ADVISER TO THE NEW ZEALAND MINISTRY OF DEFENSE).....	253

VOLUME 2: TECHNOLOGY APPLYING TO THE CAR-BOMB THREAT

VEHICLE ACCESS POINT DESIGN

SIMPLICITY VS. RELIABILITY IN PHYSICAL SECURITY PRODUCTS LTC GEORGE TALBOT, JR., USA RET., FORMERLY V.P. INTERNATIONAL MARKETING, MAN-BARRIER CORPORATION.....	307
THE APPLICATION OF 18th CENTURY FRENCH FORTRESS DESIGN PRINCIPLES TO DEFENSE AGAINST CAR-BOMBS MAJ STEVEN MYER, U.S. ARMY JEFFERSON J. IRVIN, DAMES & MOORE.....	319
CAR-BOMB RELATED DEPARTMENT OF TRANSPORTATION TECHNOLOGIES TEDDY J. HIRSCH, TEXAS A & M UNIVERSITY SYSTEM DON. L. IVEY, TEXAS A & M UNIVERSITY SYSTEM.....	353
VEHICLE ACCESS CONTROL AS RELATED TO COUNTERMEASURES AGAINST HIGH SPEED CAR-BOMB ATTACK KENNETH O. GRAY, TRW.....	389
SECURING U.S. ARMY SITE ACCESS POINTS WILLIAM F. WEBB, BLACK & VEATCH.....	433
DRAGNET VEHICLE ARRESTING SYSTEM T.J. HIRSCH, GORDON G. HAYES, AND DON L. IVEY TEXAS A & M UNIVERSITY SYSTEM.....	543
VEHICLE ACCESS CONTROL AND SEARCH JAMES E. OBERMILLER, LTC USAF (RET), MASON & HANGER-SILAS MASON CO., INC.....	627
SYSTEM SECURITY ENGINEERING APPLIED TO THE CAR-BOMB THREAT PETER MICHEL, PENN CENTRAL TECHNICAL SECURITY COMPANY.....	647
SERVICE INFORMATION PENN CENTRAL TECHNICAL SECURITY COMPANY.....	657
REFERENCES: DEFINITIVE DESIGN ANALYSIS OF ACCESS POINTS TO U.S. ARMY INSTALLATIONS BY BLACK & VEATCH.....	659
VEHICLE ACCESS AND CONTROL PLANNING DOCUMENT J.E. OBERMILLER AND H. J. WAIT.....	663
VEHICLE ACCESS AND SEARCH TRAINING MANUAL J.E. OBERMILLER AND H. J. WAIT.....	665
DEFINITIVE DRAWINGS: ACCESS POINTS FOR U.S. ARMY INSTALLATIONS U.S. ARMY ENGINEER DIVISION, HUNTSVILLE, ALABAMA.....	667

VEHICLE BARRIER ENGINEERING DESIGN

ENERGY ABSORPTION PHENOMENA ASSOCIATED WITH STOPPING VEHICLES
KATHLEEN L. HANCOCK, SOUTHWEST RESEARCH INSTITUTE.....693

DESIGN NOTES: BY MICHAEL DAVIS.....709

DO'S AND DON'TS OF VEHICLE BARRIERS
MICHAEL SMITH, NAVAL CIVIL ENGINEERING LABORATORY.....711

THE APPLICATION OF AIRCRAFT ARRESTING SYSTEM TECHNOLOGY TO
VEHICLE BARRICADES
KEVIN MULLIGAN, ALL AMERICAN ENGINEERING COMPANY.....717

REFERENCES

FIELD CIRCULAR 19-112: USE OF BARRIERS IN COUNTERING
TERRORIST SITUATIONS, U.S. ARMY MILITARY POLICE SCHOOL.....729

VELOCITY AND KINETIC ENERGY FOR SEVEN VEHICLES, SOUTHWEST
RESEARCH INSTITUTE.....733

SURVEY OF CURRENT STATUS AND PLANS FOR THE INSTALLATION OF
VEHICLE CRASH RESISTANT BARRIERS AT U.S. NAVY AND U.S.
MARINE CORPS FACILITIES WORLDWIDE,
MANAGEMENT GUIDANCE INSTITUTE, NCEL REPORT.....735

DOD SECURITY REQUIREMENTS FOR BARRIERS, T. PICKETT, NAVAL
CIVIL ENGINEERING LABORATORY.....737

FM 5-15: FIELD FORTIFICATIONS, U.S. ARMY.....739

FM 5-34: ENGINEER FIELD DATA, U.S. ARMY.....741

SECURITY VEHICLE BARRIERS, SANDIA REPORT, BY PATRICK A.
SENA.....743

TECHNICAL MEMORANDUM: VEHICLE BARRIERS, BY MICHAEL SMITH,
NAVAL CIVIL ENGINEERING LABORATORY, CA.....745

Accession For	
NTIS CRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

VOLUME III

PRODUCTS

BLAST WALLS

THE ASP WALLING SYSTEM. THE PROVEN BLAST AND FRAGMENT
RESISTANT SYSTEM FOR PROTECTIVE STRUCTURES
JAMES A. JOHNSON (GEN USA, RET.) AND YAAKOV YERUSHALMI
INNOVATIVE MILITARY TECHNOLOGIES, INC.....747

PRODUCT INFORMATION
INNOVATIVE MILITARY TECHNOLOGIES, INC.....819
CONCRETE SYSTEMS, INC.....849

BLAST DOORS & VALVES

CRITERIA FOR THE SELECTION OF BLAST ATTENUATION DEVICES
THOMAS P. CARROLL, T. CARROLL ASSOCIATES, INC.....863

THE EXP DOORS. THE TESTED AND PROVEN ANTI-EXPLOSIVES DOOR
SYSTEM
JAMES A. JOHNSON, (GEN USA, RET.) AND YAAKOV YERUSHALMI
INNOVATIVE MILITARY TECHNOLOGIES INC.....883

PRODUCT INFORMATION
OVERLY MANUFACTURING COMPANY.....889
TEMET U.S.A. INC.....905

SHELTERS

PRODUCT INFORMATION
CONCRETE SYSTEMS, INC.....921

VEHICLE BARRIERS

REFERENCE:
VEHICLE BARRIER INFORMATION, BY NAVAL SEA SYSTEMS
COMMAND.....951

PRODUCT INFORMATION
ALL AMERICAN ENGINEERING COMPANY.....953
AMERICAN SECURITY FENCE CORPORATION.....971
AUTOMATIC OPERATORS.....977
DELTA SCIENTIFIC CORPORATION.....979
ELKOSTA.....981
FLEXIBLE BARRICADES.....985
FOLGER ADAM COMPANY.....987
MADEK.....989
NASATKA MAXIMUM SECURITY BARRIER.....997
ROEMAC INDUSTRIAL SALES.....999
SHERWOOD INTERNATIONAL EXPORT CORPORATION.....1001
SURVIVABILITY RESOURCE GROUP.....1002
TRANSTOP CORPORATION.....1003
UNITED STATES STEEL CORPORATION.....1007
WESTERN MANUFACTURING CO.....1011

DESIGN OF SYSTEMS ARCHITECTURE TO RESIST THE CAR-BOMB THREAT

ENGINEERING OF DESIGN STRUCTURES TO RESIST BLAST

PHYSICAL COUNTERMEASURES FOR THE PROTECTION OF BUILDINGS AGAINST "CAR-BOMB" ATTACK

EVE E. HINMAN, WEIDLINGER ASSOCIATES.....1015

PRACTICAL EXPERIENCE IN THE ANALYSIS, DESIGN, AND CONSTRUCTION OF STRUCTURES HARDENED TO WITHSTAND CAR-BOMB ATTACKS

JOHN M. MUSACCHIO, PAUL C. RIZZO ASSOCIATES, INC.

REUBEN EYTAN, EBD INTERNATIONAL, LTD.....1053

PROTECTION OF BUILDINGS FROM TERRORIST ATTACK: DESIGN CONSIDERATIONS

DAVID R. COLTHARP AND JAMES M. WATT, JR. U.S. ARMY ENGR
WATERWAYS EXPERIMENT STATION.....1069

SUGGESTIONS FOR HARDENING STRUCTURES AGAINST CAR-BOMB ATTACK

CPT STEPHEN R. WHITEHOUSE, U.S. AIR FORCE ACADEMY, CO.....1075

CALCULATING DESIGN LOADINGS FOR BLAST & SHOCK

DR. PAUL F. MLAKAR, JAYCOR

WILLIAM J. FLATHAU, JAYCOR.....1095

THE BLAST BARRIER - A BLAST PROTECTION SYSTEM FOR BUILDING AND PERIMETER SECURITY

MARC CASPE, M. S. CASPE CO., INC.....1105

SERVICE INFORMATION

JAYCOR.....1113

U.S. GOVERNMENT RESEARCH PROGRAMS

ANTITERRORISM AND PHYSICAL SECURITY RESEARCH PROGRAM

DR. JAMES D. PRENDERGAST AND MS. PAMALEE A. BRADY,

U.S. ARMY CONSTRUCTION ENGINEERING RESEARCH LABORATORY.....1123

RESEARCH ON PROTECTION OF BUILDINGS FROM CAR-BOMB ATTACK

DAVID R. COLTHARP AND JAMES M. WATT, JR.

U.S. ARMY ENGINEER WATERWAYS EXPERIMENT STATION.....1131

CONSTRUCTION PROGRAM REVIEW

LARRY SAND, U.S. ARMY CORPS OF ENGINEERS, OMAHA DISTRICT.....1133

OTHER

LOW COST MODULAR COLLECTIVE PROTECTION USING THE IMPROVED PROTECTIVE ENTRANCE/TENT (IPE/T) SYSTEM

GEORGE D. SUMMERS, PH.D., TACTICAL EQUIPMENT CORPORATION.....1143

CONFERENCE CONCLUDING REMARKS

WILLIAM F. PUGH, P.E., MMM DESIGN GROUP.....1155

AUTHORS INDEX.....1157

ATTENDEES ROSTER.....1159

ACKNOWLEDGEMENTS

The wisdom and dedication to national security of

Bill Norman

Ken Gray

GEN Walter Bachus

are an inspiration to me and to my work.

The need for the conference was identified over coffee with Bill Norman. Bill conceived this conference. In addition, his extremely candid presentations at the conference stimulated a great deal of serious thinking.

Ken Gray, who offered his relentless energy and vast knowledge in this area of physical security, worked several 120 hour weeks with me preceding the conference.

I could not have developed, nor conducted, the conference without the generous support of General Walter Bachus, U.S. Army Ret., and his staff at the Society of Military Engineers.

NOTE: Each of these acknowledgements are made to men over the age of 60. Yet the problems we addressed at the conference seemed to be new.

The resources and technical expertise of:

The PERIMETER ENHANCEMENT GROUP
Alexandria, Virginia

and

The SURVIVABILITY RESOURCE GROUP
Vienna, Virginia

were essential to the conference.

M.W.D.



This Conference Is Dedicated To:

Marv Beasley's professional career spanned over forty-five years of security-related work, during which he was widely recognized as one of the most innovative and creative minds in the security profession. His technical expertise in the specialized field of nuclear weapon security was of profound importance to the national security of the United States, and in this area he was without equal. It was his further contributions in the fields of barrier security, locking mechanisms, electronic counter-measures, and psychological deterrents which provided an incalculable impact on world-wide physical security research and developments in the twentieth century.

OPENING REMARKS

The Proceedings of this Conference contain papers submitted by highly qualified speakers who were willing to share their expertise with a knowledgeable audience from various affiliations: Government Agencies, Departments of Defense, State, and Energy, as well as a wide variety of manufacturers and private sector representatives.

The conference was held at the Sheraton National Hotel in Arlington, Virginia, May 15 to 17, 1986.

In order to provide you with as much focussed information on the subject as possible, the Proceedings are not limited to the actual conference presentations, but include related reports, studies, reference material, as well as product information.

The conference was organized, as much as possible, into:

- Day 1 - Threat Assessment
- Day 2 - Engineering
- Day 3 - Systems Architecture

The Proceedings are divided in a similar way, so that each of these subjects follow each other. However, some papers seemed more appropriately placed in a different section than they had been presented. An index at the end of each volume, containing references to all three volumes, has been compiled for the user's convenience.

I hope this document contains information that will be of benefit to you in your effort to secure our nation.

Please let me know if I may be of assistance in helping you apply this information, or in referring you to additional sources of information on the subject.

Michael Davis,
Defense Research Institute
Conference Director
(703) 836-1106

This conference was carefully designed to impact each of the following serious problems:

PROBLEM I: Many U.S. Government entities (ARMY, NAVY, AIR FORCE, DOE, & DOS) are struggling with the 'car-bomb problem' independently, without a sound definition of the threat. Primarily through a lack of historical technical facts, each of these U.S. Government entities considers the threat to be substantially different, not in who they are, but in the techniques that they will likely use in attacking their facilities.

IMPACT I: This conference reviewed the historical details of many car-bombings directed against the U.S. It may have stimulated a more common definition of threat for all U.S. Government entities.

PROBLEM II: U.S. Industry is attempting to meet the differing requirements of five separate U.S. Government vehicle barrier programs with products that are not specifically designed per the threat. Industry, having to meet certification tests for multiple barrier programs, is becoming frustrated. The time and cost associated with introducing and testing new barrier products will ultimately severely limit the innovation and interest that U.S. Industry is willing to devote to this problem.

IMPACT II: This conference attempted to define common product performance requirements. That effort toward defining the threat, may help focus product designs; resulting in better products, simplified and less expensive certification procedures, higher profitability to manufacturers, and improved installation security.

PROBLEM III: For the most part, the U.S. Architectural, Engineering & Construction communities are designing and building 'secure facilities' for all U.S. Government entities without reviewing relevant historical fortress design, without studying existing worldwide vehicle barrier and blast survivability technology, without reviewing 30 years of related DOT highway safety research, and without considering the operation of these 'secure facilities' under attack conditions.

IMPACT III: This highly competitive community, once discovering these rich sources of design, may use them as their competitive edge over contractors that don't. These conference proceedings will provide a rich bibliography of car-bomb information which will become a technical reference document for the design of installations against this most serious terrorist threat.

PROBLEM IV: The U.S. Security community is duplicating the forgotten studies and solutions of WWII, Korea, and Vietnam. There is not an attitude of sharing of public domain knowledge between some security technicians, between some government entities, and between some knowledgeable security architects - not even when the issues are of a national security importance.

IMPACT IV: This conference exposed a wealth of bibliographic information. It illustrated the need for professional sharing of information and may thus stimulate more of it.

Omissions from the Proceedings:

Two alternate papers were submitted by William Norman. The material he presented at the conference was too sensitive to present in writing. The reports he submitted relate to the subject matter he presented at the conference.

The Discussion of Specific Car-Bombings by Post-Blast Investigator Having a First Hand Knowledge (with Richard Roberts, DOS, Danny Defenbaugh, FBI, and Benjamin Runner, DOS) was presented in free speech. Due to the sensitivity of the subject matter discussed, no written material on it will be published.

The two presentations made by Michael Smith of the Naval Civil Engineering Laboratory, and Bart Hanchett of Advanced Technology, cannot be published due to their sensitive subject matter. For further information please contact Mr. Smith directly.

The abstract of the presentation by David Coltharp and James Watt is presented here. The full presentation could not be released before the Proceedings went to print. However, Mr. Coltharp has submitted an alternate study in its place. For further information please contact Mr. Coltharp directly.

The Discussion of Vehicle Barrier Requirements of the U.S. Government (with LTC Richard Swanson, DOD, and Greg Bujac, DOS) was presented in free speech. Therefore no written material will be published.

The Discussion of Access Points (with Doug Cavileer, Naval Security & Investigation Command, Greg Bujac, DOS, and John Kane, Sandia National Laboratories) was presented in free speech. Therefore no written material will be published.

CONFERENCE SCHEDULE

"SECURING INSTALLATIONS AGAINST CAR-BOMB ATTACK"
Sheraton-National Hotel, Arlington, Virginia

THURSDAY, MAY 15, 1986 (DAY)

MODERATOR: DR. PRESTON S. ABBOTT, SENIOR STAFF SCIENTIST, TRW

- 0900 **OPENING REMARKS**
MIKE DAVIS, CONFERENCE DIRECTOR
LARRY LINVILLE, NORTHERN VIRGINIA COMMUNITY COLLEGE
DR. PRESTON S. ABBOTT, MODERATOR
- 0915 **THE WILL TO DIE**
WILLIAM NORMAN, SECURITY ADVISOR TO THE NEW ZEALAND MINISTRY
OF DEFENSE
- 0945 **A HISTORICAL REVIEW OF CAR BOMB ATTACKS, ADAPTATIONS, AND
INNOVATIONS**
DR. JAMES MOTLEY, DEFENSE SYSTEMS INC.
- 1115 **BREAK**
- 1130 **A DISCUSSION OF SPECIFIC CAR-BOMBINGS BY POST-BLAST
INVESTIGATOR HAVING A FIRST HAND KNOWLEDGE**
DANNY DEFENBAUGH, FEDERAL BUREAU OF INVESTIGATION
RICHARD ROBERTS, DEPARTMENT OF STATE
BENJAMIN RUNNER, DEPARTMENT OF STATE
- 1230 **LUNCH**
1250 DR. ROBERT H. KUPPERMAN, CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES, GEORGETOWN UNIVERSITY
- 1400 **A DISCUSSION OF SPECIFIC CAR-BOMBINGS BY POST BLAST
INVESTIGATOR HAVING A FIRST HAND KNOWLEDGE (CONTINUED)**
RICHARD ROBERTS, DEPARTMENT OF STATE
DANNY DEFENBAUGH, FEDERAL BUREAU OF INVESTIGATION
BENJAMIN RUNNER, DEPARTMENT OF STATE
- 1530 **THE CAR-BOMB: A STRATEGIC TOOL FOR TODAY, BUT FOR HOW LONG ?**
HARVEY McGEORGE, THE PUBLIC SAFETY GROUP
- 1600 **SYSTEM SECURITY ENGINEERING CONCEPTS: APPLIED TO THE CAR-BOMB
THREAT**
PETER MICHEL, PENN CENTRAL TECHNICAL SECURITY COMPANY
- 1645 **ADJOURN**

THURSDAY, 15 MAY 1986 (EVENING)

INFORMAL PANEL DISCUSSION OF CAR-BOMB RELATED DEFENSE CONCEPTS

- 1930 **INTRODUCTORY REMARKS**
 DR. JAMES MOTLEY, DEFENSE SYSTEMS, INC.
- 1935 **TECHNICAL AND LEGAL CONSIDERATION IN DEFENDING AGAINST
CAR-BOMBS**
 HARVEY McGEORGE, THE PUBLIC SAFETY GROUP
- 2130 **DISCUSSION**
- 2200 **ADJOURN**

FRIDAY, MAY 16, 1986 (DAY)

MODERATOR: JOHN KANE, DIVISON SUPERVISOR, ACCESS DENIAL TECHNOLOGY,
SANDIA NATIONAL LABORATORIES

- 0900 **INTRODUCTORY REMARKS**
 JOHN KANE, MODERATOR
- 0915 **SIMPLICITY VS. RELIABILITY IN PHYSICAL SECURITY PRODUCTS**
 LTC. GEORGE TALBOT, JR., USA RET., FORMERLY V.P.
 INTERNATIONAL MARKETING, MAN-BARRIER CORPORATION
- 0945 **CAR-BOMB RELATED DOT TECHNOLOGIES**
 DR. TEDDY HIRSCH, TEXAS TRANSPORTATION INSTITUTE, TEXAS
 A & M UNIVERSITY
- 1015 **ENERGY ABSORPTION PHENOMENA ASSOCIATED WITH STOPPING VEHICLES**
 KITTY HANCOCK, SOUTHWEST RESEARCH INSTITUTE
- 1045 **BREAK**
- 1100 **OPERABLE AND FIXED VEHICLE BARRIERS**
 MICHAEL SMITH, NAVAL CIVIL ENGINEERING LAB (UNCONFIRMED)
- 1145 **SYSTEM CONSIDERATIONS & METHODOLOGIES - A SYSTEM
SOLUTION TO TERRORIST VEHICLE BOMBS**
 MIKE SMITH, NAVAL CIVIL ENGINEERING LAB
 BART HANCHETT, ADVANCED TECHNOLOGY
- 1230 **LUNCH**
- 1250 **THE BLAST BARRIER - A BLAST PROTECTION SYSTEM FOR BUILDING
AND PERIMETER SECURITY**
 MARC CASPE, M. S. CASPE CO., INC.
- 1400 **DAMAGE CAPACITY OF CAR-BOMB DEBRIS: NO TEXT BOOK SOLUTION**
 DR. PHILLIP NASH, SOUTHWEST RESEARCH INSTITUTE

- 1430 **CAR-BOMB RELATED PROGRAMS OF THE U.S. ARMY CORPS OF ENGINEERS:
A PANEL DISCUSSION**
LARRY SAND, CORPS OF ENGINEERS, OMAHA DISTRICT
DR. JAMES W. PRENDERGAST, CONSTRUCTION EN RESEARCH LABORATORY

DAVID R. COLTHARP, WATERWAYS EXPERIMENT STATION
JIMMY WATT, WATERWAYS EXPERIMENT STATION
- 1515 **DESIGNING FACILITIES FOR RAPID RECOVERY AFTER A BOMBING:
FROM A USER PERSPECTIVE**
WILLIAM NORMAN, SECURITY ADVISOR TO THE NEW ZEALAND
MINISTRY OF DEFENSE
- 1545 BREAK
- 1600 **ELKOSTA PRODUCTS: "A PICTORIAL REVIEW"**
DR. HANS MALKMUS, ELKOSTA/WEST GERMANY
- 1630 **AN INNOVATION IN BLAST AND SHAPED CHARGE RESISTANT DOORS**
GENERAL JAMES A. JOHNSON, USA RET.
YAAKOV YERUSHALMI, INNOVATIVE MILITARY TECHNOLOGIES INC.
- 1700 **THE VEHICLE BARRIER REQUIREMENTS OF THE U.S. GOVERNMENT:
A PANEL DISCUSSION**
DOD: LTC. RICHARD SWANSON, OUDRE
DOS: GREG BUJAC, CHIEF, PHYSICAL SECURITY DEPARTMENT,
OFFICE OF DIPLOMATIC SECURITY
- 1800 **CLOSING STATEMENTS**
- 1815 ADJOURN

FRIDAY, 16 MAY 1986 (EVENING)

MODERATOR: GREG BUJAC, DEPARTMENT OF STATE

- 1930 **INTRODUCTORY REMARKS**
GREG BUJAC, DEPARTMENT OF STATE
MIKE DAVIS, THE PERIMETER ENHANCEMENT GROUP
- 2000 **CONCEPTS OF ABSORBING ENERGY: A PANEL DISCUSSION**
DIRECTING WATER: KEVIN MULLIGAN, ALL AMERICAN ENGINEERING
DESIGN COMMENTS: MIKE DAVIS, THE PERIMETER ENHANCEMENT GROUP
- 2030 **DENYING HIGH SPEED ACCESS TO VEHICLES: WAYS AND MEANS**
KEN GRAY, SENIOR SECURITY ENGINEER, TRW
- 2045 **GATHERING OF INTELLIGENCE FOR EARLY WARNING; BEING ALERT FOR
SURVEILLANCE AROUND INSTALLATIONS**
WILLIAM J. MULLIGAN, VARICON INTERNATIONAL
- 2130 DISCUSSION
- 2200 ADJOURN

SATURDAY, MAY 17, 1986

MODERATOR: DARYL SOLOMONSON/ ANTITERRORISM & SECURITY GROUP, TRW

- 0700 REGISTRATION
- 0900 INTRODUCTORY REMARKS
DARYL SOLOMONSON, MODERATOR
- 0915 THE APPLICATION OF 18th CENTURY FRENCH FORTRESS DESIGN
PRINCIPLES TO DEFENSE AGAINST CAR-BOMBS
MAJ STEVEN MYER, U.S. ARMY
MR. JEFFERSON IRVIN, DAMES & MOORE
- 1000 CALCULATING DESIGN LOADINGS FOR BLAST & SHOCK
DR. PAUL F. MLAKAR, JAYCOR
WILLIAM J. FLATHAU, JAYCOR
- 1030 CRITERIA FOR THE SELECTION OF BLAST ATTENUATION DEVICES
THOMAS CARROLL, T. CARROLL AND ASSOCIATES
- 1100 BREAK
- 1110 REFLECTIONS ON NORTHERN IRELAND
COL G. A. HEWISH, BRITISH LIAISON OFFICER, ENGINEERS
LTC C. L. ELLIOTT, DEFENCE FELLOW, SOUTHAMPTON UNIVERSITY
- 1140 HARDENING NEW AND EXISTING SITES AGAINST BLAST
EVE E. HINMAN, WEIDLINGER ASSOCIATES
- 1225 LUNCH
- 1240 COMMITMENT REQUIREMENTS FOR DEALING WITH THE THREAT
PHILLIP G. HOUGH, UXB
- 1325 INNOVATIONS IN HIGH AND LOW RISE BUILDING DESIGN OPTIMIZING
BLAST SURVIVABILITY
GEN JAMES A. JOHNSON USA RET.
YAAKOV YERUSHALMI, INNOVATIVE MILITARY TECHNOLOGIES INC.
- 1410 PRACTICAL EXPERIENCE IN THE ANALYSIS, DESIGN, AND
CONSTRUCTION OF STRUCTURES HARDENED TO WITHSTAND CAR-BOMB
ATTACKS
JOHN MUSACHIO, PAUL C. RIZZO ASSOCIATES, INC.
REUBEN EYTAN, EBD INTERNATIONAL, LTD.
- 1455 SECURING U.S. ARMY SITE ACCESS POINTS
WILLIAM WEBB, BLACK & VEACH
- 1540 BREAK

SATURDAY, MAY 17, 1986 (CONTINUED)

- 1550 **ACCESS POINTS: A PANEL DISCUSSION**
 DOUG CAVILEER, NAVAL SECURITY & INVESTIGATION COMMAND
 GREG BUJAC, DEPARTMENT OF STATE
 JOHN KANE, SANDIA NATIONAL LABORATORIES
- 1650 **VEHICLE ACCESS CONTROL & SEARCH**
 LTC. JAMES E. OBERMILLER, USAF RET., MASON & HANGER-SILAS
 MASON CO., INC.
- 1725 **CONFERENCE CONCLUDING REMARKS**
 WILLIAM F. PUGH, MMM DESIGN GROUP
- 1740 **END OF CONFERENCE**

SECURING INSTALLATIONS AGAINST CAR-BOMB ATTACK

PROCEEDINGS ORDERING FORM

3 VOLUMES (Threat, Barrier Technology & Architecture)
Cost \$395

PLEASE PROVIDE THE FOLLOWING INFORMATION ON YOUR LETTERHEAD

Enclosed please find \$395 for the DRI Conference Proceedings.

Name _____
First Middle Initial Last

Title _____

Company/Agency/Facility _____

Mailing Address _____

No. Street

City State Zip Mail Code Country

Signature of Person Ordering Title Date

PLEASE NOTE: All information must be filled in!

ADDRESS ALL CORRESPONDENCE TO: DRI Conference Director
119 South Saint Asaph Street
Alexandria, VA 22314













SECURING INSTALLATIONS
AGAINST CAR-BOMB ATTACK

INTRODUCTION

BY

MICHAEL W. DAVIS AND
JOHN M. LARIMER, CPP

THE PERIMETER ENHANCEMENT GROUP
ALEXANDRIA, VA, U.S.A.

HISTORICAL OVERVIEW

ABANDONED EXPLOSIVE LADEN CARS AND TRUCKS HAVE BEEN USED BY TERRORISTS FOR MANY YEARS TO PRODUCE MASSIVE PROPERTY DAMAGE AND PERSONNEL CASUALTIES. HISTORICALLY, VEHICLES WERE LEFT PARKED ADJACENT TO TARGETED FACILITIES OR AT A CURB IN THE TARGETED POPULATION AREA, AND THE CHARGE THEN DETONATED BY A TIMER OR A REMOTELY ACTIVATED DEVICE.

THE THREAT POSED BY CAR BOMBS IS ESCALATING IN FREQUENCY, IN EXPLOSIVE YIELD, AND IN ANTI-PERSONNEL (FRAGMENTARY) DESIGN EFFECTIVENESS.

IN ORDER TO PLACE EXPLOSIVE LADEN VEHICLES CLOSER TO, AND IN SOME CASES INSIDE SENSITIVE TARGETS, WITHIN DEFENDED PERIMETERS, THE FOLLOWING MUCH MORE SERIOUS TERRORIST TACTICS HAVE MORE RECENTLY BEEN ADOPTED:

CRASHING OR RAMMING / SUICIDE MISSION TACTIC

TERRORISTS HAVE DRIVEN EXPLOSIVE LADEN VEHICLES THROUGH DEFENDED PERIMETERS, DETONATING THE CHARGE ONCE THE INTENDED TARGET SITE WAS REACHED, OR ONCE THE DRIVER WAS DISABLED. THE SITE PENETRATION BY CRASHING OR RAMMING THROUGH STANDARD PERIMETER SECURITY FENCES AND GATES IS SIMPLE. IT OFFERS THE TERRORIST A FAST MEANS BY WHICH TO TRANSPORT, STRATEGICALLY PLACE, AND DETONATE THOUSANDS OF POUNDS OF EXPLOSIVES.

000001

STOLEN PASSES / SURREPTITIOUS PENETRATION TACTIC

TERRORISTS HAVE USED STOLEN PASSES TO GAIN OPEN ACCESS THROUGH SECURED SITE PERIMETERS, IN ORDER TO STRATEGICALLY PLACE EXPLOSIVE LADEN VEHICLES. IT HAS BEEN DOCUMENTED THAT TERRORISTS HAVE KILLED SITE AUTHORIZED PERSONNEL FOR THEIR PERSONAL IDENTIFICATION WHICH CAN THEN BE USED TO PENETRATE SITE PERIMETER SECURITY, UNDETECTED, AND WITH LARGE EXPLOSIVE PAYLOADS.

ATTEMPTING TO ESTABLISH THE THREAT

BECAUSE OF THE TERRORISTS' EXTREME RESOURCEFULNESS, DETERMINATION, AND DISREGARD FOR CONVENTIONAL TACTICS, IT IS DIFFICULT TO ESTABLISH A STANDARD THREAT TO BE CONSIDERED AS THE BASIS FOR THE DESIGN OR ACQUISITION OF VEHICLE CRASH RESISTANT BARRIERS.

IT IS CLEAR THAT ANY DEFINITION OF "WORST PROBABLE THREAT" IS A NON-STATIC AND SITE DEPENDENT VARIABLE, SUBJECT TO INFLUENCE BY THE FOLLOWING CONDITIONS:

AVAILABILITY AND NATURE OF VEHICLES USED

THE VEHICLE'S MASS, VELOCITY, AND ACCELERATION CHARACTERISTICS, ITS GEOMETRY, THE DEGREE TO WHICH IT CAN BE MODIFIED, ITS PAYLOAD CAPACITY, ITS CONCEALING CAVITIES WITHIN, ITS COST, ITS ROADABILITY AND OFF-ROADABILITY, THE DEGREE TO WHICH IT LOOKS ROUTINE TO THE SITE, AND MANY OTHER CONSIDERATIONS, CAN ALL INFLUENCE THE "WORST PROBABLE THREAT" BY DEFINING THE "MOST LIKELY AND MOST EFFECTIVE VEHICLE".

THE RESOURCES OF THE TERRORISTS' SPONSOR

SELECTION OF A TARGET, THE DEGREE TO WHICH VULNERABILITIES CAN BE IDENTIFIED IN THE TARGET PERIMETER SECURITY SYSTEM, RESISTANCE OF THE TARGET BUILDING TO BLAST, AND INTELLIGENCE GATHERING REGARDING OPTIMUM TIMING, EXPLOSIVE YIELD AND QUANTITY USED, THE VEHICLE USED, AND THE MODIFICATIONS THAT CAN BE MADE TO THE VEHICLE, WILL TO A GREAT EXTENT DETERMINE THE DISRUPTION, REACTION, DAMAGE, AND LOSS OF LIFE THAT THE TERRORIST CAN INFLICT ON HIS TARGET. A WELL DESIGNED, CAREFULLY PILOTED OR POSITIONED CAR BOMB, CAN POTENTIALLY DESTROY AN ENTIRE INSTALLATION.

THE DETERMINATION, DEDICATION, AND RESOURCEFULNESS OF THE TERRORIST

THERE SHOULD BE NO QUESTION THAT TERRORISTS PILOTING CAR BOMBS ARE WILLING TO DIE IN ORDER TO INFLICT CASUALTIES AND DESTROY TARGETED SITES. THEY ARE CLEARLY WILLING TO USE ALL RESOURCES AND MEANS AVAILABLE TO THEM.

ACCEPTING THE THREAT AS CHANGING:

THE FREQUENCY OF INCIDENTS, EXTENT OF DAMAGE, AND LOSS OF LIVES CAUSED BY CAR BOMBS PLACED NEAR OR WITHIN SENSITIVE TARGETS, CAN BE EXPECTED TO INCREASE DRAMATICALLY, BECAUSE OF THE PROVEN EFFECTIVENESS OF THE TECHNIQUE.

THE DETERMINATION OF THE TERRORIST TO ACHIEVE TARGET PENETRATION CAN ALSO BE EXPECTED TO INCREASE DRAMATICALLY, DUE TO THE HEIGHTENED POTENTIAL LOSSES HE CAN INFLICT ON HIS ENEMY, AT SENSITIVE POINTS.

THE TERRORISTS' TOOLS AND TECHNIQUES WILL BECOME MORE SOPHISTICATED. AS A RESULT, THIS WILL SUBJECT AN INSTALLATION TO GREATER AND MORE DIVERSE THREATS.

THE TECHNICAL PROBLEM:

THE SELECTIVE CONTROL OF VEHICULAR ACCESS TO SITES AND TO CONTROLLED AREAS WITHIN SITES, POSES A SPECIAL PROBLEM; THE ENTRY OF UNAUTHORIZED VEHICLES HAS TO BE PREVENTED WITHOUT INTERFERING WITH NORMAL TRAFFIC FLOW IN ADJACENT THOROUGHFARES AND WITH THE FLOW OF VEHICLES ENTERING OR LEAVING AN INSTALLATION.

EXPLOSIVE LADEN VEHICLES MAY BE CONTAINED IN THE TRAFFIC APPROACHING A CONTROL AREA AND MAY NOT BE READILY DISTINGUISHABLE FROM OTHER VEHICLES UNTIL THEY REACH THE ENTRANCE AND ARE INSPECTED. A MULTI-FOLD PROBLEM THUS DEVELOPS RELATING TO THE FOLLOWING:

RECOGNIZING AN UNAUTHORIZED VEHICLE IN A TIMELY MANNER,
MAINTAINING A PHYSICAL CONSTRAINT TO ITS' PASSAGE,

000003

NEUTRALIZING PERSONNEL IN THE VEHICLE,
REMOVING OF UN-DETONATED, UNAUTHORIZED VEHICLES, OR
ATTENUATING DESTRUCTIVE BLAST EFFECTS.

TESTING TO AN ESTABLISHED THREAT /
UTILIZING OTHER TESTING SOURCES:

CRASH RESISTANT VEHICLE BARRIER TESTING AND EVALUATION PROGRAMS CONDUCTED BY U.S. GOVERNMENT AGENCIES IS BRIEFLY SUMMARIZED BELOW.

THE DEPARTMENT OF STATE HAS RECENTLY BEGUN CERTIFICATION TESTING OF PRODUCTS TO THEIR STANDARD.

THE DEPARTMENT OF ENERGY HAS TESTED CRASH RESISTANT VEHICLE BARRIERS FOR OVER A DECADE. SANDIA NATIONAL LABORATORIES HAS CONDUCTED DOZENS OF CRASH TESTS USING THE FOLLOWING PROCEDURE:

CRASH RESISTANT VEHICLE BARRIERS ARE PURCHASED OR
DESIGNED BY SANDIA,

ANALYSIS OF THE BARRIER IS CONDUCTED TO PREDICT THE
FAILURE MODE AND ENERGY ABSORPTION CAPABILITY OF THE
BARRIER,

BARRIERS ARE TESTED AT A SLIGHTLY LOWER IMPACT ENERGY
LEVEL THAN IS PREDICTED TO FAIL IT, AND

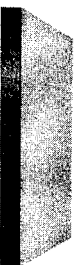
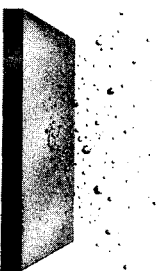
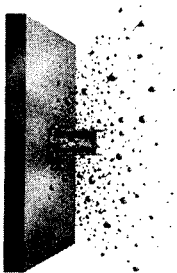
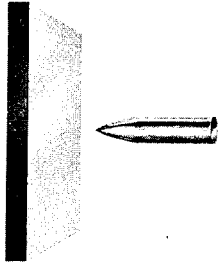
THE RESULTS ARE PUBLISHED AS A CLASSIFIED DOE DOCUMENT.

THE DEPARTMENT OF TRANSPORTATION HAS PERFORMED DOZENS OF CRASH TESTS OF VEHICLES AGAINST BARRIERS. THEIR WORK HAS INVOLVED A MUCH GREATER VARIETY OF CRASH VEHICLES, IMPACT CONFIGURATIONS, AND BARRIER TYPES THAN ANY OF THE OTHER U.S. AGENCIES. THEIR TESTS HAVE ALSO BEEN VERY CAREFULLY DOCUMENTED.

THE DEPARTMENT OF DEFENSE HAS DEVELOPED NUMEROUS FIELD EXPEDIENT VEHICLE BARRIERS, PRIMARILY DURING WWII, DIRECTED AT STOPPING MILITARY VEHICLES (JEEPS, TRUCKS, PERSONNEL CARRIERS, AND TANKS). THESE BARRIERS HAVE A VAST AMOUNT OF FIELD DATA ACCUMULATED ON THEM AND SHOULD HAVE EXCELLENT RELEVANCE TO ANY VEHICLE BARRIER MISSION; ESPECIALLY WITH REGARD TO PORTABLE, TYPE V & VI BARRIERS. RECENTLY PORT HUENEME HAS BEEN ASSIGNED THE DOD MISSION FOR ALL VEHICLE BARRIER WORK. PORT HUENEME HAS EXTENSIVE VEHICLE BARRIER TESTING AND EVALUATION ACTIVITY PLANNED FOR THE NEAR FUTURE.

**THE
PERIMETER
ENHANCEMENT
GROUP, INC.**

119 SO. SAINT ASAPH
ALEXANDRIA, VA 22314 • USA
(703) 836-1106/7
FAX: (703) 549-8887
TELEX: 292835 NTC UR



The Perimeter Enhancement Group was initially formed to assist architects in designing and specifying site security. We specialized in:

- Assessing terrorist threats
- Establishing site vulnerability
- Designing effective physical countermeasures

We have since expanded our management staff to include highly qualified and experienced operational, as well as technical, security professionals.

As a matter of policy, we maintain constantly updated reference sources to security threats and state-of-the-art countermeasures as they develop. Working with key professionals worldwide in the areas of security countermeasures, security architecture, engineering, construction, survivability, testing, and materials science, we manage an impressive list of associates and associated companies.

We routinely use our in-house Computer Aided Design (CAD) and link with data bases such as National Technical Information Service (NTIS) in our design work. With these tools, our professional technical and operational staff and many professional associates and associations, we offer the most advanced threat assessment and countermeasure procedural, equipment, and facility design solutions available anywhere in the world.

Our primary clients include U.S. Government entities and their contractors, major institutions and industry.

HISTORICAL TERRORIST CAR BOMB ATTACKS: THE COPYCAT SYNDROME

By

James Berry Motley

OVERVIEW

The purpose of this paper is to provide a historical profile [1980-1986 (January-March 8)] of a terrorist phenomena--car bomb attacks--which, to date, has proven extremely difficult to defend against. The data is not all inclusive, but reflects those car bomb incidents in which sufficient information is available to support an informed analysis. (Car bombs are explosive devices placed on or in vehicles (cars, vans, and trucks) for the purpose of causing personnel injury, death, or property damage.) Although efforts are underway to cope more effectively with car bombing, security defenses are only in the development stages. It is my contention that only through systematic analysis of car bombings will counterterrorism security planners, physical security manufacturers, and architects, through integrated efforts, understand those practical defenses needed to deter this form of terrorist attack.

The paper presents empirically-based data--derived solely from open source material--on 87 reported car bomb attacks which have been directed abroad against the United States and 22 other countries (Figure 1) and is a venture onto largely uncharted ground. Its objective is to encourage further discussion and research.

Dr. James Berry Motley, Director of National Security Studies, Defense Systems Inc., has been active for over twenty years in the government, private and academic sectors on issues involving U.S. national security and foreign policy. He is a widely-published author and has participated in numerous interagency defense and foreign policy symposiums.

	AUSTRIA	BELGIUM	CHILE	CYPRUS	ENGLAND	FRANCE	GREECE	GUADELOUPE	GUATEMALA	INDIA	IRAN	IRELAND	ISRAEL	ITALY	JORDAN	KUWAIT	LEBANON	PORTUGAL	SOUTH AFRICA	SPAIN	SYRIA	WEST GERMANY	TOTAL
1980					1	2		1									2						6
1981		1		1	2					1							3		1	1	1	1	11
1982					1	2				2	2			1			5					3	16
1983					1			1						1		6	8		1				18
1984	1				1										1		4		2				9
1985			2				1		1	1	1		3			1	11	1	1			2	24
1986																	2	1					3
TOTAL	1	1	2	1	6	4	1	1	1	1	4	2	3	2	1	7	35	2	4	1	1	6	87

Figure 1: Reported Car Bombings, 1980-1986 (January-March 8)

Ten factors are considered of primary interest for the purpose of this analysis. They are:

- the country in which the car bombing occurred;
- the purpose of the attack;
- target description;
- perpetrator;
- type of explosive;
- the yield of explosion (i.e., the equivalent pounds of TNT);
- a description of the explosive device;
- type of vehicle used;
- number of casualties (killed and wounded); and
- the response of security personnel, if present.

Organizationally, the paper consists of six sections and one appendix. After this brief overview, introductory comments are made regarding explosive devices. Next, a historical snapshot of terrorists' fascination with bombs is presented. Section 4 is a discussion of the capability that car bombs provide to contemporary terrorists and cites examples of the different forms of car bombs. Readers whose main interests are in a comparative analysis of car bombings may want to briefly scan these four background sections and go directly to Section 5 which provides both narrative and tabular data on reported car bombings between 1980 and 1986. The final section provides concluding remarks. Appendix A, arranged alphabetically by country and by year, provides further information on the 87 reported car bombings.

EXPLOSIVE DEVICES¹

It is not the intent of this article to discuss the technical intricacies associated with the various types of explosives suitable for car bomb construction. However, for the purpose of providing a general understanding of explosive devices and how they have been used by terrorists in recent years, a few brief comments are appropriate.

Regardless of their origin, all explosive devices are similar in that each must contain certain components--an explosive, an initiator, a power source, and a fusing system. A representative sampling of the explosives used by terrorists include: dynamite, TNT, and plastic compounds (Table 1).²

Explosives are compounds that, when appropriately stimulated, undergo a vigorous chemical changes. The result is an explosion which generates heat and gas. Explosive blast qualities often are compared to TNT, which is arbitrarily assigned a relative effectiveness (RE) value of 1.00. By this scale, C4, with its RE of 1.34 (Table 1) is approximately one-third more powerful than TNT per unit volume.

Since most bulk explosives are relatively insensitive to heat, shock, and friction, specific means must be provided to initiate the explosive charge. Common initiators for high explosives (HE) such as TNT or C4 are called blasting caps or detonators. Blasting caps, which come in two principal forms (electrical and nonelectrical), are comprised of several layers of different primary explosives (typically lead azide and lead styphanite) and are produced in a variety of strength. The standard Number 6 commercial blasting cap is sufficiently powerful to reliably detonate

Name	Principal Uses	Relative Effectiveness	Common Packaging	Texture	Color of Explosive	Other
Dynamite (all types)	road construction, agriculture, quarrying	0.42-0.92	rolled paper tubes ½ lb. and larger	granular to paste	beige to brown	may contain nitroglycerine
TNT, Trotyl	military demolition, seismic exploration, ordnance	1.0	US-¼ lb. cylinders, ½ & 1 lb. block. Eur.-200 & 400 gram blocks wrapped in brown paper	flake, pressed powder, cast	mottled green to dark brown	
Plastic Explosive C3-4, PE2-4, Semtex-H, MP-10	Military demolition	1.34	US-plastic wrapped blocks Czech-2 KG paper wrapped blocks	"putty"-smooth to slightly granular	C3-yellow C4-white PE-beige MP10-black Semtex-orange	Semtex-H has been used in virtually every letter bomb originating in Arab countries

Table 1. Characteristics of Some Principal Explosives

dynamite; however, C4 plastic explosives require a special military blasting cap or equivalent.

The typical power source--the third component required in an explosive device--to activate the initiator is an electrical battery. A fusing system separates the power source from the initiator. Typical systems are based on time delay, environmental sensors, and physical action sensors. Military MI chemical pencils typify chemical delay devices. Environmental fusing systems are those which detect some change in their physical environment. Increase or decrease in atmospheric pressure, temperature, or light can be used to initiate an explosive device. Physical action fuses are the basis for most booby-trapping techniques. Many governments supply their military forces with booby-trapping devices, known in the United States as firing devices, for use with land mines and other ordnance items. Many of these devices, which rely on a person applying pressure to the fuse, releasing pressure by lifting some object, or breaking a trip wire, have fallen into the hands of terrorist groups. Finally, the sensors used with commercial intrusion detection and environmental alarm systems are well suited for use as fuses in bomb construction.

A HISTORICAL SNAPSHOT OF CAR BOMBS

The bomb, whether car or other types, is the classic terrorist weapon. Nearly 70 percent of all terrorist attacks involve explosives in some form or other.³ Since the development of gunpowder by the Chinese, terrorists have viewed bombs as a weapon that allows them to inflict death

and destruction against the state with minimal risk to themselves.

Over the years, as explosives became more powerful, terrorists increasingly became more indiscriminate with respect to the targets of their bombs. With the development of dynamite, Tsarist Russia witnessed, what one author describes "the cult of the bomb," as disciples of Bakunin and Necharev relentlessly attacked the state with bomb after bomb.⁴

Historically, car bombs first consisted of small explosive devices (a few sticks of dynamite) placed on or in the vehicle. The purpose of such bombings was primarily to kill the occupant. Motivation for such incidents was revenge, financial gain, or in some cases, suicide. Organized crime has used car bombs to achieve coercion, punish informers, and to eliminate rivals.

Although car bombings have been a favorite tactic⁵ of the terrorist for years, it was not until suicide bomb attacks against the United States and other targets in the Middle East commenced that the worldwide effects of the terrorist copycat syndrome--the increased use of large-scale car bombs--assumed prominence. Inasmuch as terrorists are more imitative and adaptive than innovative, they have undoubtedly monitored the outcome of such attacks, which has further proliferated their use (Figure 1A).

First employed against the United States in Beirut on April 18, 1983, the suicidal attack against the U.S. Embassy (killing a total of 63, of whom 17 were Americans, and wounding 100) stunned and horrified the Western world. The pattern of the use of car bombs in Lebanon during the

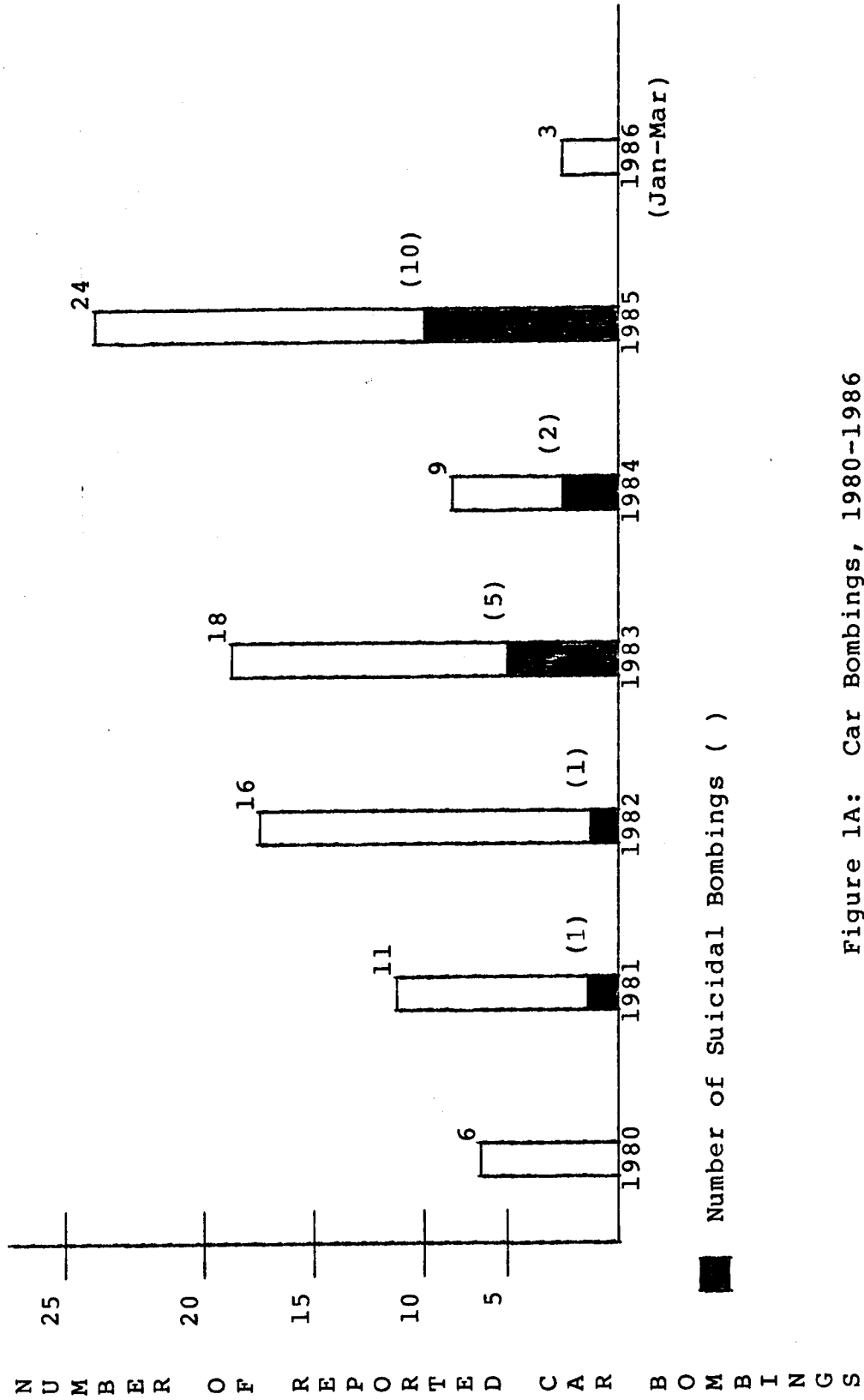


Figure 1A: Car Bombings, 1980-1986

preceding year made the threat foreseeable but it was ignored. Two similar type attacks against the United States would occur before the end of the year. On October 23, the car bombing of the U.S. Marine Corps Headquarters at the Beirut airport resulted in the death of 241 marines. The third suicide bombing occurred on December 12 against the U.S. Embassy in Kuwait. The explosive charge reportedly approached 4,000 pounds equivalent of TNT, of which only a quarter exploded, claimed the lives of six, wounded 17, and collapsed part of the embassy.

The most recent suicidal car bombing against the United States was the September 20, 1984 attack on the U.S. Embassy annex in Beirut. A van containing an estimated 3,000 pounds of explosive traversed road obstacles designed to impede car bombing attacks, penetrated security checkpoints, was fired upon by security personnel, yet managed to gain close proximity to the annex where it detonated. The bombing claimed the lives of 23 people (two Americans) and wounded 68, of whom 18 were Americans.⁶

CAR BOMBS: THE WEAPONS OF TERROR⁷

The contemporary terrorist car bomb serves a four-fold purpose: (1) to instill fear, (2) to intimidate, (3) to destroy property, and (4) to kill. Bombs, of course, are easy to make, safe to handle and can be triggered by a variety of ingenious methods. At its simplest, the car bomb is a crude device--several sticks of dynamite bound together and set off by a short length of combustible fuse. Often wrapped with six-inch nails, such crude devices create a lethal burst of shrapnel when they explode, thus not only killing the intended victim, but also innocent bystanders.

The car bomb, which may assume many different forms, has become a major weapon in the terrorist arsenal. A car stuffed with 200 pounds of explosives can cause absolute devastation. The Mafia-type car bomb, that is, a bundle of explosives wired to the starting system so that when the ignition is switched on, destroys both driver and car. A pressure bomb under the driver's seat is instant death. To circumvent those who might inspect their engines before turning on their ignition keys or inspect under their car seat, the terrorist might turn to plastic explosives attached to a car's exhaust pipe which will, of course, explode once the pipes are hot. One of the more sophisticated types of car bombs provides a double firing system, a timing device which enables the terrorist to distance himself from his intended victim and a "tilt" detonating circuit which is completed when a blob of mercury roles down a tube as the car goes up an incline.

A COMPARATIVE CAR BOMBING ANALYSIS: 1980-1986

This section provides, in both narrative and graphic form, the findings of the research conducted on 87 car bombings from February 24, 1980 to March 8, 1986. It focuses on ten factors regarding car bombings: the country in which the incident occurred; the purpose of the attack; target description; perpetrator; type of explosive; the yield of explosion (i.e., the equivalent pounds of TNT); a description of the explosive device and type of vehicle used; number of casualties (killed and wounded); and the response of security personnel, if present.

Although these factors do not subsume all empirical research on car bombings, they do: (1) reflect the most pressing concerns of security planners; (2) provide the physical security manufacturer with comprehensive insight into the type of products required to deal more effectively with car bombing tactics; and (3) capture the thrust of open source data in one document. (Figure 1B provides a sample car bomb collection work sheet.)

A car bombing chronology of reported incidents from 1980 to early 1986 (Table 2) reveals not only the worldwide impact of this form of terrorist attack, but the increase in the number and the lethality of car bombings. In most of the incidents, terrorist organizations have actively sought recognition for the bombings. A country threat profile (Figure 2) reveals that Lebanon is at the center of car bombings with 35, followed by Kuwait (seven), and England and West Germany with six each. Three countries--France, Iran, and South Africa--had four incidents. The remaining countries experienced three or less car bombings during the period 1980 through 1986.

Figure 1B: SAMPLE CAR BOMB DATA COLLECTION WORK SHEET

Vehicle Type:	☐ Automobile	Vehicle Color:	☐ Beige
	☐ Pick Up Truck		☐ Blue
	☐ Large Truck		☐ Red
	☐ Unknown		☐ White
			☐ Yellow
			☐ Other _____

Explosive Charge (TNT Equivalent)

☐	10 lbs.
☐	100 lbs.
☐	1,000 lbs.
☐	10,000 lbs.
☐	Other _____

Detonation Device:	☐ Blasting Cap	Means of Detonation	☐ Driver
	☐ Grenade		☐ Remote
	☐ Fuse		☐ Timed
	☐ Timer		☐ Mechanical
			☐ Unknown

Penetrating Vehicle Access Point By:

☐	Surreptitious entry
☐	Stolen ID
☐	Delivery
☐	Trash Collection
☐	Other _____
☐	Parked (Distance from target _____)
☐	Low Speed 5 - 20 mph
☐	High Speed 20 mph

Response of Security

Personnel:

- ☐ Verbal warning
☐ Engaged with
small arms fire
☐ None

Time:

- ☐ Dawn (0500-0600)
☐ Day (0600-1700)
☐ Dusk (1700-1800)
☐ Night(1800-0500)

Weather

- ☐ Clear
☐ Rain/Snow (light)
☐ Rain/Snow (heavy)
☐ Overnight/Foggy

Driver

- ☐ Male
☐ Female

Occupants:

- ☐ One
☐ Two
☐ More than two
☐ None

Comments:

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1980</u>			
2/24	Lebanon, Beirut	8/20	No group claimed responsibility
9/5	Guatemala, Guatemala City	8/20	Guatemalan Leftists
10/3	France, Paris	4/12	Faisceaux Nationalistes Europeans
10/5	France, Paris	0/1	Revolutionary Nationalist Movement
11/10	Lebanon, Beirut	20/44	Front for the Liberation of Lebanon from Foreigners
12/2	England, London	0/5	Irish Republic Army
<u>1981</u>			
1/3	Cyprus, Nicosia	0/1	Israeli agents blamed
4/22	Iran, Teheran	2/10	Unknown
5/7	Spain, Madrid	3/several	Basque Separatists
8/31	West Germany, Ramstein AFB	0/20	Red Army Faction
9/28	Lebanon, Zrariyeh	15/40	Israeli agents blamed
10/1	Lebanon, Beirut	83/300	Front for the Liberation of Lebanon (FLL)

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986 (Continued)

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1981</u> (Continued)			
10/10	England, London	2/37	Irish Republican Army
10/17	England, London	0/1	Irish Republican Army
10/20	Belgium, Antwerp	2/99	Direct Action Group
11/29	Syria, Damascus	64/135	FLL
12/15	Lebanon, Beirut	20/Dozens	Iran and Syria blamed
<u>1982</u>			
1/4	Italy, Rome, Rovigo	-	Red Brigades or Front Line Leftists
1/6	Ireland, Dublin	0/1	Irish Republican Army
2/22	Iran, Teheran	15/61	Mujahedeen Khalq Guerillas blamed
4/22	France, Paris	1/63	Syrian Forces
5/24	Lebanon, Beirut	14/21	Unidentified groups
7/20	England, London	3/22	Irish Republican Army
8/5	Lebanon, Beirut	0/9	Palestine Liberation Organization blamed
8/6	Lebanon, Beirut	Unknown due to earlier airstrike	No group claimed responsibility
9/17	France, Paris	-	Lebanese Revolutionary Armed Faction

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986 (Continued)

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1982 (Continued)</u>			
10/1	Iran, Teheran	60/200	No group claimed responsibility
10/31	West Germany, Giessen	-	Red Army Faction blamed
11/11	Lebanon, Tyre	89/0	Ahmad Khassir
11/24	Ireland, Belfast	-	Irish National Liberation Army
12/1	Lebanon, West Beirut	4/38	Maronite Christians blamed
12/14	West Germany, Butzbach	0/1	Five-member right-wing cell
12/15	West Germany, Darmstadt	-	Five-member right-wing cell
<u>1983</u>			
2/5	Lebanon, Beirut	20/100	No group claimed responsibility
2/5	Lebanon, Beirut	20/70	Unknown
4/18	Lebanon, Beirut	63/120	Islamic Holy War
5/20	South Africa, Pretoria	19/180	African National Congress
7/29	Italy, Sicily, Palermo	4/14	Italian Mafia
8/5	Lebanon, Tripoli	19/38	No group claimed responsibility
8/7	Lebanon	33/125	Front for the Liberation of Lebanon from Foreigners

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986 (Continued)

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1983 (Continued)</u>			
10/23	Lebanon, Beirut	23/15	Islamic Revolutionary Movement & Islamic Holy War
10/23	Lebanon, Beirut	241/75	Islamic Revolutionary Movement & Islamic Holy War
11/4	Lebanon, Tyre	39/many	Islamic Holy War
11/14	Guadeloupe, Basse Terre	0/23	Revolutionary Caribbean Alliance suspected
12/12	Kuwait	-	Shiite Moslems blamed
12/12	Kuwait	1/73	Islamic Holy War
12/12	Kuwait	5/15	Islamic Holy War
12/12	Kuwait	-	Islamic Holy War
12/12	Kuwait	0/3	Islamic Holy War
12/12	Kuwait	-	Islamic Holy War
12/17	England, London	6/95	Irish Republican Army
<u>1984</u>			
3/11	England, Manchester	0/3	Khadafy Sympathizers
3/24	Jordan, Amman	0/2	No group claimed responsibility
4/3	South Africa, Durban	3/16	African National Congress

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986 (Continued)

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1984</u> (Continued)			
4/12	Lebanon, Deir Kanoun	1/many	Shiite Moslems
6/20	Austria, Vienna	1/5	Armenian revolutionary group
7/13	South Africa, Durban	4/27	African National Congress
9/20	Lebanon, Beirut	60/24	Islamic Holy War
11/29	Lebanon, Beirut	7/17	Christians
12/21	Lebanon, Beirut	4/32	Christians blamed
<u>1985</u>			
2/1	Lebanon, Tripoli	10/60	Suni and Shiite Moslems accused
2/1	Portugal, Beja	0/1	Red Army Faction
3/8	Lebanon, Beirut	80/260	No group claimed responsibility
3/8	Lebanon, Beirut	80/100s	No group claimed responsibility
3/10	Israel, Tel Aviv	9/11	Lebanese National Resistance
3/10	Lebanon, Border Area	12/14	Moslem Groups
3/26	Chile, Santiago	0/9	Unknown
3/28	Chile, Santiago	-	Manuel Rodriguez Patriotic Front

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986 (Continued)

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1985 (Continued)</u>			
4/9	Lebanon, Beirut	2/50	Lebanese National
5/12	Iran, Teheran	12/35	U.S. agents accused
5/22	Lebanon, Beirut	60/190	No group claimed responsibility
5/25	Kuwait	3/11	Islamic Holy War
6/14	Lebanon, Beirut	23/many	No group claimed responsibility
7/9	Israel, Tel Aviv	6/13	Syrian Social Nationalist Party
7/9	Israel, Tel Aviv	0/2	Syrian Social Nationalist Party
7/15	Lebanon, Tibnit	-	Syrian Social Nationalist Party
8/6	Lebanon, Beirut, Hasbaya	-	Syrian Social Nationalist Party
8/8	West Germany, Frankfurt	2/16	Red Army Faction & Direct Action claimed joint responsibility
8/17	Lebanon, Beirut	-	No group claimed responsibility
9/19	Lebanon, Marjayoun	-	Arab Socialist Union-Nasserite Organization
9/23	India, Amritsar, Punjab	3/1	Sikh Terrorists

Table 2. CAR BOMBING CHRONOLOGY, 1980-1986 (Continued)

<u>DATE</u>	<u>LOCATION</u>	<u>CASUALTIES KILLED/WOUNDED</u>	<u>PERPETRATOR</u>
<u>1985</u>			
11/24	West Germany, Frankfurt	0/35	Palestinian Terrorists
11/26	Greece, Athens	1/14	Students Against the "Military Dictatorship"
12/21	South Africa, Durban	-	African National Congress
<u>1986</u>			
2/19	Portugal, Lisbon	-	Popular Forces of April 25 (FP-25)
2/24	Lebanon, Beirut	5/25	Hobeika Loyalists
3/8	Lebanon	5/42	Hobeika Loyalists

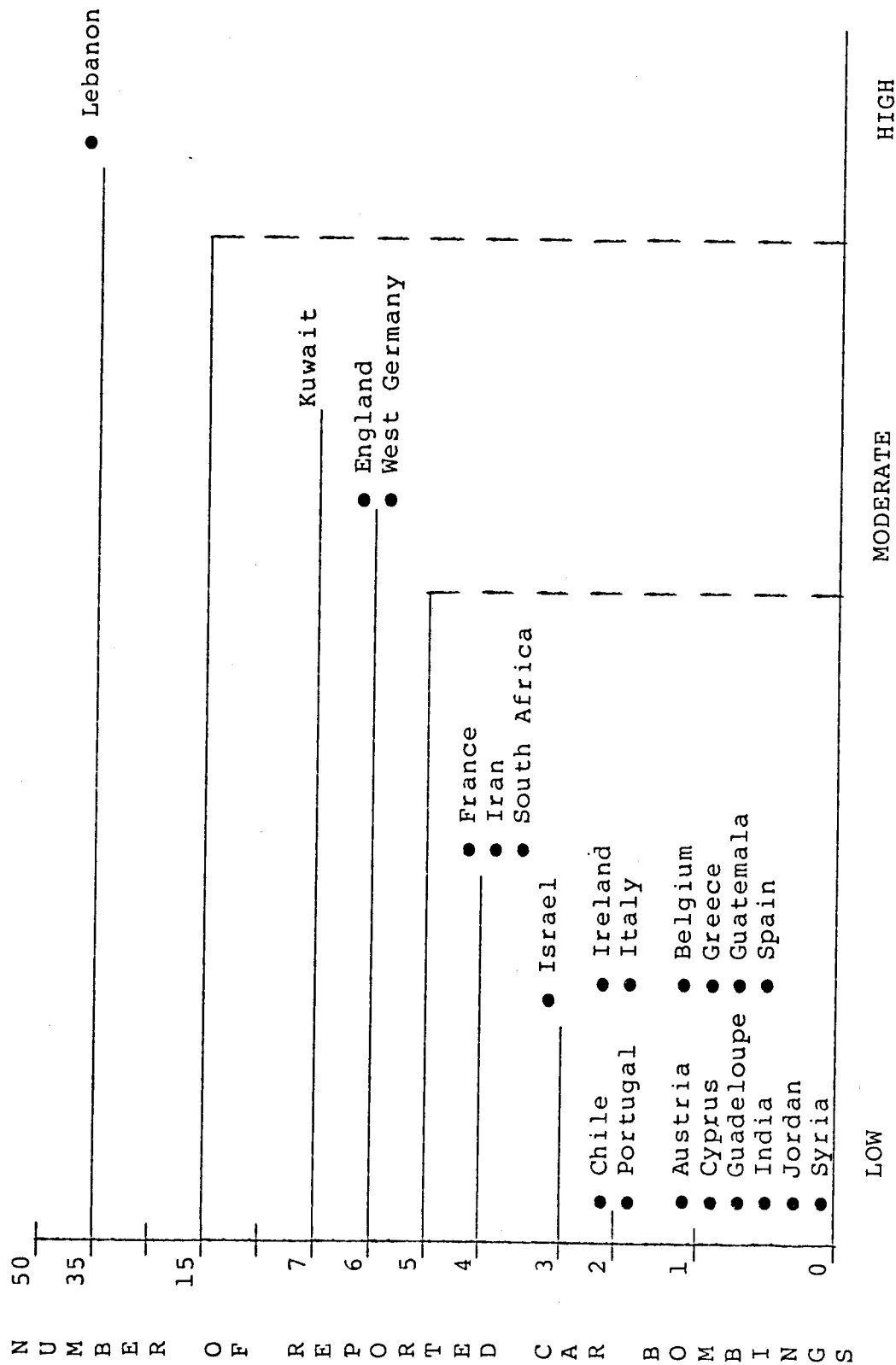


Figure 2: Car Bomb Country Threat Profile (1980-1986)

Total number of casualties, by year, are reflected in Figure 3. Exclusive of 1986, which only reflects a three-month period (to the extent that data is available), 1980 reflected the lowest number in killed and wounded (40/102) with 1983 reflecting the highest number, 493 killed and 951 wounded. (The degree of property damage is extremely difficult to quantify, and accordingly is not reflected.)

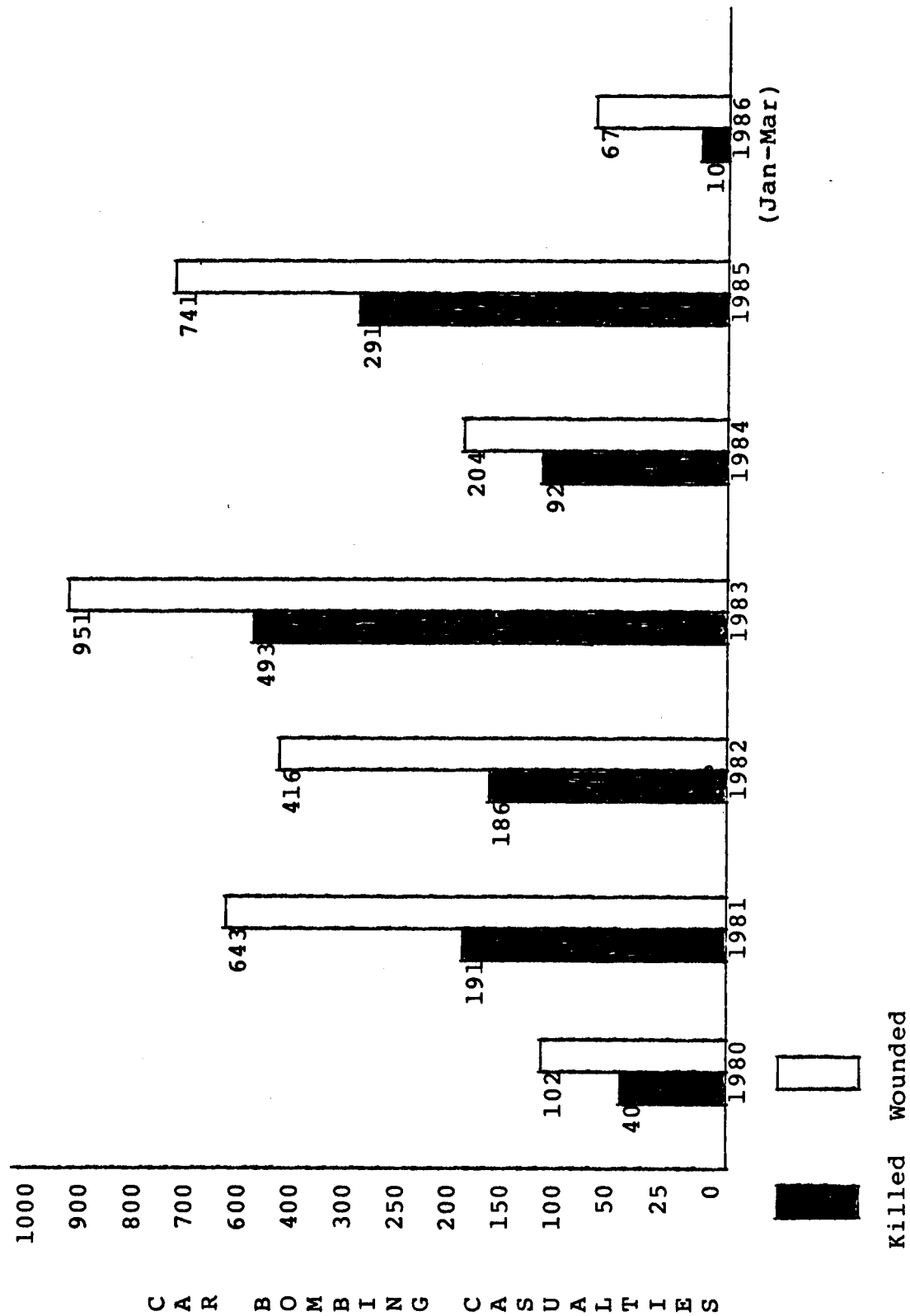


Figure 3: Car Bombing Casualties, 1980-1986

Table 3 provides a comprehensive overview of the 87 reported car bombings that were identified, to include target description (individuals, military, embassy, religious facilities, government facilities, industrial and residential complexes, media and administrative facilities, and miscellaneous targets); type of explosive, yield, a description of explosive device, type vehicle used, and the casualty effects (killed or wounded). The following abbreviations apply to Table 3.

- A - Automobile
- CB - Car Bomb
- D - Dynamite
- D&H - Dynamite and Hexogene
- HE - High Explosive
- K - Killed
- PE - Plastic Explosive
- RC - Remote Control
- TB - Time Bomb
- U - Unknown
- W - Wounded

Figure 3A provides a graphic representation of total car bombing incidents by target description.

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Individual(s)</u>					
(Austria)	U	U	CB-RC	Honda Accord	1-K 5-W
(Cyprus)	U	U	CB	A	1-W
(England)	U	U	CB	Red Volkswagon	1-W
(England)	U	U	CB	U	3-W
(France)	TNT	4	CB	White Peugeot	Vehicles Damaged/ High School Facility
(Ireland)	U	U	CB	A	
(Ireland)	U	U	CB	A	1-W
(Italy)	TNT	200	CB-RC	Green Fiat 126	4-K 14-W
(Kuwait)	U	220	CB	Small Car	3-K 11-W
(Lebanon)	HE	165	CB-RC	A	8-K 20-W
(Lebanon)	U	U	CB	A	80-K 260-W
(Lebanon)	U	U	CB	Renault Sedan	60-K 190-W
(Lebanon)	U	U	CB	A	5-K 25-W
(Lebanon)	TNT	275	CB	Small Renault	5-K 42-W
(Lebanon)	D&H	90-D 20-H	CB-RC	Fiat	4-K 38-W

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Individual(s)</u> (Continued)					
(Greece- Police)	U	U	CB- Electron- ically Detonated	Volkswagen	1-K 14-W
(India- Campaign Workers)	U	U	7XCB	Multiple Vehicles	3-K 1-W
● <u>Military</u>					
+ Barracks/ Facilities					
(England)	U	U	2XCB	U	5-W
(Iran)	U	U	CB	Garbage Truck	15-K 61-W
(Lebanon-U.S.)	TNT	1-6 Tons	CB	Large Red Mercedes- Benz Truck	241-K 5-W
(Lebanon- French)	TNT	U	CB	Truck	23-K 15-W
(West Germany- U.S. (PX))	U	U	CB	White Mercedes	
(West Germany- U.S. (HA))	U	13-15	CB	Station Wagon	
+ Headquarters					
(Lebanon- Israeli)	U	U	CB	Vehicle	79-K
(Lebanon- Israeli)	HE	1,000- 1,200	CB	Truck	39-K Many-W
(South Africa- AF)	U	U	CB	Blue Alpha Romeo	19-K 180-W
(West Germany- USAF)	U	U	CB	A	20-W

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Military (Continued)</u>					
+ Forces					
(England)	U	10	CB w/4-6" nails, remote control	Blue Austin	3-K 22-W
(Lebanon- Israeli)	U	440	CB	Peugeot	2-K 50-W
(Lebanon- Lebanese)	U	U	CB	A	213-K Many-W
(Lebanon- South Leb Army)	U	U	Explosives were hidden in saddle baskets on mule	Mule	
(Lebanon- Israeli)	U	200	CB	Pickup Truck	12-K 14-W
(Lebanon- Israeli)	U	U	CB	Pale Green Fiat	1-K Many-W
(Spain)	U	U	CB	U	3-K
(West Germany- U.S.)	U	U	CB	U	1-W
(West Germany- U.S.)	U w/Propane or Butane gas	U - 2 can of gas	CB	Volkswagon Sedan	2-K 10-W
(West Germany- U.S.)	U	U	CB	Silver- Blue Metallic BMW 525 Sedan	35-W

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Military (Continued)</u>					
+ Checkpoints					
(Israel)	U	300	CB	Volkswagon	6-K 13-W
(Israel)	U	220	CB	Peugeot 540	2-W
(Lebanon)	U	U	CB	Blue Mercedes	15-K 40-W
+ Airbase					
(Portugal)	U	U	8X Home- made CB	Mercedes	1-W
+ Convoy					
(Israel)	U	220	CB	Pickup Truck	9-K 11-W

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Embassy</u>					
(Kuwait-U.S.)	U	U	CB w/ explosives & butane gas cylinders	6-wheeled Mercedes Dump Truck	5-K 15-W
(Kuwait-French)	U	U	"	A	3-W
(Lebanon-Iraqi)	U	U	CB	A	20-K Dozens-W
(Lebanon-French)	U	U	CB-RC	Vehicle owned by Embassy Secretary	14-K 21-W
(Lebanon-U.S.)	U	2,000	CB-RC	Black Pickup Truck	63-K 120-W
(Lebanon-U.S.)	U	400	CB	White Van w/Dutch Diplomatic Plates	24-K 60-W
(Portugal-U.S.)	U	U	CB	Silver-Gray Volkswagon	

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Religious Facilities</u>					
(Belgium-Jewish Synagogue)	U	U	CB	Delivery Truck	2-K 99-W
(France)	U	U	CB-TB	A	4-K 12-W
(Lebanon-Moslem Place of Worship)	HE	165	CB-RC	Blue Saloon Car	19-K 38-W
(Lebanon)	D	130	CB	Blue Mercedes	10-K 60-W

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield</u> <u>Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Government Facilities</u>					
(Guadeloupe)	U	U	CB	A	23-W
(Guatemala)	D	U	CB	U	8-K 20-W
(South Africa)	TNT W/PE	U	CB	Datsun Sedan	3-K 16-W
● <u>Industrial Complexes</u>					
(Kuwait)	U	U	CB w/ explosives & butane gas cylinders (either RC or detonated by hand grenade)	Yellow Truck	
(Lebanon-Hotel)	D	U	CB	A	9-W
(Lebanon-Post Office)	U	U	CB	A	7-K 17-W
(England-Dept. Store)	U	25-30	CB-RC	Blue 1972 Austin 13006T	6-K 95-W

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>PLO HQ</u>					
(Lebanon)	U	220	CB	A	83-K 300-W
(Lebanon)	130 HE	550	CB	A	20-K 100-W
● <u>Media Facilities</u>					
(Chile-Newspaper Bldg)	D	77	CB	Fiat Sedan	9-W
(France-Magazine Facility)	U	U	CB	Orange Opel	1-K 63-W
● <u>Residential Complexes</u>					
(Kuwait-U.S.)	U	U	CB	A	
(Lebanon-School)	U	U	CB	A	4-K 32-W
● <u>International Airport</u>					
(Kuwait)	U	U	CB	Red Car	1-K 73-W
● <u>Administrative Facility</u>					
(Kuwait)	U	U	CB	A	
● <u>Bus</u>					
(England)	U	U	CB w/bolts & 6" nails	Laundry Van	2-K 37-W
● <u>Prison</u>					
(Italy)	U	U	CB	A	

Table 3. OVERVIEW OF REPORTED CAR BOMBINGS, 1980-1986 (Continued)

<u>Target Description</u>	<u>Explosive Type</u>	<u>Yield Eq Lbs of TNT</u>	<u>Description of Explosive Device</u>	<u>Type Vehicle Used</u>	<u>Effects</u>
● <u>Not Specified</u>					
(Chile)	D	77	CB	A	
(France)	U	U	CB	A	1-W
(Iran)	U	U	CB	Mini-bus	2-K 10-W
(Iran)	TNT	330	CB	Truck	60-K 200-W
(Iran)	TNT	110	CB	A	12-K 35-W
(Jordan)	U	U	CB	A	2-W
(Lebanon)	U	U	2xCB	A	20-K 44-W
(Lebanon)	U	U	CB	A	
(Lebanon)	U	528	CB-RC	A	20-K 70-W
(Lebanon)	U	U	CB	A	80-K 100-W
(Lebanon)	PE	550	CB	A	
(Lebanon)	HE	165	CB	A	30-K 125-W
(Lebanon)	U	220	CB	White Peugeot 504 flying a Red Cross flag	
(South Africa)	U	65	CB	U	4-K 27-W
(South Africa)	U	U	Limpet Mine	Van	
(Syria)	U	200	CB	A	64-K 135-W

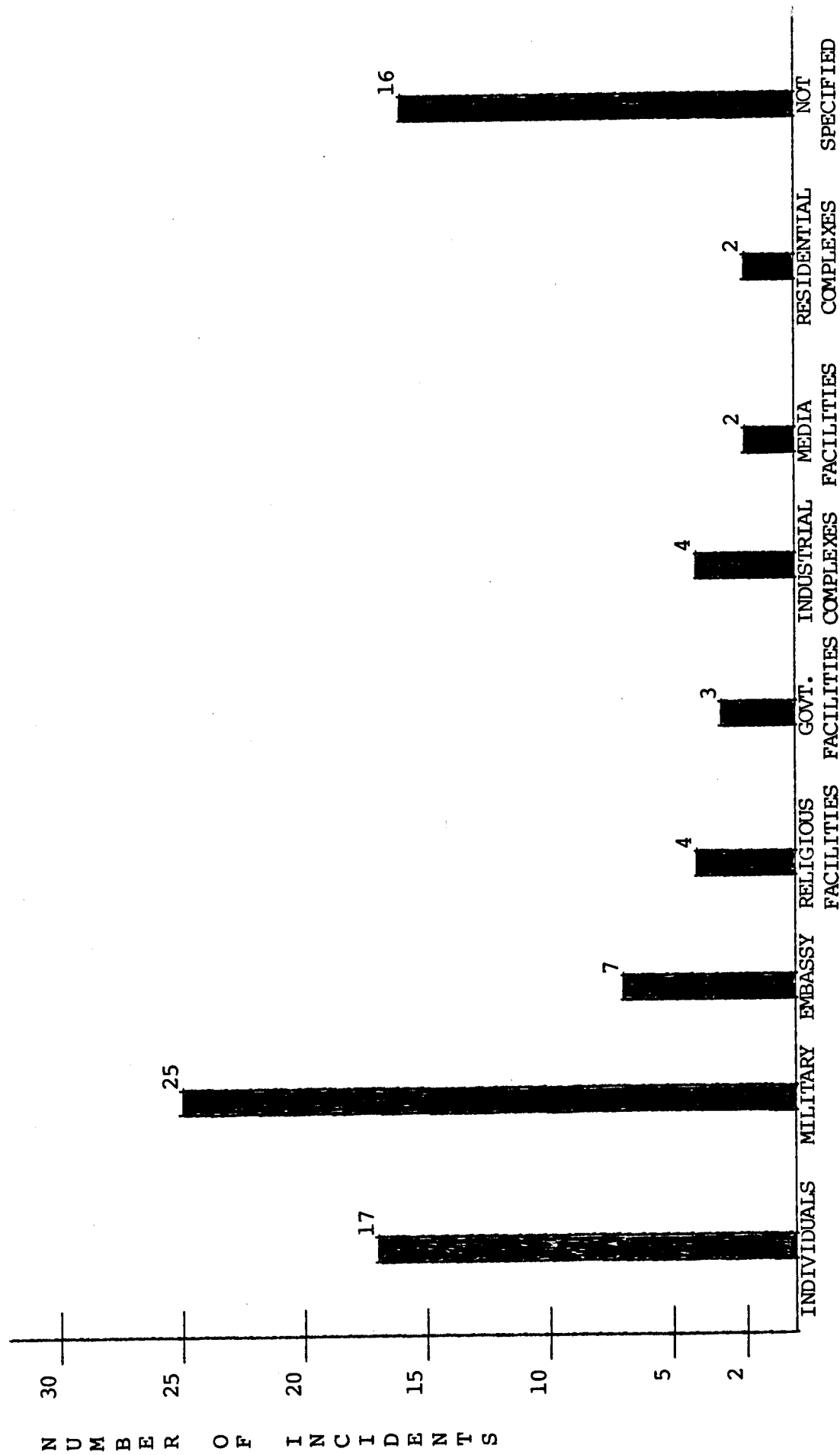


Figure 3A: Car Bombings: Target Description, 1980-1986 (Jan-Mar)

Of the car bombing incidents examined, terrorist preference was for TNT, ranging from a yield of one to 330 pounds (Table 4). In six incidents, the type of explosive could not be determined, but the yield was established at 220 pounds.

Table 4. REPORTED CAR BOMBINGS: EXPLOSIVE DATA

<u>Explosive Type</u>	<u>Yield (Eq Lbs of TNT)</u>	<u>No. Times Used</u>
TNT	1-6	1
TNT	4	1
U	13-15	1
U	25-30	1
U	65	1
D	77	2
TNT	110	1
D	130	1
HE	165	3
U	200	1
TNT	200	1
U	220	6
TNT	275	1
U	300	1
TNT	330	1
U	400	1
U	440	1
U	528	1
HE	550	1
PE	550	1
HE	1,000-1,2000	1
U	2,000	1

U - Unknown
D - Dynamite
HE - High Explosive
PE - Plastic Explosive

Where specific types of vehicles could be identified (Table 5), trucks were used in nine car bombings. Mercedes and Volkswagens were used six and five times respectively. Five vehicles--BMW, Datsun, Honda Accord, Opel, and a Romeo--were used in one incident each.

Table 5. REPORTED CAR BOMBINGS: VEHICULAR DESCRIPTION

<u>Vehicle Description</u>	<u>No. Car Bombings</u>
Austin	2
BMW	1
Datsun	1
Fiat	4
Honda Accord	1
Mercedes	6
(car-4)	
(truck-2)	
Opel	1
Peugeot	4
Renault	2
Romeo	1
Truck (exclusive of Mercedes)	9
Van	3
Volkswagon	5
	—
Total	40

NOTES:

1. Total no. reported car bombing incidents: 87
2. No. countries: 22
3. Timeframe: 1980-86 (Jan.-March 8)
4. Automobile (positive ID type unknown): 32

The remainder of this section will provide a synopsis of the car bombing incidents by year (1980-1986), focusing on the ten factors identified earlier as areas of primary interest for this analysis.

The purpose of all six reported car bombs examined in 1980 were to kill either specific individuals or members of ethnic communities. In three incidents, specific facilities--an army barracks, a synagogue, and a national palace--were targeted. In all cases, innocent bystanders were killed or wounded. In five of the six incidents, terrorist organizations either claimed responsibility or were identified. Casualties ranged from a low of four killed and five wounded, to a high of 20 killed and 44 wounded. Only in one incident was the type of explosive (dynamite) identified. In none of the incidents was the yield of the explosion determined. No specific description of the type of vehicle (other than automobile) used in any of the bombings was reported. In all incidents, the vehicle used by the terrorist was parked within proximity of the intended victim(s)/facility(ies). In two incidents multiple bombs (two) were used. The penetration of security checkpoints was not a factor. Initial response of security personnel was not applicable.

In 1981, reported car bombings almost doubled from the previous year (11 versus six). Ten of the 11 incidents were targeted against specific individuals or facilities. In one incident, it is assumed that the target was either policemen or military personnel. In nine incidents, terrorist organizations either claimed responsibility or were identified as the perpetrators of the attack. In four of the incidents there were no deaths; however, wounded varied from one to 20. Casualties in the remaining seven incidents

ranged from two to 83 killed and 37 to 300 wounded. Innocent bystanders were victims in eight of the car bombings. The types of explosives were not determined in any of the incidents--two yields were identified, 200 and 220 pounds. The types of vehicles used included: a Volkswagon (victim's car), a delivery truck, a laundry van, a minibus, a blue Mercedes, and an army staff car. In eight incidents, cars were parked within proximity of their targets. A pressure bomb was used in one incident (victim's car). In another incident, the victim's car exploded after being driven a few feet. In one incident (suicidal bomber), the terrorist sped through a hail of machine-gun fire by security personnel into the embassy compound and into the basement garage. There was one incident of a remote wire control-command denotation.

The year 1982 reflected an increase in car bombings from the previous year. Fifteen of the 16 incidents were designed to kill or destroy surrounding facilities. (One car bombing was used to assist in a prison break.) Terrorist organizations either claimed responsibility or were blamed for 13 of the 16 incidents. One additional incident was attributed to a suicidal bomber. In the two remaining incidents, credit was neither sought nor a perpetrator/affiliation identified. Despite the increase in total number of incidents from previous years, personnel casualties were somewhat smaller. Lives lost and injured ranged from one to 89, and one to 200, respectively. In three of the car bombings the type of explosive was determined [TNT (two) and dynamite]. Yields of TNT equivalent pounds was established in four of the incidents at four, ten, 13 to 15, and 330. Eight types of vehicles were identified in the bombings: blue Austin, orange Opel,

white Peugeot, garbage truck, truck, Fiat, white Mercedes, and a station wagon. In two of the incidents pressure sensitive bombs were placed under the driver's seat. Two bombs were detonated by remote control. (In one instance, it is speculated that the individual who triggered the bomb was 55 yards away.) Five of the bombings occurred in the victim's car; in 15 incidents, cars were parked. There was one suicidal bomber which penetrated security (this was the first attack of this type against the Israelis in Lebanon), and one car (belonging to an embassy staff member) to which a bomb was attached, and subsequently detonated, that was not inspected by security personnel.

In 1983, 18 car bomb incidents were recorded. A unique aspect of the bombings that occurred in this year was that six of the total incidents were conducted in Kuwait on December 12. All six of these car bombs included explosives and butane gas cylinders. This year also marked an increase in casualties and the use of larger yields of explosives. In addition, there were five suicidal bomber incidents. Four military headquarters and three embassies were targeted by terrorists. In seven of the 18 bombings, the Islamic Holy War claimed responsibility. Only two of the incidents went unclaimed. Deaths from these 18 car bombings ranged from zero to 241. The number of wounded ranged from zero to 180. In four incidents the wounded numbered 100 or more. The type of explosive was determined in seven of the bombings (four-HE and three-TNT). It was possible to identify the yield of the explosion (equivalent pounds of TNT) in nine incidents. They were: one-6; 25-30; 165 (two); 200; 528; 550; 1,000-1,200; and 2,000. Eleven different types of vehicles were used in the 18 car bombings. Assorted trucks were used six times. Other

vehicles included: a blue 1972 Austin 1300 GT, a green Fiat 126, a blue saloon car, and a blue Alpha Romeo. In seven of the 18 incidents, bombs were detonated by remote control or hand grenade. Of the five suicidal bomber incidents in which security checkpoints and/or barriers were penetrated, only in two cases did security guards fire their weapons at the driver. In three of the five suicidal bomber attacks, the terrorist vehicle crashed through protective gates.

A 50 percent reduction in car bombs from the previous year occurred in 1984. Of the nine incidents recorded, four were in Lebanon, two in South Africa, and one each in Austria, England, and Jordan. Targets included individuals, government office buildings, a school, an embassy annex, and military forces. In comparison to earlier years, casualties were relatively small--the largest number of deaths were 24. Wounded ranged from 2-60. Only in one incident was the type of explosive identified (TNT). The yield of the explosion was determined for two of the bombings (65 and 400). Four types of vehicles were identified: Honda Accord (victim's car), a white van, a pale green Fiat, and a Datsun sedan. One car bombing was remote control detonated. Suicidal bombers accounted for two of the nine incidents. However, only one of the suicidal bombers crashed through barrier defenses and ran a gauntlet of obstacles and gunfire before arriving at his target. (The second suicidal bomber crashed his car into an armored personnel carrier.) In eight of the incidents, specific terrorist organizations claimed responsibility for the car bombings.

The year 1985 was the year of the suicidal bomber. Of the 24 reported car bombs, ten were suicidal. In four of the ten, the driver had left behind a videotape which was subsequently aired on local television. Two of the suicidal

bombers were females and in one incident the means of transportation was a mule, which took the guards by surprise. (Although not a car bomb per se, the mule incident reflects an adaptive means to transport explosives.) In none of the suicidal bombings were the types of explosives identified, but the yield was determined in eight of the ten incidents--200, 220 (four), 300, 440, and 550. Conducted primarily to inflict large scale casualties, 11 of the 24 car bombings were directed at military forces and/or their facilities. Deaths ranged from zero to 80 (twice) with the number of wounded ranging from one (twice) to 260. In three of the 24 bombings, a Volkswagon was used three times; a Peugeot 504, a Mercedes, and pickup trucks were used twice each. Other vehicles involved included: a Fiat, a Renault, a BMW sedan, and a van. In two of the incidents multiple bombs were used (seven and eight) and in one case a bomb was detonated electronically. In 18 of the 24 incidents terrorist organizations either claimed responsibility or were accused for the bombings.

Data for 1986 (through March 8), revealed three reported car bombings--Lebanon (two) and Portugal. The two Lebanon incidents were directed at the Christian community by Hobeika loyalists. In each bombing, five people were killed. Twenty-five people were wounded in the first incident and 42 in the second. Only in one of these two incidents were the type of explosive and yield determined--TNT/275--and the type of vehicle identified (a small Renault). The Portugal bombing was directed against the U.S. Embassy. Information revealed that a bomb was placed in the car trunk (Volkswagon) of one of the U.S. Marine guards. It was detected during a routine security check.

Of the 87 car bombings researched, 60 were parked at the time of denotation and 17 were moving. Because of insufficient data, ten of the incidents could not be categorized (Figure 3B).

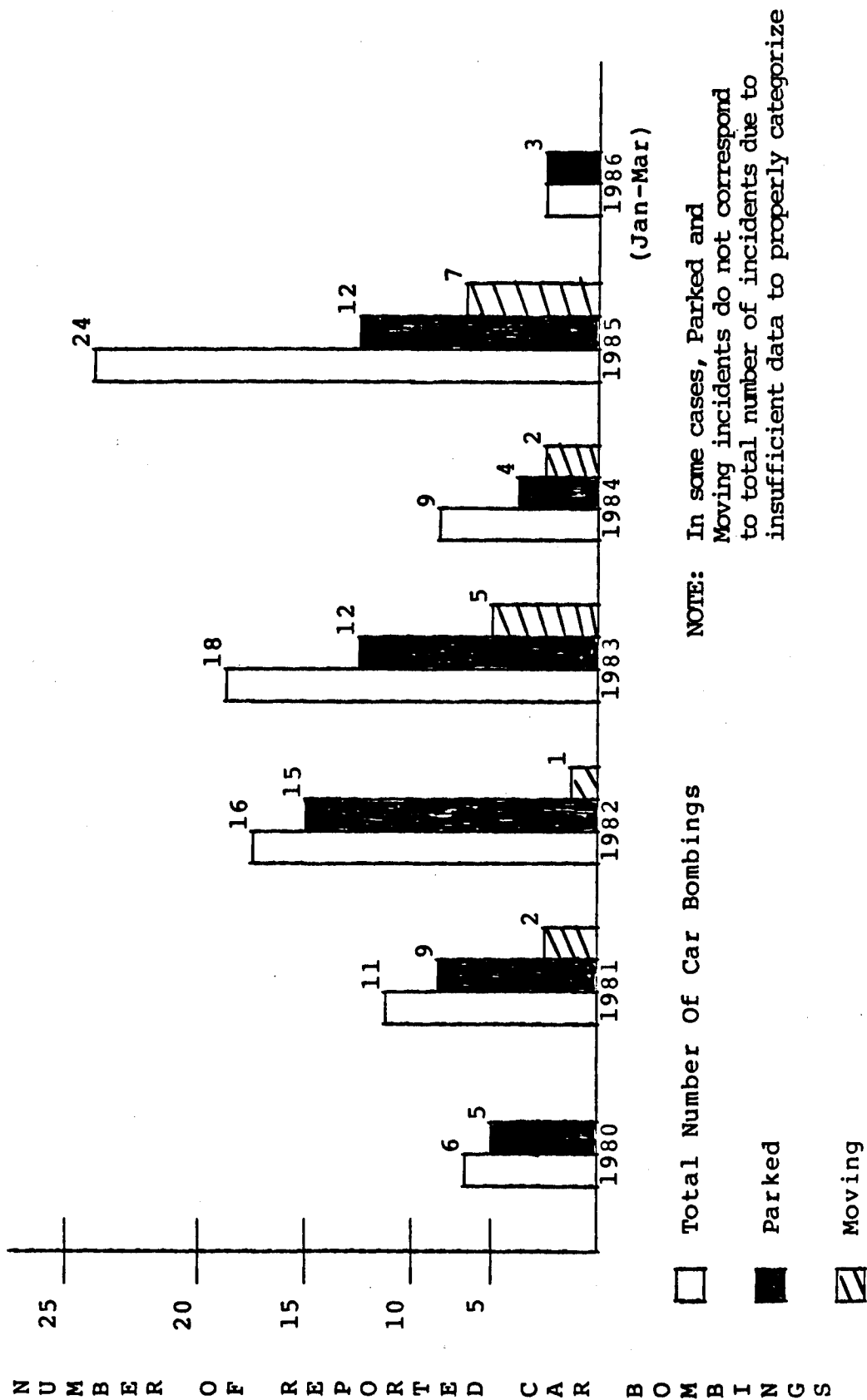


Figure 3B: Car Bombings, 1980-1986: Vehicle Status

CONCLUSION

The car bomb has been and will continue to be a popular terrorist tactic for at least three reasons.

- It is a relatively easy technique to master, requiring little technical know-how.
- Except for suicidal bombings, terrorists confront only a low risk of injury or capture.
- It produces the desired psychological effect, namely mass casualties, and draws immediate news media coverage.

In sum, the following observations can be drawn from this discussion of car bombs:

- Car bombing capitalizes on the strategy of surprise which is at the heart of terrorist success.
- Since 1980, terrorist car bombings have increased in number and lethality.
- Lebanon remains at the center of car bombings.
- The readily available supply of explosives provides terrorists worldwide with the means to conduct more destructive and increasing acts of terrorism.
- To date, terrorists have reverted to multiple, coordinated car bombings only in a few incidents.
- Suicidal car bombings are on the rise.
- Terrorist organizations actively seek recognition for their heinous acts (Table 6) and most are insensitive to the well-being of innocent bystanders.
- Car bombing attacks against military forces and/or installations are increasing.
- Target-hardening and security measures have been largely unsuccessful in coping with car bombings.
- Prospects for a slowdown in car bombings are dim.

TABLE 6: CAR BOMBING: BY TERRORIST GROUP

<u>YEAR</u>	<u>NUMBER</u>	<u>TERRORIST GROUP</u>
1980 (6)*	1 (France)	Faisceaux Nationalistes Europeens
	1 (Lebanon)	Front for the Liberation of Lebanon from Foreigners
	1 (Guatemala)	Guatemalan Leftists
	1 (England)	Irish Republic Army
	1 (France)	Revolutionary Nationalist Movement
	1 (Lebanon)	Unknown
1981 (11)	1 (Spain)	Basque Separatists
	1 (Belgium)	Direct Action Group
	2 (Lebanon) (Syria)	Front for the Liberation of Lebanon
	1 (Lebanon)	Iran/Syria (Jointly Blamed)
	2 (England)	Irish Republican Army
	2 (Cyprus) (Lebanon)	Israeli Agents to Blame
	1 (West Germany)	Red Army Faction
	1 (Iran)	Unknown

* () Total Number of incidents.

TABLE 6: CAR BOMBING: BY TERRORIST GROUP (Continued)

<u>YEAR</u>	<u>NUMBER</u>	<u>TERRORIST GROUP</u>
1982 (16)	1 (Lebanon)	Ahmad Khassir
	2 (West Germany)	Five-Member Right-Wing Cell
	1 (Ireland)	Irish National Liberation Army
	2 (Ireland) (England)	Irish Republican Army
	1 (France)	Lebanese Revolutionary Armed Faction
	1 (Lebanon)	Maronite Christians
	1 (Iran)	Mujahedeen Khalq Guerrillas
	1 (Lebanon)	Palestine Liberation Organization
	1 (West Germany)	Red Army Faction
	1 (Italy)	Red Brigades or Front Line Leftists
	1 (France)	Syrian Forces
	2 (Lebanon)	Unknown
	1 (Iran)	

TABLE 6: CAR BOMBING: BY TERRORIST GROUP (Continued)

<u>YEAR</u>	<u>NUMBER</u>	<u>TERRORIST GROUP</u>
1983 (18)	1 (South Africa)	African National Congress
	1 (Lebanon)	Front for the Liberation of Lebanon from Foreigners
	1 (England)	Irish Republican Army
	2 (Lebanon)	Islamic Holy War
	5 (Kuwait)	
	2 (Lebanon)	Islamic Revolutionary Movement and Islamic Holy War
	1 (Italy)	Italian Mafia
	1 (Guadeloupe)	Revolutionary Caribbean Alliance
	1 (Kuwait)	Shiite Moslems
	3 (Lebanon)	Unknown
1984 (9)	2 (South Africa)	African National Congress
	1 (Austria)	Armenian Revolutionary Group
	2 (Lebanon)	Christians
	1 (Lebanon)	Islamic Holy War
	1 (England)	Khadafy Sympathizers
	1 (Lebanon)	Shiite Moslems
	1 (Jordan)	Unknown

TABLE 6: CAR BOMBING: BY TERRORIST GROUP (Continued)

<u>YEAR</u>	<u>NUMBER</u>	<u>TERRORIST GROUP</u>
1985 (24)	1 (South Africa)	African National Congress
	1 (Lebanon)	Arab Socialist Union-Nasserite Organization
	1 (Kuwait)	Islamic Holy War
	1 (Israel)	Lebanese National Resistance Front
	1 (Lebanon)	
	1 (Chile)	Manuel Rodriguez Patriotic Front
	1 (Lebanon)	Moslem Groups
	1 (West Germany)	Palestinian Terrorists
	1 (Portugal)	Red Army Faction
	1 (West Germany)	(RAF and Direct Action claimed joint responsibility)
	1 (India)	Sikh Terrorists
	1 (Lebanon)	Suni and Shiite Moslems
	1 (Greece)	Students Against the "Military Dictatorship"
	2 (Israel)	Syrian Social Nationalist Party
	2 (Lebanon)	
	1 (Iran)	U.S. Agents blamed
	5 (Lebanon)	Unknown
	1 (Chile)	
1986 (3)	2 (Lebanon)	Hobeika Loyalists
	1 (Portugal)	Popular Forces of April 25

END NOTES

1. For a more detailed treatment see, Harvey J. McGeorge, II, "Kinetics of Terrorism" especially pp. 27-31, in World Affairs, Summer 1983.
2. Ibid., p. 39 (modified).
3. Neil C. Livingstone, The War Against Terrorism. Lexington, MA: D.C. Heath and Company, 1982, p. 104.
4. Ibid.
5. For a very perceptive article on car bomb tactics and methods see, Beth A. Salamanca, "Vehicle Bombs: Death on Wheels," pp. 35-47, in Neil C. Livingstone and Terrell E. Arnold, Fighting Back. Lexington, MA: D.C. Heath and Company, 1986.
6. All of these suicidal bombings received extensive coverage by the U.S. news media. For more detailed information especially see The Washington Post, The New York Times, Newsweek, Time, U.S. News and World Report. Also see Report of the DOD Commission on Beirut International Terrorist Act, October 23, 1983, U.S. Government Printing Office, Washington, D.C., December 20, 1983.
7. For this section, I have extracted material from Christopher Dobson and Ronald Payne, The Terrorists: Their Weapons, Leaders, and Tactics, Revised Edition. New York: Facts on File, Inc., 1982, Chapter 7.

APPENDIX A

000058

CAR BOMB INCIDENT REPORT

DATE: 6/20/1984

LOCATION (COUNTRY, STATE, CITY): AUSTRIA, VIENNA

TARGET: ERDOGAN OZEN

TARGET DESCRIPTION: LABOR ATTACHE TO THE TURKISH EMBASSY IN VIENNA

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ARMENIAN REVOLUTIONARY ARMY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB, REMOTE CONTROL

DESCRIPTION OF VEHICLE USED: OZEN'S HONDA ACCORD

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY. OZEN HAD JUST STOPPED IN A PARKING ZONE RESERVED FOR DIPLOMATS' CARS.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMB WAS PLANTED IN OZEN'S CAR

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
BOMB EXPLODED AS THE DUTY OFFICER APPROACHED THE VEHICLE.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
DEBRIS WAS SCATTERED OVER A 150 FOOT RADIUS. MANY BUILDINGS WERE DAMAGED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
1 PERSON KILLED AND 5 PEOPLE WOUNDED. POLICE RESPONDED TO THE SCENE.

COMMENTS:
POLITICALLY MOTIVATED BOMBING TO PROTEST TURKISH RULE OF ARMENIA.

CAR BOMB INCIDENT REPORT

DATE: 10/20/1981

LOCATION (COUNTRY, STATE, CITY): BELGIUM, ANTWERP

TARGET: JEWISH SYNAGOGUE

TARGET DESCRIPTION: SYNAGOGUE IN THE CITY'S DIAMOND DISTRICT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
DIRECT ACTION GROUP, SECTION BELGIUM

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: DELIVERY TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
LARGELY JEWISH AREA IN ONE OF THE WORLD'S GREATEST DIAMOND CUTTING AND
SETTING DISTRICTS.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
TRUCK WAS PARKED CONTAINING EXPLOSIVES. THE CURTAINS WERE DRAWN ON THE
TRUCK AND ONE OF THE WHEELS WAS REMOVED TO MAKE IT APPEAR BROKEN DOWN.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE CORDONED OFF THE AREA AND ORDERED NEARBY OFFICES CLEARED.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE BLAST BROKE WINDOWS FOR BLOCKS AND DEMOLISHED THE VAN LEAVING ONLY THE
AXLE AND A PILE OF GLASS AND OTHER DEBRIS. SYNAGOGUE WAS HEAVILY DAMAGED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
2 PEOPLE DIED AND 99 WERE WOUNDED.

COMMENTS:
MANY OF THE SURROUNDING BUILDINGS WERE SO HEAVILY DAMAGED THAT THE DIAMOND
DISTRICT VIRTUALLY SHUT DOWN FOR SEVERAL DAYS FOLLOWING THE BLAST.

000060

CAR BOMB INCIDENT REPORT

DATE: 3/26/1985

LOCATION (COUNTRY, STATE, CITY): CHILE, SANTIAGO

TARGET: LA NACION NEWSPAPER BUILDING

TARGET DESCRIPTION: LA NACION IS THE GOVERNMENT RUN NEWSPAPER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: DYNAMITE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 77 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: STOLEN FIAT SEDAN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED IN FRONT OF TH GOVERNMENT NEWSPAPER
BUILDING, ACROSS CONSTITUTION SQUARE FROM THE PRESIDENTIAL PALACE.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE BLAST SHATTERED EVERY WINDOW IN THE 10 STORY BUILDING. THE CAR WAS
DEMOLISHED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
9 PEOPLE WERE INJURED INCLUDING 6 NEWSPAPER EMPLOYEES. ONE MAN WAS
HOSPITALIZED.

COMMENTS:
BOMB WAS PLANTED AS PART OF A ONE DAY PROTEST IN AN ATTEMPT TO REVIVE
PUBLIC PRESSURE TO RETURN CIVILIAN RULE. A COMMUNIST-LED COALITION, THE
DEMOCRATIC POPULAR MOVEMENT, IS SUSPECTED OF PLANTING THE CAR BOMB.

000061

CAR BOMB INCIDENT REPORT

DATE: 3/28/1985

LOCATION (COUNTRY, STATE, CITY): CHILE, SANTIAGO

TARGET: NONE SPECIFIED

TARGET DESCRIPTION: COMMERCIAL BLOCK OF SANTIAGO'S UPTOWN PROVIDENCIA DISTRICT
NEAR A BANK

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
MANUEL RODRIGUEZ PATRIOTIC FRONT

EXPLOSIVE TYPE: DYNAMITE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 77 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED OUTSIDE A BANK IN A COMMERCIAL
SECTION OF SANTIAGO

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
CONFUSION ENSUED

COMMENTS:
GOVERNMENT PROTESTORS (BELIEVED TO BE A COMMUNIST GROUP) WERE BLAMED FOR
THE BLAST. POLICE OFFICIALS SEEM UNABLE TO DEAL WITH THE RECENT RASH OF
TERRORISM.

000062

CAR BOMB INCIDENT REPORT

DATE: 1/3/1981

LOCATION (COUNTRY, STATE, CITY): CYPRUS, NICOSIA

TARGET: HANI AL-HINDI

TARGET DESCRIPTION: SYRIAN FOUNDED MEMBER OF PAN-ARAB AND PALESTINIAN
MOVEMENTS

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISRAELI AGENTS WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: MR. AL-HINDI'S OWN CAR

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
RESIDENTIAL SECTION OF CYPRUS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMB PLACED UNDER THE FRONT SEAT OF AL-HINDI'S CAR EXPLODED WHEN HE SAT
DOWN

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
AL-HINDI WAS HOSPITALIZED WITH SERIOUS WOUNDS

COMMENTS:
MR. AL-HINDI WAS A PROMINENT FIGURE IN THE EARLY YEARS OF THE ARAB
STRUGGLE BUT HAD NOT BEEN ACTIVE IN POLITICS FOR THE LAST 10 YEARS.

CAR BOMB INCIDENT REPORT

DATE: 12/2/1980

LOCATION (COUNTRY,STATE,CITY): ENGLAND, LONDON

TARGET: HAMMERSMITH ARMY BARRACKS

TARGET DESCRIPTION: BARRACKS USED TO HOUSE ARMY PERSONNEL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH REPUBLIC ARMY (IRA)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: 2 CAR BOMBS

DESCRIPTION OF VEHICLE USED: NOT AVAILABLE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
5 CIVILIANS WERE INJURED

COMMENTS:

000064

CAR BOMB INCIDENT REPORT

DATE: 10/10/1981

LOCATION (COUNTRY, STATE, CITY): ENGLAND, LONDON

TARGET: IRISH GUARDS AND THEIR FAMILIES

TARGET DESCRIPTION: BUS CONTAINING 23 IRISH GUARDS AND THEIR FAMILIES

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH REPUBLICAN ARMY (IRA)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB CONTAINING BOLTS AND 6 INCH NAILS

DESCRIPTION OF VEHICLE USED: LAUNDRY VAN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
WITNESSES SAID 2 MEN PUSHED THE VAN INTO POSITION 30 MINUTES BEFORE THE
EXPLOSION

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
GUARDS RUSHED TO THE SCENE TO KEEP SPECTATORS AWAY

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
2 PEOPLE KILLED AND 37 INJURED. "IT WAS JUST MADNESS", SAID WITNESS.

COMMENTS:
THE GUARDS USE THIS SAME ROUTE EVERYDAY TO AND FROM THE TOWER OF LONDON.
THE BOMB WAS DETONATED BY REMOTE CONTROL WITH A COMMAND WIRE ATTACHED TO
THE VAN.

000065

CAR BOMB INCIDENT REPORT

DATE: 10/17/1981

LOCATION (COUNTRY, STATE, CITY): ENGLAND, LONDON

TARGET: LT. GEN. SIR STUART PRINGLE

**TARGET DESCRIPTION: GEN. PRINGLE IS COMMANDER OF BRITAIN'S ROYAL MARINES
COMMANDO FORCES**

**PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH REPUBLICAN ARMY (IRA)**

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: GEN. PRINGLE'S RED VOLKSWAGON PASSAT

**DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY**

**DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
PRINGLE STARTED THE CAR AND HAD DRIVEN A FEW FEET WHEN THE EXPLOSION
OCCURED.**

**NOTABLE DRIVER ACTIONS:
NONE**

**RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT**

**DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE HOOD OF THE CAR WAS BLOWN OVER THE TOP OF A NEARBY HOUSE AND THE CAR'S
ROOF WAS PEELED BACK.**

**DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
FIREMAN AND POLICE ARRIVED ON THE SCENE AND ATTEMPTED TO FREE GEN. PRINGLE
FROM THE WRECKAGE.**

**COMMENTS:
PRINGLE WAS CRITICALLY INJURED IN THE BLAST (HE LOST A LEG) BUT WAS NOT
KILLED.**

CAR BOMB INCIDENT REPORT

DATE: 7/20/1982

LOCATION (COUNTRY,STATE,CITY): ENGLAND, LONDON

TARGET: HOUSEHOLD CAVALRY

TARGET DESCRIPTION: SOLDIERS OF THE HOUSEHOLD CAVALRY, HYDE PARK

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH REPUBLICAN ARMY (IRA)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 10 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB. EXPLOSIVES WITH 4 TO 6 INCH NAILS,
REMOTE CONTROLLED.

DESCRIPTION OF VEHICLE USED: BLUE AUSTIN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NORMAL ACTIVITY IN HYDE PARK. THE GUARDS WERE ON THEIR WAY TO THE
CHANGING OF THE GUARD CEREMONY.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE CAR WAS PARKED NEAR ROTTEN ROW, THE BRIDAL PATH AROUND THE PARK.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE CORDONED OFF THE PARK CLOSING STREETS AROUND AND INSIDE THE PARK.
THE PUBLIC WAS WARNED TO BE VIGILANT.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE SCENE WAS ONE OF "...SHEER HORROR".

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
TRAFFIC BUILT UP AND CROWDS GATHERED. 3 PEOPLE KILLED AND 22 WOUNDED.

COMMENTS:
THE GUARDS ARE NOTED FOR THEIR PUNCTUALITY AND THIS WAS THEIR NORMAL
ROUTE, THUS IT WAS NOT DIFFICULT TO TIME THE ATTACK.

000067

CAR BOMB INCIDENT REPORT

DATE: 12/17/1983

LOCATION (COUNTRY,STATE,CITY): ENGLAND, LONDON

TARGET: HARRODS DEPARTMENT STORE

TARGET DESCRIPTION: POPULAR ENGLISH SHOPPING FACILITY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH REPUBLICAN ARMY (IRA)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): APPROX. 25-30 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB, REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: BLUE 1972 AUSTIN 1300 GT

DESCRIPTION OF AREA PRIOR TO EXPLOSION:

AREA CROWDED WITH CHRISTMAS SHOPPERS. VEHICLE WITH BOMB WAS PARKED ON HANS
CRESENT, A STREET ON THE SIDE OF HARRODS.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:

BOMB WARNINGS WERE RECEIVED BY PHONE 36 MIN. PRIOR TO DETONATION. POLICE
WITH BOMB SNIFFER DOGS WERE APPROACHING THE CAR AS IT EXPLODED.

NOTABLE DRIVER ACTIONS:

NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):

STREETS WERE CLOSED, ROADBLOCKS SET UP. A CODED MESSAGE OVER HARRODS P.A.
SYSTEM ALERTED STAFF TO SEARCH THEIR SECTIONS FOR MORE BOMBS.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:

DEVASTATED 4 FLOORS ALONG ONE SIDE OF HARRODS. APPROX. 10% OF THE STORE
WAS DAMAGED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:

6 KILLED AND 95 WOUNDED. BUILDINGS AROUND HARRODS WERE EVACUATED. 700
EXTRA POLICE WERE DEPLOYED TO CENTRAL LONDON.

COMMENTS:

PARKING WAS BANNED ON EITHER SIDE OF OXFORD STREET, THE MAIN SHOPPING
THOROUGHFARE. PUBLIC IS ASKED TO BE AWARE OF SUSPICIOUS CARS AND PACKAGES
AND TO ALERT POLICE.

000068

CAR BOMB INCIDENT REPORT

DATE: 3/11/1984

LOCATION (COUNTRY, STATE, CITY): ENGLAND, MANCHESTER

TARGET: UNIDENTIFIED LIBYAN EXILE

TARGET DESCRIPTION: LIBYAN EXILE WHO IS AN OPPONENT OF MOHAMMAR KHADAFY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
KHADAFY SYMPATHIZERS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: CAR OWNED BY INTENDED VICTIM

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE SEALED OFF AREA AND EVACUATED RESIDENTS.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CAR WAS DEMOLISHED. MINOR DAMAGE TO SURROUNDING AREA. NO CASUALTIES.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
CONFUSION ENSUED

COMMENTS:
ANOTHER DEVICE WAS FOUND NEARBY A FEW HOURS LATER. THE DEVICE WENT OFF AS BOMB EXPERTS WERE PREPARING TO DETONATE IT. THREE CIVILIANS WERE INJURED IN THE SECOND BLAST.

000069

CAR BOMB INCIDENT REPORT

DATE: 10/3/1980

LOCATION (COUNTRY, STATE, CITY): FRANCE, PARIS

TARGET: UNION LIBERAL SYNAGOGUE

TARGET DESCRIPTION: ISRAELITE SYNAGOGUE IN THE 16TH DISTRICT AT 24 RUE COPERNIC

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
FAISCEAUX NATIONALISTES EUROPEENS (FNE)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR TIME-BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SABBATH SERVICES WERE GOING ON INSIDE THE SYNAGOGUE

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMB WAS PLACED IN A PARKED CAR

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE BLAST OVERTURNED CARS, DAMAGED 5 BUILDINGS AND SHATTERED WINDOWS FOR BLOCKS.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
4 PEOPLE WERE KILLED AND 12 OTHERS WERE INJURED

COMMENTS:
THE BOMB HAD APPARENTLY BEEN TIMED TO GO OFF WHEN THE SERVICES ENDED. IF IT HAD WORKED AS PLANNED, 100'S COULD HAVE BEEN KILLED.

000070

CAR BOMB INCIDENT REPORT

DATE: 10/5/1980

LOCATION (COUNTRY, STATE, CITY): FRANCE, PARIS

TARGET: NO SPECIFIC TARGET

TARGET DESCRIPTION: BLAST DIRECTED TOWARDS THE JEWISH COMMUNITY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
REVOLUTIONARY NATIONALIST MOVEMENT

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BOMB PLANTED ON CAR PARKED ON BOULEVARD ST. GERMAINE IN THE LATIN QUARTER
OF PARIS.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE, VEHICLE CONTAINING BOMB WAS RIPPED APART

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
FEMALE DUTCH TOURIST IN CRITICAL CONDITION.

COMMENTS:
THE INJURED WOMAN, THE OWNER OF THE VEHICLE CONTAINING THE BOMB, WAS NOT
JEWISH.

000071

CAR BOMB INCIDENT REPORT

DATE: 4/22/1982

LOCATION (COUNTRY, STATE, CITY): FRANCE, PARIS

TARGET: LEBANESE NEWS WEEKLY

TARGET DESCRIPTION: PARIS BASED MAGAZINE THAT IS OPENLY PRO-IRAQI

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SYRIAN FORCES

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: ORANGE OPEL RENTED IN VIENNA

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
MORNING RUSH HOUR IN CENTRAL PARIS NEAR THE CHAMPS ELYSEES.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING EXPLOSIVES WAS PARKED ON THE STREET.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE CAR CONTAINING THE EXPLOSIVES WAS COMPLETELY DEMOLISHED AND 15 OTHERS WERE DAMAGED. DEBRIS WAS SCATTERED IN A 150 FOOT RADIUS.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
A YOUNG PREGNANT FRENCHWOMAN WAS KILLED AND 63 OTHERS WERE WOUNDED.

COMMENTS:
THE BLAST COINCIDED WITH THE OPENING OF A TRIAL OF TWO EXTREMISTS. SYRIAN MILITARY AND CULTURAL ATTACHES WERE IMMEDIATELY EXPELLED FROM FRANCE

000072

CAR BOMB INCIDENT REPORT

DATE: 9/17/1982

LOCATION (COUNTRY, STATE, CITY): FRANCE, PARIS

TARGET: AMOS MANEL

TARGET DESCRIPTION: ISRAELI DIPLOMAT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
LEBANESE REVOLUTIONARY ARMED FACTION

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 4 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: WHITE PEUGEOT 504 (CAR OF INTENDED VICTIM)

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
VEHICLE WAS IN THE CENTER OF PARIS BUT NO UNUSUAL ACTIVITY WAS REPORTED.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMBING OCCURRED ON THE EVE OF ROSH HASHANA, THE JEWISH NEW YEAR

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SEVERAL VEHICLES WERE DAMAGED AND MINOR DAMAGE WAS REPORTED TO THE LYCEE
CARNOT HIGH SCHOOL.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
EMERGENCY VEHICLES RUSHED TO THE SCENE.

COMMENTS:
POLICE SUSPECTED THE INVOLVEMENT OF THE DRIVER OF A PARIS REGISTERED BMW
SEEN NEAR THE SCENE PRIOR TO THE EXPLOSION. TERRORISTS COMMONLY CHOOSE
ISRAELI HOLY DAYS FOR ATTACKS.

000073

CAR BOMB INCIDENT REPORT

DATE: 11/26/1985

LOCATION (COUNTRY,STATE,CITY): GREECE, ATHENS

TARGET: POLICE OFFICIALS

TARGET DESCRIPTION: BUS CARRYING POLICE OFFICERS TO THEIR ASSIGNMENTS

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
STUDENTS AGAINST THE "MILITARY DICTATORSHIP"

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB ELECTRONICALLY DETONATED

DESCRIPTION OF VEHICLE USED: VOLKSWAGEN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
AREA OF ATHENS NEAR THE CARAVEL AND ATHENS HILTON HOTELS.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BUS CARRYING POLICE OFFICERS HAD JUST LEFT A NEARBY POLICE STATION

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE QUESTIONED RESIDENTS AND ARRESTED SOME PEOPLE IN THE AREA

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
OTHER CARS WERE SEVERELY DAMAGED. WINDOWS BROKEN.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
POLICE RECEIVED LEADS ON THREE YOUNG MEN SUSPECTED OF PLANTING THE BOMB.
ONE OF THE OFFICERS WAS KILLED AND 14 WOUNDED.

COMMENTS:
TWO HOURS BEFORE THE EXPLOSION, ABOUT 1000 ANARCHISTS DEMONSTRATED
PEACEFULLY IN FRONT OF PARLIAMENT TO PROTEST THE POLICY KILLING OF
TEENAGER MICHALIS KALTEZAS, ON NOV. 17

000074

CAR BOMB INCIDENT REPORT

DATE: 9/5/1980

LOCATION (COUNTRY,STATE,CITY): GUATEMALA, GUATEMALA CITY

TARGET: NATIONAL PALACE

TARGET DESCRIPTION: THE PORTION OF THE PALACE THAT HOUSES THE OFFICE OF
PRESIDENT FERNANDO ROMEO LUCAS GARCIA

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
GUATEMALAN LEFTISTS

EXPLOSIVE TYPE: DYNAMITE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: NO DESCRIPTION AVAILABLE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR WITH EXPLOSIVES WAS PARKED ABOUT 25 YARDS FROM THE PALACE

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE EVACUATED FIVE BUILDINGS NEAR THE PALACE. NO OTHER BOMBS WERE
FOUND.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
FLYING GLASS, CARS TWISTED AND BURNING, TREES UPROOTED, CRATER BLOWN IN
PAVEMENT.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
8 PEOPLE KILLED AND AT LEAST 20 WOUNDED. EXTENSIVE DAMAGE TO PALACE

COMMENTS:
IT IS BELIEVED THAT THE BOMB WAS PLANTED BY THE LEFTISTS TO COUNTER A
RALLY PLANNED IN THE PALACE SQUARE BY ANTI-COMMUNIST GROUPS THAT SUPPORT
THE GOVERNMENT.

000075

CAR BOMB INCIDENT REPORT

DATE: 11/14/1983

LOCATION (COUNTRY, STATE, CITY): GUADELOUPE, BASSE TERRE

TARGET: GOVERNMENT FACILITIES

TARGET DESCRIPTION: BUILDING THAT CONTAINED MAIN GOVERNMENT OFFICES

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
REVOLUTIONARY CARIBBEAN ALLIANCE (ARC) IS SUSPECTED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSINESS AREA IN BASSE TERRE

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
100 FRENCH PARAMILITARY POLICE WERE DISPATCHED TO THE AREA AFTER THE
EXPLOSION.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
23 PEOPLE SUFFERED MINOR INJURIES

COMMENTS:
ARC'S DECLARED ITS AIM TO "STRIKE FRENCH COLONIALISM AND ITS LOCAL
COLLABORATORS UNTIL TOTAL INDEPENDENCE."

000076

CAR BOMB INCIDENT REPORT

DATE: 9/23/1985

LOCATION (COUNTRY,STATE,CITY): INDIA, AMRITSAR, PUNJAB

TARGET: GOVERNMENT OFFICIALS

TARGET DESCRIPTION: CAMPAIGN WORKERS OR CANDIDATES TO THE STATE LEGISLATURE AND
PARLIAMENT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SIKH TERRORISTS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: 7 CAR BOMBS

DESCRIPTION OF VEHICLE USED: MULTIPLE VEHICLES INVOLVED

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SECURITY WAS HIGH. MORE THAN 100,000 MEN WERE DEPLOYED.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
LAST DAY OF THE PUNJAB STATE ELECTION CAMPAIGN.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
CONFUSION ENSUED

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
3 YOUNG GIRLS WERE KILLED AND A YOUNG BOY WAS INJURED.

COMMENTS:
DESPITE STRINGENT SECURITY MEASURES, INCLUDING FREQUENT ROAD BLOCKS AND
IDENTITY CHECKS, POLICE SOURCES SAID A TERRORIST HAD BEEN MOVING AROUND
THE STATE ON A GREEN MOTORCYCLE WITHOUT LICENSE PLATES

000077

CAR BOMB INCIDENT REPORT

DATE: 4/22/1981

LOCATION (COUNTRY, STATE, CITY): IRAN, TEHERAN

TARGET: NOT SPECIFIC

TARGET DESCRIPTION: BOMB WAS DETONATED NEAR THE HOME OF AYATOLLAH KHOMENI, WHO
MAY HAVE BEEN THE INTENDED TARGET

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
UNKNOWN

EXPLOSIVE TYPE: NO DETAILS WERE MADE AVAILABLE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): NO DETAILS WERE MADE AVAILABLE

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: MINI BUS

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING BOMB WAS PARKED ON THE STREET

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BLAST REACHED HOUSES UP TO 1/2 MILE AWAY. THE MINI BUS AND 3 OTHER CARS
WERE COMPLETELY DESTROYED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
2 PEOPLE WERE KILLED AND 10 INJURED

COMMENTS:

000078

CAR BOMB INCIDENT REPORT

DATE: 2/22/1982

LOCATION (COUNTRY, STATE, CITY): IRAN, TEHERAN

TARGET: IRANIAN MILITIA

TARGET DESCRIPTION: REVOLUTIONARY GUARD BARRACKS AT SEPAH SQUARE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
MUJAHEDDEEN KHALQ GUERRILLAS WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: GARBAGE TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY DISTRICT WITH MORNING RUSH HOUR COMMUTERS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE BOMB WAS HIDDEN IN THE GARBAGE TRUCK

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
ROADS TO THE AREA WERE CLOSED

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE BLAST DESTROYED THE TRUCK, GOUGED A 9 FOOT CRATER INTO THE STREET,
WRECKED 20 CARS AND BLEW OUT WINDOWS MORE THAN 1000 FEET AWAY.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
15 PEOPLE WERE KILLED AND 61 WOUNDED

COMMENTS:
THE GARBAGE TRUCK HAD BEEN PARKED OUTSIDE THE BARRACKS FOR SEVERAL MONTHS

000079

CAR BOMB INCIDENT REPORT

DATE: 10/1/1982

LOCATION (COUNTRY, STATE, CITY): IRAN, TEHERAN

TARGET: NO SPECIFIC TARGET

TARGET DESCRIPTION: TEHERAN'S MAIN SQUARE, IMAM SQUARE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 330 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
REPORTEDLY, 10'S OF THOUSANDS OF PEOPLE ARRIVED AT THE CENTER OF TEHERAN TO CELEBRATE RECENT MILITARY VICTORIES.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE VEHICLE CONTAINING THE BOMB WAS PARKED ON THE STREET. MANY OF THE PEOPLE HAD BEGUN TO DISPERSE.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
A 5 STORY HOTEL AND 3 PASSING DOUBLE-DECKER BUSES WERE DEMOLISHED. SEVEN OTHER HOTELS AND ADJACENT BUILDINGS WERE HEAVILY DAMAGED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
60 PEOPLE WERE KILLED AND AT LEAST 200 WOUNDED.

COMMENTS:
IRANIAN OFFICIALS BLAMED THE AMERICANS FOR THE BLAST

000080

CAR BOMB INCIDENT REPORT

DATE: 5/12/1985

LOCATION (COUNTRY, STATE, CITY): IRAN, TEHERAN

TARGET: NO SPECIFIC TARGET

TARGET DESCRIPTION: NASSER KHOSROW AVENUE, ONE OF THE BUSIEST IN A POOR
SOUTHERN NEIGHBORHOOD OF TEHERAN.

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
"U.S. AGENTS" WERE ACCUSED

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): APPROX. 110 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
STREET WAS CROWDED WITH SUNDAY SHOPPERS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING BOMB WAS PARKED ON THE STREET

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BOMB STARTED A FIRE THAT GUTTED TWO BUILDINGS AND TWO SHOPS. IT WRECKED 7
CARS AND DAMAGED 15 OTHERS. WINDOWS WERE BROKEN AS FAR AS 250 YARDS AWAY.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
12 PEOPLE WERE KILLED AND 35 WOUNDED

COMMENTS:

000081

CAR BOMB INCIDENT REPORT

DATE: 1/6/1982

LOCATION (COUNTRY, STATE, CITY): IRELAND, DUBLIN

TARGET: DR. JAMES DONOVAN

TARGET DESCRIPTION: DONOVAN IS A POLICE FORENSIC SCIENTIST

**PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH REPUBLICAN ARMY (IRA)**

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE BELONGING TO MR. DONOVAN

**DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY**

**DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMB WAS PLACED UNDER THE HOOD OF THE VEHICLE**

**NOTABLE DRIVER ACTIONS:
NONE**

**RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT**

**DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE**

**DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
DONOVAN WAS TAKEN TO ST. JAMES'S HOSPITAL. POLICE INVESTIGATORS ARRIVED
ON THE SCENE.**

**COMMENTS:
DONOVAN'S TESTIMONY HAD HELPED CONVICT AN IRA GUERRILLA IN THE 1979
BOMBING MURDER OF BRITAIN'S LORD MOUNTBATTEN.**

000082

CAR BOMB INCIDENT REPORT

DATE: 11/24/1982

LOCATION (COUNTRY, STATE, CITY): IRELAND, BELFAST

TARGET: JUDGE ROY WATT

TARGET DESCRIPTION: MR. WATT IS A CIRCUIT JUDGE IN BELFAST COUNTY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRISH NATIONAL LIBERATION ARMY (INLA)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE BELONGING TO THE JUDGE'S DAUGHTER

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
PARKING LOT OF THE BELFAST COUNTY COURTHOUSE

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
AS MS. WATT PULLED INTO THE PARKING LOT, A SECURITY GUARD NOTICED THE BOMB -
ATTACHED TO THE CAR'S FRAME.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SECURITY GUARD SHOUTED OUT A WARNING AND THE COURTHOUSE WAS EVACUATED.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
ARMY BOMB DISPOSAL TEAM ARRIVED ON THE SCENE

COMMENTS:
THE BOMB HAD A FAULTY DETONATOR. MOST OF THE CAR BOMBS USED IN THIS AREA
HAVE EXPLODED ON IGNITION, OR WITH A TILT MECHANISM WHEN THE CAR WENT UP
OR DOWN AN INCLINE.

000083

CAR BOMB INCIDENT REPORT

DATE: 7/9/1985

LOCATION (COUNTRY, STATE, CITY): ISRAEL, TEL AVIV

TARGET: LEBANESE CHECKPOINT

TARGET DESCRIPTION: LEBANESE-ISRAELI BORDER CHECKPOINT

**PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SYRIAN SOCIAL NATIONALIST PARTY**

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 220 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: PEUGEOT 504

**DESCRIPTION OF AREA PRIOR TO EXPLOSION:
LEBANESE CHECKPOINT 4 MILES NORTHEAST OF THE ISRAELI BORDER.**

**DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NORMAL ACTIVITY UNTIL THE PEUGEOT 504 WAS SEEN APPROACHING THE CHECKPOINT**

**NOTABLE DRIVER ACTIONS:
DRIVER WAS FEMALE AND BEGAN ACCELERATING AS SHE APPROACHED THE CHECKPOINT.**

**RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
IT IS IMPLIED THAT SECURITY PERSONNEL SUSPECTED THIS TO BE A SUICIDE
BOMBER AND ATTEMPTED TO TAKE COVER.**

**DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE CHECKPOINT WAS DESTROYED.**

**DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
2 PEOPLE WERE WOUNDED.**

**COMMENTS:
THIS EXPLOSION OCCURRED WITHIN 15 MINUTES OF ANOTHER CAR BOMBING AT A
DIFFERENT CHECKPOINT. THE SUICIDE DRIVER LEFT BEHIND A VIDEOTAPE WHICH
WAS AIRED ON LOCAL TELEVISION.**

000084

CAR BOMB INCIDENT REPORT

DATE: 7/9/1985

LOCATION (COUNTRY, STATE, CITY): ISRAEL, TEL AVIV

TARGET: LEBANESE CHECKPOINT

TARGET DESCRIPTION: LEBANESE-ISRAELI BORDER CHECKPOINT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SYRIAN SOCIAL NATIONALIST PARTY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 300 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: VOLKSWAGEN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
LEBANESE BORDER CHECKPOINT 10 MILES NORTH OF ISRAELI BORDER.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES APPROACHED THE CHECKPOINT AND WAS STOPPED AND
THE DRIVER WAS ASKED TO STEP OUT OF THE CAR TO CHECK HIS PAPERS.

NOTABLE DRIVER ACTIONS:
WHEN GUARDS BEGAN TO SEARCH THE VEHICLE, THE DRIVER JUMPED BACK INTO THE
CAR AND DETONATED THE EXPLOSIVES. SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SINCE THE DRIVER'S PAPERS APPEARED TO BE FORGED, THE GUARDS BEGAN TO
SEARCH THE VEHICLE.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE CHECKPOINT WAS DESTROYED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
13 PEOPLE WERE WOUNDED AND 6 WERE KILLED.

COMMENTS:
THE SUICIDE BOMBER LEFT BEHIND A VIDEOTAPE WHICH WAS AIRED ON LOCAL
TELEVISION. THIS BOMBING OCCURED WITHIN 15 MINUTES OF ANOTHER ONE AT A
DIFFERENT CHECKPOINT.

000085

CAR BOMB INCIDENT REPORT

DATE: 3/10/1985

LOCATION (COUNTRY, STATE, CITY): ISRAEL, TEL AVIV

TARGET: ISRAELI ARMY CONVOY

TARGET DESCRIPTION: CONVOY OF TRUCKS CARRYING SOLDIERS

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
LEBANESE NATIONAL RESISTANCE

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 220 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: PICKUP TRUCK (LEBANESE)

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SOUTHERN LEBANON AT A MILITARY CHECKPOINT JUST NORTH OF THE ISRAELI
BORDER.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOTH THE CAR CONTAINING THE EXPLOSIVES AND THE CONVOY WERE IN MOTION.

NOTABLE DRIVER ACTIONS:
THE DRIVER RAN HIS CAR INTO A TRUCK FULL OF ISRAELI SOLDIERS. SUICIDE
BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SECURITY FORCES WERE THE OBJECT OF THE ATTACK AND WERE TAKEN BY SURPRISE.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
ISRAELIS SEALED OFF THE AREA

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
9 SOLDIERS WERE KILLED AND 11 WOUNDED

COMMENTS:
THIS WAS REPORTEDLY A REVENGE BOMBING MOTIVATED BY A MOSQUE BOMBING IN
MOSLEM WEST BEIRUT.

000086

CAR BOMB INCIDENT REPORT

DATE: 1/4/1982

LOCATION (COUNTRY, STATE, CITY): ITALY, ROME, ROVIGO

TARGET: PRISON IN ROVIGO

TARGET DESCRIPTION: WOMEN'S PRISON SOUTH OF VENICE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
RED BRIGADES OR FRONT LINE LEFTISTS (URBAN TERRORISTS)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED ALONGSIDE THE PRISON WALL

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
PRISON SENTRIES WERE KEPT AT BAY WITH SUBMACHINE GUN FIRE

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
HOLE WAS BLASTED IN THE CONCRETE WALL OF THE PRISON

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
POLICE SET UP ROADBLOCKS AND DETECTIVES INTERROGATED PRISON INMATES

COMMENTS:
FOUR WOMEN WHO ESCAPED ARE SUSPECTED OF TAKING PART IN THE KIDNAPPING OF
U.S. BRIG. GEN. JAMES L. DOZIER

000087

CAR BOMB INCIDENT REPORT

DATE: 7/29/1983

LOCATION (COUNTRY, STATE, CITY): ITALY, SICILY, PALERMO

TARGET: JUDGE ROCCO CHINNICI

TARGET DESCRIPTION: ANTI-MAFIA JUDGE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ITALIAN MAFIA

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 200 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB, REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: GREEN FIAT 126

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
EXPLOSIVES WERE APPARENTLY PLANTED IN THE CAR SOMETIME DURING THE NIGHT.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SECURITY PERSONNEL WERE EITHER KILLED OR INJURED IN THE BLAST.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
EXPLOSION DEVASTATED A BLOCK LONG AREA DAMAGING BUILDINGS AND OTHER VEHICLES.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
4 PEOPLE WERE KILLED (INCLUDING JUDGE CHINNICI) AND 14 WERE INJURED.

COMMENTS:
INVESTIGATORS SPECULATED THAT THE BOMBING WAS THE MAFIA'S RESPONSE TO RECENT SETBACKS. 14 PEOPLE WITH MAFIA CONNECTIONS HAD BEEN ARRESTED TWO WEEKS EARLIER.

000088

CAR BOMB INCIDENT REPORT

DATE: 3/24/1984

LOCATION (COUNTRY, STATE, CITY): JORDAN, AMMAN

TARGET: NONE SPECIFIED

TARGET DESCRIPTION: BOMB EXPLODED NEAR THE BRITISH AND U.S. EMBASSIES IN THE
PARKING LOT OF THE JORDAN INTERNATIONAL HOTEL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN (CHARGE WEIGHT 1 POUND)

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
3 BOMBS WERE ATTACHED TO VEHICLES IN THE HOTEL PARKING LOT (ONLY ONE WAS
DETONATED)

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE ARRIVED ON THE SCENE AND KEPT CIVILIANS INSIDE THE BUILDINGS WHILE
THE OTHER BOMBS WERE DEFUSED

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE TO VEHICLES AND BUILDINGS.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
2 MINOR INJURIES WERE REPORTED

COMMENTS:
IN PREPARATION FOR THE VISIT OF THE BRITISH QUEEN, CONCRETE BARRIERS WERE
PLACED OUTSIDE THE BRITISH EMBASSY TO GUARD AGAINST SUICIDE TRUCK BOMB
ATTEMPTS

000089

CAR BOMB INCIDENT REPORT

DATE: 12/12/1983

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: KUWAITI ELECTRICITY AND WATER MINISTRY

TARGET DESCRIPTION: BUILDING THAT HOUSED KUWAITI ADMINISTRATIVE FACILITIES

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SHIITE MOSLEMS WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES AND BUTANE GAS CYLINDERS THAT WERE DETONATED BY
REMOTE CONTROL OR A HAND GRENADE WAS PARKED ON THE STREET

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE AREA WAS SEALED TO ALL BUT KUWAITIS

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
ONE OTHER CAR WAS DAMAGED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
NO INJURIES WERE REPORTED

COMMENTS:
NATIONALS OTHER THAN KUWAITIS WERE NOT ALLOWED TO BOARD FLIGHTS INTO
KUWAIT. LEBANESE, SYRAINS, IRANIANS, IRAQIS AND PALESTINIANS WERE NOT
ALLOWED TO LEAVE THE CITY. ROAD BLOCKS AND ARMORED VEHICLES WERE VISIBLE.

000090

CAR BOMB INCIDENT REPORT

DATE: 12/12/1983

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: KUWAIT'S INTERNATIONAL AIRPORT

TARGET DESCRIPTION: GENERAL AIRPORT AREA NEAR THE CENTRAL TOWER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: RED CAR

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
THE CENTRAL TOWER APPROX. 100 YARDS FROM THE MAIN TERMINAL

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE VEHICLE CONTAINING THE EXPLOSIVES AND BUTANE GAS CYLINDERS WAS PARKED-
NEAR THE TOWER AND POSSIBLY DETONATED BY REMOTE CONTROL OR A HAND GRENADE

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE AREA WAS SEALED. NATIONALS OTHER THAN KUWAITIS WERE NOT ALLOWED TO
BOARD FLIGHTS INTO KUWAIT FOR FIVE HOURS.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
DEBRIS SPREAD OVER APPROX 200 YARDS. THE TOWER WAS ONLY SLIGHTLY DAMAGED
BY FIRE. OTHER NEARBY VEHICLES WERE DAMAGED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
1 WORKER WAS KILLED AND 73 WOUNDED

COMMENTS:
LEBANESE, SYRIANS, IRANIANS, IRAQIS AND PALESTINIANS WERE NOT ALLOWED TO
LEAVE. ALL ARRIVING PASSENGERS WERE CHECKED. THIS WAS ONE OF SIX CAR
BOMBINGS THAT OCCURRED WITHIN THE CITY ON THIS DAY.

000091

CAR BOMB INCIDENT REPORT

DATE: 12/12/1983

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: U.S. EMBASSY

TARGET DESCRIPTION: EMBASSY PERSONNEL AND BUILDING

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB CONTAINING EXPLOSIVES AND BUTANE GAS
CYLINDERS

DESCRIPTION OF VEHICLE USED: 6 WHEELED MERCEDES DUMP TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
THE EMBASSY IS LOCATED NEAR THE HOME OF KUWAITI'S EMIR AND IS SURROUNDED
BY A 10 FOOT HIGH WALL.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NORMAL ACTIVITY

NOTABLE DRIVER ACTIONS:
DRIVER SLAMMED THROUGH THE GATES OF THE EMBASSY THEN VEERED LEFT AND WENT
ABOUT 150 FEET. OBVIOUS SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
EXTRA SECURITY MEASURES HAD ALREADY BEEN TAKEN AFTER THE OCTOBER BOMBINGS
BUT WERE NOT SUFFICIENT TO STOP THE BOMBER

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MANY BUILDINGS WERE DAMAGED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
5 PEOPLE WERE KILLED AND 15 INJURED

COMMENTS:
TWO MEN WERE IN THE VEHICLE, ONE WAS KILLED AND THE OTHER WAS BLOWN FREE
BY THE BLAST BUT IT IS NOT CLEAR WHETHER HE SURVIVED.

000092

CAR BOMB INCIDENT REPORT

DATE: 12/12/1983

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: FRENCH EMBASSY

TARGET DESCRIPTION: EMBASSY COMPOUND

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB WITH EXPLOSIVES AND BUTANE GAS
CYLINDERS

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
EMBASSY COMPOUND

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED ON THE STREET OUTSIDE THE EMBASSY AND
THE BLAST WAS DETONATED EITHER BY REMOTE CONTROL OR A HAND GRENADE

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE CITY OF KUWAIT WAS VIRTUALLY CLOSED OFF

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
HOLE WAS BLOWN INTO THE OUTER EMBASSY WALL, OTHER BUILDINGS WERE DAMAGED
AND 4 CARS WERE WRECKED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
3 PEOPLE WERE REPORTED INJURED

COMMENTS:
THIS WAS ONE OF SIX CAR BOMBINGS THAT OCCURED IN KUWAIT ON THIS DAY.

000093

CAR BOMB INCIDENT REPORT

DATE: 12/12/1983

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: THE SHOAIBA COMPLEX

TARGET DESCRIPTION: INDUSTRIAL COMPLEX 30 MILES SOUTH OF KUWAIT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB WITH EXPLOSIVES AND BUTANE GAS
CYLINDERS

DESCRIPTION OF VEHICLE USED: YELLOW TRUCK WITHOUT PLATES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
A NATURAL GAS REFINERY AREA OF THE COMPLEX

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
TRUCK LOADED WITH EXPLOSIVES AND BUTANE GAS CYLINDERS WAS PARKED OUTSIDE
THE REFINERY. EITHER REMOTELY CONTROLLED OR DETONATED BY HAND GRENADE

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE CITY OF KUWAIT WAS VIRTUALLY CLOSED DOWN

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
DEBRIS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
ROADS WERE BLOCKED AND ARMORED VEHICLES WERE VISIBLE.

COMMENTS:
THIS WAS ONE OF SIX CAR BOMBINGS THAT OCCURRED THIS DAY IN KUWAIT

000094

CAR BOMB INCIDENT REPORT

DATE: 12/12/1983

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: U.S. PERSONNEL

TARGET DESCRIPTION: AMERICAN RESIDENTIAL COMPLEX AT AL-BADAH

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB WITH EXPLOSIVES AND BUTANE GAS
CYLINDERS

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
RESIDENTIAL AREA 9 MILES FROM THE CENTER OF THE CITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED NEAR THE COMPLEX AND DETONATED BY
EITHER REMOTE CONTROL OR A HAND GRENADE

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE CITY OF KUWAIT WAS VIRTUALLY CLOSED OFF

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
NO INJURIES WERE REPORTED

COMMENTS:
THIS WAS ONE OF SIX CAR BOMBINGS THAT OCCURED IN KUWAIT ON THIS SAME DAY.

000095

CAR BOMB INCIDENT REPORT

DATE: 5/25/1985

LOCATION (COUNTRY, STATE, CITY): KUWAIT

TARGET: SHEIK JABER AL-AHMED AL-SABAH

TARGET DESCRIPTION: EMIR OF KUWAIT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 220 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: SMALL CAR

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
HIGHWAY ALONG THE CITY'S WATER FRONT, NOT FAR FROM THE U.S. EMBASSY.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE EMIR'S ROYAL MOTORCADE WAS TRAVELING TOWARD SIEF PALACE.

NOTABLE DRIVER ACTIONS:
THE DRIVER CAUSED THE CAR TO SWERVE ACROSS THE ROAD, IT STRUCK THE FIRST VEHICLE IN THE MOTORCADE AND EXPLODED. SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE AREA OF THE ATTACK WAS CORDONED OFF AND SPOT SECURITY CHECKS WERE STEPPED UP.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE EMIR'S CAR WAS BADLY DAMAGED AND SEVERAL OTHER CARS WERE SET ON FIRE.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
THE BORDERS WERE CLOSED TO FOREIGNERS IN A TEMPORARY BAN THAT LASTED ONE DAY. THREE PEOPLE DIED AND 11 WERE INJURED.

COMMENTS:
THE INTENDED TARGET SUFFERED ONLY MINOR SCRATCHES FROM FLYING GLASS. THE BOMB-LADEN CAR WAS TRAVELING IN A DIRECTION OPPOSITE THAT OF THE MOTORCADE THIS ROUTE IS USED BY THE EMIR ALMOST DAILY.

000096

CAR BOMB INCIDENT REPORT

DATE: 2/24/1980

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: BASHIR GEMAYEL

TARGET DESCRIPTION: FLANGIST PARTY LEADER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: HE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 165 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY THOROUGHFARE IN A PREDOMINATELY CHRISTIAN NEIGHBORHOOD

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING EXPLOSIVES WAS PARKED ON THE STREET AND DETONATED AS
THE GEMAYEL CAR PASSED BY.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
DEBRIS, DEMOLISHED CARS, WOUNDED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
8 DIED INCLUDING GEMAYEL'S BABY DAUGHTER, BODYGUARD AND DRIVER. 20 PEOPLE
WERE WOUNDED

COMMENTS:
THIS WAS THE THIRD ATTEMPT ON MR. GEMAYEL'S FAMILY

000097

CAR BOMB INCIDENT REPORT

DATE: 11/10/1980

LOCATION (COUNTRY,STATE,CITY): LEBANON, BEIRUT

TARGET: NO DEFINITIVE TARGET

TARGET DESCRIPTION: ASHRAFIYEH, CHRISTIAN NEIGHBORHOOD

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
FRONT FOR THE LIBERATION OF LEBANON FROM FOREIGNERS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: 2 CAR BOMBS

DESCRIPTION OF VEHICLE USED: AUTOMOBILES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY MAIN STREET IN THE ASHRAFIEH DISTRICT AT MIDDAY WHEN CHILDREN WERE
BEING DISMISSED FOR LUNCH

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
EXPLOSIVE PACKED CARS WERE PARKED ON A MAIN STREET IN THE HEART OF
CHRISTIAN EAST BEIRUT

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
20 PEOPLE WERE KILLED AND 44 WOUNDED

COMMENTS:
EXPLOSIONS OCCURED WITHIN 10 MINUTES OF EACH OTHER AT LOCATIONS 200 YARDS
APART

000098

CAR BOMB INCIDENT REPORT

DATE: 9/28/1981

LOCATION (COUNTRY, STATE, CITY): LEBANON, ZRARIYEH

TARGET: PALESTINIANS

TARGET DESCRIPTION: PALESTINIAN GUERILLA CHECKPOINT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
"ISRAELI AGENTS" WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: BLUE MERCEDES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
OUTSIDE A CROWDED RESTAURANT AND NEXT TO A SANDBAGGED PALESTINIAN GUERILLA CHECKPOINT

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE DRIVER PARKED THE CAR AND WALKED THROUGH THE RESTAURANT TO SAFETY

NOTABLE DRIVER ACTIONS:
WITNESSES WERE NOT SUSPICIOUS OF THE DRIVER WHEN THE DRIVER LEFT THE CAR

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BLAST DESTROYED THE CHECKPOINT AND GUTTED THE RESTAURANT.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
AT LEAST 15 PEOPLE WERE KILLED AND 40 WOUNDED

COMMENTS:
ANOTHER CAR PARKED NEAR THE RESTAURANT ENTRANCE WAS THROWN INTO THE RESTAURANT AND OUT THROUGH A REAR WALL.

000099

CAR BOMB INCIDENT REPORT

DATE: 10/1/1981

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: PALESTINE LIBERATION ORGANIZATION (PLO)

TARGET DESCRIPTION: PLO HEADQUARTERS

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
FRONT FOR THE LIBERATION OF LEBANON

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 220 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSINESS AND RESIDENTIAL AREA IN MOSLEM WEST BEIRUT

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING EXPLOSIVES WAS PARKED ON BUSTANI STREET, OUTSIDE PLO HEADQUARTERS.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CARS AND TELEPHONE POLES WERE SHATTERED, FIRES STARTED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
83 PEOPLE WERE KILLED AND MORE THAN 300 WOUNDED

COMMENTS:
PLO DECLARED THAT "THE OPTION IS ALWAYS OPEN FOR RETALIATION AGAINST ISRAEL".

000100

CAR BOMB INCIDENT REPORT

DATE: 12/15/1981

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: IRAQI EMBASSY

TARGET DESCRIPTION: RELATIVELY NEW STEEL AND CONCRETE EMBASSY BUILDING

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
IRAN AND SYRIA WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
EMBASSY ACTIVITY DURING NORMAL BUSINESS DAY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
DRIVER SPED THROUGH A HAIL OF MACHINEGUN FIRE INTO THE EMBASSY COMPOUND
AND INTO THE BASEMENT GARAGE

NOTABLE DRIVER ACTIONS:
DRIVER DETONATED THE EXPLOSIVES IN THE UNDERGROUND GARAGE. OBVIOUS-
SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SECURITY GUARDS FIRED AT THE VEHICLE BUT WERE UNABLE TO STOP IT.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BUILDING WAS COMPLETELY DEMOLISHED AND OTHER NEARBY BUILDINGS WERE DAMAGED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
20 PEOPLE WERE KILLED AND DOZENS WOUNDED

COMMENTS:
LEBANESE MILITARY SOURCES SAID THE IRAQIS HAD STOCKPILED AMMUNITION IN THE
BASEMENT

000101

CAR BOMB INCIDENT REPORT

DATE: 5/24/1982

LOCATION (COUNTRY,STATE,CITY): LEBANON, BEIRUT

TARGET: FRENCH EMBASSY

TARGET DESCRIPTION: FRENCH EMBASSY COMPOUND IN BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
2 UNIDENTIFIED GROUPS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: VEHICLE OWNED BY AN EMBASSY SECRETARY

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
MANY LEBANESE WERE CROWDED AT THE EMBASSY GATES WAITING TO APPLY FOR VISAS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE BOMB WAS PLANTED IN THE SECRETARY'S CAR WHILE IT WAS PARKED OUTSIDE
HER HOME.

NOTABLE DRIVER ACTIONS:
THE DRIVER WAS UNAWARE THAT THE BOMB HAD BEEN PLANTED

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
GUARDS ALLOWED THE CAR TO ENTER WITHOUT INSPECTION BECAUSE "THEY
RECOGNIZED THE VEHICLE AND ITS DRIVER" AND WERE NOT SUSPICIOUS.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SMOKE, FIRE, DEBRIS, BODIES OF DEAD AND WOUNDED. CONFUSION ENSUED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
14 PEOPLE WERE KILLED AND 21 INJURED

COMMENTS:
THE BOMB HAD APARENTLY BEEN PLANTED UNDER THE REAR SEAT OF THE CAR AND WAS
DETONATED BY REMOTE CONTROL FROM A DISTANCE THAT COULD NOT HAVE EXCEEDED
MORE THAN 55 YARDS.

000102

CAR BOMB INCIDENT REPORT

DATE: 8/5/1982

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: ALEXANDRE HOTEL

TARGET DESCRIPTION: PARKING LOT OF THE HOTEL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
PALESTINE LIBERATION ORGANIZATION IS BLAMED

EXPLOSIVE TYPE: DYNAMITE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
100 FOREIGN JOURNALISTS AND A GROUP OF ISRAELI OFFICERS WERE STAYING AT
THE HOTEL

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED IN THE PARKING LOT OF THE HOTEL

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SHATTERED ALL THE WINDOWS AND BENT THE ALUMINUM FRAMES ON THE FRONT OF THE
BUILDING, NINE CARS WERE DESTROYED AND 27 OTHERS DAMAGED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
NINE PEOPLE WERE WOUNDED IN THE BLAST

COMMENTS:
ISRAELI FORCES USE EAST BEIRUT, THE CHRISTIAN SECTOR, AS A STAGING AREA
FOR ATTACKS ON WEST BEIRUT, THE MOSLEM SECTOR WHERE THE PLO IS HIDING OUT.

000103

CAR BOMB INCIDENT REPORT

DATE: 8/6/1982

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: NO DEFINITIVE TARGET

TARGET DESCRIPTION: BUILDING THAT HOUSED CHRISTIAN PALESTINIAN REFUGEES

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
THE AREA HAD BEEN PARTIALLY DESTROYED BY AN ISRAELI AIR ATTACK THREE HOURS EARLIER.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE CAR CONTAINING THE BOMB WAS PARKED ON THE STREET.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
PLO GUERILLAS RODE THRU THE STREETS WITH A BULLHORN WARNING PEOPLE TO STAY INSIDE FEARING MORE CAR BOMBINGS OR TO CLEAR THE STREETS FOR AMBULANCES.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
BODY COUNTS WERE CONFUSED DUE TO THE PRIOR AIR STRIKE.

COMMENTS:

000104

CAR BOMB INCIDENT REPORT

DATE: 11/11/1982

LOCATION (COUNTRY, STATE, CITY): LEBANON, TYRE

TARGET: ISRAELI MILITARY HEADQUARTERS

TARGET DESCRIPTION: MILITARY HEADQUARTERS IN LEBANON

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
AHMAD KHASSIR - MOSLEM FIGHTER

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: VEHICLE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
EIGHT STORY BUILDING USED AS HEADQUARTERS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
KHASSIR DROVE THE VEHICLE INTO THE BUILDING

NOTABLE DRIVER ACTIONS:
DEFINITE SUICIDE BOMBER

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
TAKEN BY SURPRISE

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BUILDING WAS DEMOLISHED, DEAD AND WOUNDED WERE ALL AROUND

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
75 ISRAELI SOLDIERS AND 14 LEBANESE AND PALESTINIANS WERE KILLED.

COMMENTS:
THIS WAS THE FIRST SUICIDE BOMBING AGAINST ISRAELIS IN LEBANON. KHASSIR HAD LEFT A TAPE RECORDED MESSAGE ASKING THAT HIS IDENTITY REMAIN A SECRET FOR 2 1/2 YEARS, TO PREVENT ISRAELI REPRISALS AGAINST HIS FAMILY.

000105

CAR BOMB INCIDENT REPORT

DATE: 12/1/1982

LOCATION (COUNTRY, STATE, CITY): LEBANON, WEST BEIRUT

TARGET: WALID JUMBLATT

TARGET DESCRIPTION: MOSLEM LEADER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
MARONITE CHRISTIANS WERE BLAMED

EXPLOSIVE TYPE: DYNAMITE & HEXOGENE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 90 LBS DYNAMITE, 20 LBS HEXOGENE

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: FIAT

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
HAMRA SHOPPING DISTRICT IN MOSLEM POPULATED WEST BEIRUT

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE CAR CONTAINING THE EXPLOSIVES WAS PARKED IN THE STREET APPROX. 15
YARDS FROM WHERE JUMBLATT WAS HAVING LUNCH.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
LEBANESE POLICE AND SOLDIERS WERE PRESENT BUT WERE TAKEN BY SURPRISE.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CARS WERE WRECKED AND THEIR GAS TANKS SET ON FIRE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
SOLDIERS AND POLICE FIRED M-16 RIFLES INTO THE AIR TO DISPERSE THE CROWD.
FRENCH PARATROOPERS HELPED "KEEP ORDER". 4 KILLED AND 38 WOUNDED.

COMMENTS:
THE TARGET SURVIVED WITH MINOR WOUNDS. THE CAR WAS DETONATED AS JUMBLATT
APPROACHED IT. PERPETRATORS PROBABLY HAD VISUAL CONTACT.

000106

CAR BOMB INCIDENT REPORT

DATE: 2/5/1983

LOCATION (COUNTRY, STATE, CITY): ~~LEBANON~~, BEIRUT

TARGET: PALESTINE LIBERATION ORGANIZATION (PLO)

TARGET DESCRIPTION: MAIN OFFICE OF PLO IN BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: 130 POUNDS OF SPECIAL HE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 550 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SIX STORY OFFICE BUILDING WITH APARTMENTS ACROSS THE STREET. NEAR
QUITTING TIME FOR THE OFFICE WORKERS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING BOMB WAS PARKED OUTSIDE THE BUILDING

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
PLO HEADQUARTERS WAS COMPLETELY DEMOLISHED. SMOKE, FIRE AND DAMAGE TO
NEARBY BUILDINGS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
20 PEOPLE WERE KILLED AND 100 INJURED

COMMENTS:
ANOTHER CAR BOMBING WAS REPORTED AT THE SAME TIME BUT NO DETAILS WERE MADE
AVAILABLE.

000107

CAR BOMB INCIDENT REPORT

DATE: 2/5/1983

LOCATION (COUNTRY,STATE,CITY): LEBANON, BEIRUT

TARGET: NOT SPECIFIED

TARGET DESCRIPTION: NEAR PALESTINE RESEARCH CENTER AND LIBYAN NEWS AGENCY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
UNKNOWN

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 528 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY BUSINESS DISTRICT DURING WORKING HOURS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE CONTAINING EXPLOSIVES WAS PARKED OUTSIDE THE OFFICE BUILDINGS

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
POLICE FIRED SHOTS IN THE AIR TO DISPERSE THE CROWDS AND CLEAR THE STREETS

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BOTH BUILDINGS WERE ABLAZE; DEBRIS, WOUNDED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
20 PEOPLE WERE KILLED AND 70 WOUNDED. FIRE ENGINES ARRIVED AT THE SCENE
AND ATTEMPTED TO FREE TRAPPED VICTIMS

COMMENTS:
2 OTHER CAR BOMBINGS WERE REPORTED IN THE SAME AREA BUT NO DETAILS WERE
MADE AVAILABLE

000108

CAR BOMB INCIDENT REPORT

DATE: 4/18/1983

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: U.S. EMBASSY

TARGET DESCRIPTION: EMBASSY IN CHRISTIAN EAST BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 2000 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: BLACK PICKUP TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:

"HEAVILY GUARDED" EMBASSY. THERE WAS NO FENCE BETWEEN THE EMBASSY AND THE SEASIDE ROAD.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:

VEHICLE CONTAINING THE EXPLOSIVES DROVE INTO THE CIRCLE DRIVEWAY IN FRONT OF THE EMBASSY COMPOUND AND THEN VEERED TOWARD THE BUILDING

NOTABLE DRIVER ACTIONS:

THE DRIVER WAS DESCRIBED AS WEARING A BLACK LEATHER JACKET. SUICIDE BOMBER

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):

THE GUARDS WERE TAKEN BY SURPRISE (THERE WERE NO REPORTS THAT THE GUARDS FIRED ON THE DRIVER) AND UNABLE TO STOP THE DRIVER.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:

THE CENTRAL SECTION OF THE EMBASSY WAS DESTROYED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:

63 PEOPLE WERE KILLED INCLUDING 17 AMERICANS AND 120 WOUNDED

COMMENTS:

THE BOMBING WAS AIMED TO DISRUPT A CIA STAFF MEETING.

000109

CAR BOMB INCIDENT REPORT

DATE: 8/5/1983

LOCATION (COUNTRY, STATE, CITY): LEBANON, TRIPOLI

TARGET: HARET AL-BAGGAR MOSQUE

TARGET DESCRIPTION: MOSLEM PLACE OF WORSHIP

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: HE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 165 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB REMOTELY CONTROLLED

DESCRIPTION OF VEHICLE USED: BLUE SALOON CAR

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
WORSHIPPERS WERE LEAVING THE MOSQUE AFTER NOON PRAYERS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED ON THE STREET OUTSIDE THE MOSQUE.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
ARMED MEN FROM RIVAL MILITIAS FILLED THE STREETS. SHOTS WERE FIRED.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BUILDINGS DAMAGED, DEBRIS, BURNING CARS, WOUNDED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
19 PEOPLE DIED AND 38 WERE WOUNDED. CONFUSION ENSUED.

COMMENTS:
"ANTI-MOSLEM PLOTTERS" WERE BLAMED

000110

CAR BOMB INCIDENT REPORT

DATE: 8/7/1983

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT, BAALBEK

TARGET: NO SPECIFIC TARGET

TARGET DESCRIPTION: BAALBEK IS UNDER SYRIAN CONTROL BUT THE TOWN CENTER IS RULED BY MILITANT SHIITE MOSLEMS.

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
FRONT FOR THE LIBERATION OF LEBANON FROM FOREIGNERS

EXPLOSIVE TYPE: HE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 165 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY VEGETABLE MARKET

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED IN THE MARKET NEAR A TAXI STATION

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SMOKE, FIRE, DEBRIS, 33 PEOPLE WERE KILLED AND 125 INJURED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
GUNMEN FROM SEVERAL LEBANESE, PALESTINIAN AND IRANIAN FACTIONS SWARMED THE STREETS TO SET UP CHECKPOINTS ON MAIN ROADS.

COMMENTS:
SYRIAN TROOPS ARE IN OVERALL CONTROL OF THE AREA BUT THE TOWN CENTER IS RULED BY MILITANT SHIITE GUNMEN AIDED BY 300 IRANIAN REVOLUTIONARY GUARDS

000111

CAR BOMB INCIDENT REPORT

DATE: 10/23/1983

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: U.S. MILITARY (MARINES)

TARGET DESCRIPTION: 4 STORY MARINE COMMAND CENTER AT BEIRUT INTERNATIONAL AIRPORT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC REVOLUTIONARY MOVEMENT & ISLAMIC HOLY WAR CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 1 TO 6 TONS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: LARGE RED MERCEDES-BENZ TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
A FOUR STORY BUILDING WITH A CENTRAL ATRIUM REACHING THE TOP FLOOR. MOST OF THE OCCUPANTS OF THE BUILDING WERE SLEEPING.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
A SERGEANT OF THE GUARD NOTICED THE TRUCK AND CALLED THE COMMAND POST. THE SENTRY FIRED FIVE SHOTS AT THE TRUCK BUT WAS UNABLE TO STOP IT.

NOTABLE DRIVER ACTIONS:
THE DRIVER ACCELERATED, SMASHED THROUGH AN IRON GATE, OVER A SAND-BAGGED GUARDPOST, SMASHED INTO THE LOBBY OF THE BUILDING AND DETONATED THE TNT.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SENTRIES WERE ADDED, CHECKPOINTS SETUP, INCOMING ROADS WERE BLOCKED WITH TRUCKS AND REINFORCED SECURITY BARRIERS. INCOMING VEHICLES WERE CHECKED.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE EXPLOSION LEFT A CRATER 40 FOOT ACROSS AND 10 FEET DEEP IN THE CENTER OF THE ATRIUM. ONLY THE TRUCK'S CRANKSHAFT WAS LEFT IN THE HOLE.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
241 SOLDIERS KNOWN DEAD AND APPROX. 75 WOUNDED. A RESCUE ATTEMPT WAS MADE TO LOCATE TRAPPED MEN IN THE AREA OF THE SLEEPING QUARTERS.

COMMENTS:
THE ATTACK WAS ALMOST SIMULTANEOUS TO THE ONE AT THE FRENCH COMMAND POST. SENTRIES WERE NOT ALLOWED TO HAVE MAGAZINES IN THEIR WEAPONS, WHICH PREVENTED THEM FROM ACTING QUICKLY.

000112

CAR BOMB INCIDENT REPORT

DATE: 10/23/1983

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: FRENCH MILITARY FORCES

TARGET DESCRIPTION: 9 STORY BUILDING HOUSING THE FRENCH PARATROOPER COMMAND POST

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC REVOLUTIONARY MOVEMENT & ISLAMIC HOLY WAR CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
FRENCH PARATROOPER'S COMMAND CENTER WITH EARLY MORNING ACTIVITY. (APPROX. 6:30AM)

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
TERRORIST DROVE EXPLOSIVE-LADEN TRUCK INTO THE COMMAND POST AND DETONATED THE BOMB.

NOTABLE DRIVER ACTIONS:
THIS WAS AN OBVIOUS SUICIDE BOMBING.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SECURITY WAS MINIMAL AND THE GUARDS WERE TAKEN BY SURPRISE.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE 9 STORY COMMAND POST WAS TURNED INTO A 15 FOOT HIGH PILE OF CONCRETE SLABS AND TWISTED STEEL RODS.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
23 SOLDIERS WERE KILLED, 35 PRESUMED DEAD AND 15 WOUNDED.

COMMENTS:
THIS ATTACK WAS ALMOST SIMULTANEOUS TO THE ONE AT THE U.S. MARINE COMMAND CENTER.

000113

CAR BOMB INCIDENT REPORT

DATE: 11/4/1983

LOCATION (COUNTRY,STATE,CITY): LEBANON, TYRE

TARGET: ISRAELI COMMAND POST

TARGET DESCRIPTION: ISRAELI COMMAND POST WHERE TROOPS WORKED AND SLEPT AND
LEBANESE AND PALESTINIAN PRISONERS WERE HELD.

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR, A FANATICAL SHIITE MOSLEM GROUP

EXPLOSIVE TYPE: HE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 1000 TO 1200 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: TRUCK OF UNKNOWN ORIGIN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SECURED AREA SURROUNDING THE COMMAND POST

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
GUARDS FIRED AT THE SUICIDE BOMBER AS HE CRASHED THROUGH THE LIGHTWEIGHT
METAL BARS OF THE GATE. THE TRUCK CONTINUED TO THE CENTER OF THE POST.

NOTABLE DRIVER ACTIONS:
DRIVER DUCKED BEHIND THE STEERING WHEEL AS GUARDS FIRED AT HIM. OBVIOUS
SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
PERSONNEL RESPONDED QUICKLY BUT WERE UNABLE TO STOP THE SUICIDE BOMBER

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BUILDING WAS DEMOLISHED. 14 ISRAELIS AND 25 ARAB PRISONERS WERE KILLED.
MANY INJURED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
ISRAELI TROOPS CORDONED OFF THE COMPOUND AND CLOSED THE COASTAL HIGHWAY.

COMMENTS:
QUICK RESPONSE OF THE GUARDS KEPT THE BOMBER FROM DRIVING THE TRUCK INTO
THE BUILDING WHICH LIKELY REDUCED THE DEATH TOLL TREMENDOUSLY.

000114

CAR BOMB INCIDENT REPORT

DATE: 4/12/1984

LOCATION (COUNTRY, STATE, CITY): LEBANON, DEIR KANOUN

TARGET: ISRAELI MILITARY FORCES

TARGET DESCRIPTION: TWO ISRAELI ARMORED PERSONNEL CARRIERS

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SHIITE MOSLEMS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: PALE GREEN FIAT

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
QUIET MEDITERRANEAN RESIDENTIAL COMMUNITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
AS THE ARMORED VEHICLES APPROACHED THE VEHICLE CONTAINING THE BOMB, THE DRIVER STARTED THE ENGINE AND DROVE TOWARD THE PERSONNEL CARRIERS.

NOTABLE DRIVER ACTIONS:
DRIVER HAD BEEN WAITING FOR SOME TIME FOR THE PERSONNEL CARRIERS TO APPROACH HIM. OBVIOUS SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SHOTS WERE FIRED INTO THE AIR AND THE CITY WAS SEALED OFF WHILE INVESTIGATORS SEARCH FOR CLUES.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
ONE OF THE PERSONNEL CARRIERS BURST INTO FLAMES.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
THERE WAS ONE REPORTED DEATH AND MANY WOUNDED.

COMMENTS:
IT WAS DISCOVERED THAT THE SUICIDE BOMBER'S BROTHER WAS KILLED WHILE BEING HELD AT THE ISRAELI ARMY POST IN TYRE LAST NOVEMBER. SEVERAL SAID THAT THIS ATTACK WAS A "PERSONAL ACT OF VENGEANCE."

000115

CAR BOMB INCIDENT REPORT

DATE: 9/20/1984

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: U.S. EMBASSY ANNEX

TARGET DESCRIPTION: ANNEX IN MOSLEM WEST BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ISLAMIC HOLY WAR

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 400 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: WHITE VAN WITH DUTCH DIPLOMATIC PLATES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
6 STORY EMBASSY ANNEX WITH IRON GATES THAT HAD NOT YET BEEN COMPLETED

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE DRIVER OF THE VEHICLE CONTAINING THE EXPLOSIVES CRASHED THROUGH THE FRONT GATES OF THE EMBASSY.

NOTABLE DRIVER ACTIONS:
DRIVER RAN A GUANTLET OF OBSTACLES AND BULLETS AND DETONATED AT THE ENTRANCE OF THE BUILDING BUT BEFORE IMPACT. SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
GUARDS FIRED ON THE DRIVER BUT WERE UNABLE TO STOP HIM.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE FRONT OF THE EMBASSY WAS BADLY DAMAGED AND WINDOWS WERE BROKEN UP TO A MILE AWAY.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
60 PEOPLE WERE WOUNDED AND 24 KILLED INCLUDING 2 U.S. SERVICEMEN.

COMMENTS:
REPORTS DIFFER GREATLY ON THIS INCIDENT. IT IS POSSIBLE THAT THE DRIVER WAS KILLED BY A GUARD BEFORE THE EXPLOSION AND THAT THE CAR WAS STILL ROLLING WHEN IT BLEW UP.

000116

CAR BOMB INCIDENT REPORT

DATE: 11/29/1984

LOCATION (COUNTRY,STATE,CITY): LEBANON, BEIRUT

TARGET: DRUSE

TARGET DESCRIPTION: CENTRAL POST OFFICE IN ALEY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
CHRISTIANS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY CENTRAL POST OFFICE IN ALEY, THE LARGEST DRUSE TOWN IN LEBANON, 7
MILES SOUTHEAST OF BEIRUT.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED OUTSIDE THE POST OFFICE.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
WOUNDED CIVILIANS, DAMAGED BUILDINGS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
7 CIVILIANS WERE KILLED AND 17 WOUNDED

COMMENTS:
DRUSE AND CHRISTIAN FORCES SEEM TO BOMB EACH OTHER AT WILL.

000117

CAR BOMB INCIDENT REPORT

DATE: 12/21/1984

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: DRUSE SUPPORTERS

TARGET DESCRIPTION: A DRUSE SCHOOL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
CHRISTIANS WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
A DRUSE SCHOOL IN LEBANON'S CENTRAL MOUNTAINS IN THE TOWN OF RAS EL-MATN,
20 MILES EAST OF BEIRUT.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED IN FRONT OF THE SCHOOL

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BLAST KNOCKED DOWN THE FRONT SECTION OF THE SCHOOL

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
4 PEOPLE WERE KILLED AND 32 WOUNDED INCLUDING 19 SCHOOLCHILDREN.

COMMENTS:

000118

CAR BOMB INCIDENT REPORT

DATE: 2/1/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, TRIPOLI

TARGET: IMAN ALI MOSQUE

TARGET DESCRIPTION: VICINITY OF THE IMAN ALI MOSQUE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SUNNI AND SHIITE MOSLEMS WERE ACCUSED

EXPLOSIVE TYPE: DYNAMITE

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 130 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: BLUE MERCEDES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NEAR A CROWDED MOSQUE DURING NOON PRAYERS

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR WITH EXPLOSIVES WAS PARKED OUTSIDE THE MOSQUE

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MOSQUE SUFFERED HEAVY DAMAGE WHICH EXTENDED IN A 500 FOOT RADIUS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
10 PEOPLE KILLED AND 60 WOUNDED

COMMENTS:
RECENT REPORTS INDICATE THAT UNDERGROUND SUNNI AND SHIITE MOSLEM MILITIAS
ARE READY TO TAKE OVER THE CITY.

000119

CAR BOMB INCIDENT REPORT

DATE: 3/8/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: NOT SPECIFIED

TARGET DESCRIPTION: RESIDENTIAL DISTRICT OF BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED OUTSIDE AN APARTMENT BUILDING

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
DAMAGE TO BUILDINGS AND INJURED CIVILIANS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
80 PEOPLE WERE KILLED IN THE BLAST AND 100'S WOUNDED

COMMENTS:

000120

CAR BOMB INCIDENT REPORT

DATE: 3/8/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: SHEIK MOHAMMED HUSSEIN FADLALLAH

TARGET DESCRIPTION: SPIRITUAL GUIDE OF LEBANON'S SHIITE MOSLEM COMMUNITY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SHIITE POPULATED SOUTHERN SUBURB OF BEIR EL-ABED

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED OUTSIDE THE SHEIK'S HOME

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MANY CIVILIANS LAY WOUNDED, SMOKE, FIRE, BUILDINGS WERE DAMAGED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
80 PEOPLE KILLED AND 260 WOUNDED

COMMENTS:
CIA CONNECTIONS TO THE BLAST WERE REPORTED BUT NOT SUBSTANTIATED

000121

CAR BOMB INCIDENT REPORT

DATE: 3/10/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BORDER AREA

TARGET: ISRAELI MILITARY FORCES

TARGET DESCRIPTION: NEAR THE LEBANON-ISRAEL BORDER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
3 MOSLEM GROUPS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 200 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: PICK UP TRUCK

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SOLDIERS WERE TRAVELING IN AN "OPEN SIDED" TROOP TRANSPORT ON A ROAD
LEADING TO A BORDER CHECKPOST

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
DRIVER OF THE PICK UP TRUCK WAITED FOR THE TROOP TRANSPORT TO PASS BY HIM

NOTABLE DRIVER ACTIONS:
OBVIOUS SUICIDE BOMBER

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THOSE PRESENT WERE IN THE TROOP TRANSPORT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SMOKE, FLAMES, DEBRIS. 12 SOLDIERS KILLED AND 14 WOUNDED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
ONLY VEHICLES AUTHORIZED BY THE ARMY ARE ALLOWED SOUTH OF THE LITANI RIVER
BRIDGES AS A SECURITY MEASURE INSTITUTED AFTER THE TROOP BOMBING.

COMMENTS:
A PLANNED REDUCTION OF ISRAELI FORCES IN LEBANON WAS ALREADY IN PROGRESS
BUT MOVING TOO SLOWLY. THIS SUICIDE BOMBING WAS AN ATTEMPT TO SPEED
THINGS UP.

000122

CAR BOMB INCIDENT REPORT

DATE: 4/9/1985

LOCATION (COUNTRY,STATE,CITY): LEBANON, BEIRUT

TARGET: ISRAELI MILITARY FORCES

TARGET DESCRIPTION: ISRAELI CONVOY IN SOUTH LEBANON, NEAR JEZZINE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
LEBANESE NATIONAL RESISTANCE FRONT

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 440 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: PEUGEOT

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SOUTH LEBANON. CONVOY OF TRUCKS AND ARMORED VEHICLES WERE PRESENT

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
ANONYMOUS CALL FROM THE LNRF TO A NEWS ORGANIZATION, CLAIMING
RESPONSIBILITY FOR THE BOMBING, PRIOR TO THE EXPLOSION.

NOTABLE DRIVER ACTIONS:
THE DRIVER OF THE CAR CONTAINING THE BOMB, PHYSICALLY TRIGGERED THE
EXPLOSION KNOWING THAT IT WOULD BE SUICIDE.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT OTHER THAN THE SOLDIERS IN THE CONVOY.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SMOKE, FLAMES, DEBRIS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
2 WERE KILLED AND 50 WOUNDED

COMMENTS:
THE GIRL WAS KNOWN TO BE A MEMBER OF SYRIAN SOCIALIST NATIONALIST PARTY.
THE PARTY PROVIDED THE CAR USED IN THE BOMBING. IN A VIDEO TAPED MESSAGE
LEFT BY THEM, SHE SAID THAT SUICIDE WAS HER OWN IDEA.

000123

CAR BOMB INCIDENT REPORT

DATE: 5/22/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: CHRISTIANS

TARGET DESCRIPTION: CHRISTIAN COMMUNITY IN BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: RENAULT SEDAN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY INTERSECTION OF THE CHRISTIAN SUBURB

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED ON THE STREET PRIOR TO AFTERNOON RUSH HOUR

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
CHRISTIAN MILITIAMEN FILLED THE STREETS

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
50 CARS ABLAZE, 10 FOOT DEEP CRATER WAS BLASTED IN THE STREET, FLYING GLASS AND DAMAGE TO NEARBY BUILDINGS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
60 PEOPLE WERE KILLED AND 190 WOUNDED

COMMENTS:
AS MILITIAMEN BEGAN TO RESCUE WOUNDED TRAPPED IN BUILDINGS, ARTILLERY SHELLS FROM MOSLEM-HELD AREAS EAST OF THE CITY BEGAN FALLING NEARBY.

000124

CAR BOMB INCIDENT REPORT

DATE: 6/14/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: LEBANESE ARMY PERSONNEL

TARGET DESCRIPTION: LEBANESE ARMY POST IN BEIRUT

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
TWO BEARDED MEN DROVE INTO THE ARMY POST.

NOTABLE DRIVER ACTIONS:
OBVIOUS SUICIDE BOMBERS

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
CONFUSION

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BODIES EVERYWHERE, FLAMES FROM BURNING CAR

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
23 PEOPLE WERE KILLED AND MANY WOUNDED

COMMENTS:
THE TWO MEN DETONATED THE SUICIDE CAR INSIDE THE ARMY POST.

000125

CAR BOMB INCIDENT REPORT

DATE: 7/15/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, TIBNIT

TARGET: UNKNOWN

TARGET DESCRIPTION: INTENDED TARGET MAY HAVE NOT BEEN REACHED

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SYRIAN SOCIAL NATIONALIST PARTY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 220 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: WHITE PEUGEOT 504 FLYING A RED CROSS FLAG

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
EDGE OF ISRAEL'S SECURITY ZONE IN SOUTH LEBANON NEAR THE VILLAGE OF TIBNIT.
AT A BORDER CHECKPOINT.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
ISRAELI SUPPORTED MILITIAMEN NEAR THE SECURITY ZONE ASKED THE DRIVER FOR
IDENTIFICATION AT THE CHECKPOINT.

NOTABLE DRIVER ACTIONS:
FEARING HE WOULD BE CAUGHT AND ARRESTED, THE DRIVER DETONATED THE BOMB.
SUICIDE BOMBER.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
CROSSING HAD ALREADY BEEN CLOSED TO CIVILIANS AND THE DRIVER SEEMED
SUSPICIOUS TO THE GUARDS

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
MOST VICTIMS WERE WORKERS OR CUSTOMERS AT A NEARBY BAKERY.

COMMENTS:
THE RED CROSS USES PEUGEOT 504 CARS IN LEBANON AND HAD REPORTED 10 STOLEN
IN THE PRIOR THREE MONTHS. THE SUICIDE BOMBER HAD LEFT BEHIND A VIDEOTAPE
WHICH WAS AIRED ON LOCAL TELEVISION.

000126

CAR BOMB INCIDENT REPORT

DATE: 8/6/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT, HASBAYA

TARGET: SOUTH LEBANON ARMY

TARGET DESCRIPTION: BUILDING USED AS HEADQUARTERS OF ISRAELI MILITARY GOVERNOR
MAJOR FIROY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
SYRIAN SOCIAL NATIONALIST PARTY, FACTION OF THE NATIONAL RESISTANCE FRONT

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: EXPLOSIVES WERE HIDDEN IN SADDLE BASKETS ON
MULE

DESCRIPTION OF VEHICLE USED: MULE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
SUICIDE BOMBER, RIDING A MULE, APPROACHED THE BUILDING. THIS ACTION
CAUSED NO IMMEDIATE ALARM.

NOTABLE DRIVER ACTIONS:
NO UNUSUAL ACTIONS

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
GUARDS WERE TAKEN BY SURPRISE, COMPLETELY CONFUSED

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
BUILDING DEMOLISHED. CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
LEBANESE POLICE ARRIVED ON THE SCENE BUT HAD NO IMMEDIATE REPORT OF
CASUALTIES.

COMMENTS:
LEBANESE NATIONAL RESISTANCE FRONT IS A GUERRILLA ALLIANCE THAT OPERATES
IN THE SOUTH OF LEBANON. THE GUERRILLAS REPORTED THAT THE BUILDING WAS
DEMOLISHED WITH 30 ISRAELIS AND 40 MILITIAMEN INSIDE.

000127

CAR BOMB INCIDENT REPORT

DATE: 8/17/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: NO SPECIFIED TARGET

TARGET DESCRIPTION: MELKI SHOPPING SUPERMARKET IN BEIRUT'S CHRISTIAN COMMUNITY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: PLASTIC EXPLOSIVES

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 550 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY SHOPPING AREA PACKED WITH WOMEN AND CHILDREN

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED IN A NEARBY PARKING LOT

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
MILITIAMEN CAUSED EVEN MORE CASUALTIES BY SHOOTING INTO THE AIR TO CLEAR
THE STREETS FOR AMBULANCES.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
SMOKE, FLAMES, DEBRIS AND WOUNDED CIVILIANS.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
CIVIL DEFENSE TEAMS ARRIVED. NO ARRESTS WERE MADE.

COMMENTS:
THIS ATTACK WAS AGAINST THE LEBANESE CHRISTIAN COMMUNITY, LIKELY
PERPETRATED BY MOSLEM MILITIAMEN.

000128

CAR BOMB INCIDENT REPORT

DATE: 9/19/1985

LOCATION (COUNTRY, STATE, CITY): LEBANON, MARJAYOUN

TARGET: UNKNOWN

TARGET DESCRIPTION: UNKNOWN

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
ARAB SOCIALIST UNION-NASSERITE ORGANIZATION

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 550 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SOUTH LEBANON ARMY CHECKPOINT

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
TWO VEHICLES WERE SEEN IN THE STREET

NOTABLE DRIVER ACTIONS:
SUSPICIOUS BEHAVIOR

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
MILITIAMEN NOTICED THE VEHICLES AND THE SUSPICIOUS ACTIONS OF THE DRIVERS,
GUARDS YELLED TO THE YOUTHS WHO THEN SURRENDERED.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
EXPLOSION WAS CONTROLLED BY MILITIAMEN THEREFORE NO INJURIES OCCURRED.
DAMAGE WAS LIMITED TO THE VEHICLE CONTAINING THE EXPLOSIVES.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
THE TWO MEN WERE ARRESTED

COMMENTS:
DRIVER OF THE BOMB-LADEN VEHICLE SAID HE WAS ON A SUICIDE MISSION, THE
DRIVER OF THE OTHER VEHICLE WAS TO MAKE SURE THE SUICIDE-BOMBER CARRIED
OUT HIS MISSION. APPARENTLY NEITHER YOUTH WAS WILLING TO COMMIT SUICIDE.

000129

CAR BOMB INCIDENT REPORT

DATE: 2/24/1986

LOCATION (COUNTRY,STATE,CITY): LEBANON, BEIRUT

TARGET: CHRISTIANS

TARGET DESCRIPTION: CHRISTIAN NEIGHBORHOOD OF SINN EL-FIL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
HOBEIKA LOYALISTS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
SHOPPING DISTRICT IN SINN EL-FIL

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED OUTSIDE A SUPERMARKET.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
INJURED CIVILIANS EVERYWHERE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
5 PEOPLE WERE KILLED AND 25 WOUNDED

COMMENTS:

000130

CAR BOMB INCIDENT REPORT

DATE: 3/8/1986

LOCATION (COUNTRY, STATE, CITY): LEBANON, BEIRUT

TARGET: CHRISTIANS

TARGET DESCRIPTION: JAATWI STREET IN THE CHRISTIAN NEIGHBORHOOD OF ASHRAFIEH

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
HOBEIKA LOYALISTS

EXPLOSIVE TYPE: TNT

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 275 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: SMALL RENAULT

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BUSY SHOPPING DISTRICT OUTSIDE THE OFFICE OF PRESIDENT AMIN GEMAYEL'S
CHRISTIAN PHALANGE PARTY.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING THE EXPLOSIVES WAS PARKED IN FRONT OF THE NAPOLI CANDY
STORE, FACING THE ENTRANCE TO THE OFFICE BUILDING.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
POOLS OF BLOOD IN THE DEBRIS-STREWN STREET, A CRATER 5 FEET DEEP AND 9
FEET WIDE. A GAS STATION CAUGHT FIRE.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
AMBULANCES AND MILITIAMEN ARRIVED. FIVE PEOPLE WERE KILLED AND 42 WOUNDED

COMMENTS:
THE EXPLOSIVES WERE WIRED TO FOUR 81MM MORTAR SHELLS. THE SHELLS DID NOT
DETONATE.

000131

CAR BOMB INCIDENT REPORT

DATE: 2/1/1985

LOCATION (COUNTRY, STATE, CITY): PORTUGAL, BEJA

TARGET: BEJA AIR BASE

TARGET DESCRIPTION: VEHICLES BELONGING TO WEST GERMAN SERVICEMAN STATIONED AT THE PORTUGUESE AIR BASE.

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
RED ARMY FACTION

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: EIGHT HOME MADE CAR BOMBS

DESCRIPTION OF VEHICLE USED: BOMBS PLANTED ON MOSTLY MERCEDES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMBS WERE PLANTED ON PARKED VEHICLES

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
VEHICLES DAMAGED AND MINOR DAMAGE TO BUILDINGS.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
1 PERSON WOUNDED. AMERICAN EMBASSIES AND NATO FACILITIES WERE PLACED ON FULL ALERT.

COMMENTS:
THE CARS BORE DISTINCTIVE FOREIGN MILITARY LICENSE PLATES. EXPLOSIONS OCCURRED EVERY FEW MINUTES FOR ABOUT HALF AN HOUR. THE CAR BOMBINGS HAD BEEN CARRIED OUT TO DEMAND THE CLOSING OF THE BASE

000132

CAR BOMB INCIDENT REPORT

DATE: 2/19/1986

LOCATION (COUNTRY, STATE, CITY): PORTUGAL, LISBON

TARGET: U.S. EMBASSY

TARGET DESCRIPTION: HEAVILY PROTECTED U.S. EMBASSY COMPOUND

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
POPULAR FORCES OF APRIL 25 (FP-25)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: SILVER-GRAY VOLKSWAGON GOLF

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
GUARDS SPOTTED A SUSPICIOUS LOOKING PACKAGE IN THE CAR TRUNK DURING A
ROUTINE SECURITY CHECK.

NOTABLE DRIVER ACTIONS:
DRIVER WAS UNAWARE THAT THE BOMB HAD BEEN PLANTED IN HIS CAR.

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
GUARDS RESPONDED QUICKLY AND CLEARED THE AREA.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CAR BURST INTO FLAMES AND GLASS SHARDS AND OTHER DEBRIS FLEW AS FAR AS 100
YARDS AWAY.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
GUARDS PUT OUT THE BLAZE WITH FIRE EXTINGUISHERS

COMMENTS:
THE PERSON WHO PLANTED THE BOMB PROBABLY EXPECTED IT TO GO OFF IN THE
STREET RATHER THAN AT THE EMBASSY. THE EMBASSY CLOSED AT 5:30PM AND THE
BOMB WENT OFF SHORTLY BEFORE 7:00PM.

000133

CAR BOMB INCIDENT REPORT

DATE: 5/20/1983

LOCATION (COUNTRY, STATE, CITY): SOUTH AFRICA, PRETORIA

TARGET: AIR FORCE HEADQUARTERS

TARGET DESCRIPTION: HEADQUARTERS IN NEDBANK BUILDING ON CARVER STREET

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
AFRICAN NATIONAL CONGRESS (ANC)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: BLUE ALPHA ROMEO

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
THE BUSIEST PART OF THE AFTERNOON, AT A TIME (4:30PM) WHEN THOUSANDS OF
PEOPLE WERE WALKING THE STREET.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE CAR CONTAINING THE BOMB WAS PARKED OUTSIDE THE BUILDING

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
INTERSECTIONS IN THE AREA WERE GUARDED, BARBED WIRE WAS STRUNG ACROSS
STREETS TO CORDON OFF THE BUILDING

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
APPROX. 3/4 OF THE WINDOWS IN THE BUILDING WERE BLOWN OUT AND AT LEAST 20
CARS WERE DAMAGED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
19 PEOPLE WERE KILLED AND 180 WOUNDED. THE BLAST WAS SO POWERFUL THAT THE
ENGINE OF THE CAR THAT CONTAINED THE BOMB WAS BLOWN 165 FEET IN THE AIR.

COMMENTS:
IT WAS ALSO REPORTED THAT POLICE DISMANTLED A SECOND CAR BOMB AFTER THE
INITIAL BLAST. THIS WAS NOT CONFIRMED.

000134

CAR BOMB INCIDENT REPORT

DATE: 4/3/1984

LOCATION (COUNTRY, STATE, CITY): SOUTH AFRICA, DURBAN

TARGET: DEPARTMENT OF INTERNAL AFFAIRS BUILDING

TARGET DESCRIPTION: A GOVERNMENT OFFICE BUILDING THAT OVERLOOKS DURBAN BAY

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
AFRICAN NATIONAL CONGRESS (ANC)

EXPLOSIVE TYPE: TNT WITH PLASTIC EXPLOSIVES

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: DATSUN SEDAN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
STREETS WERE BUSY. BLAST OCCURRED DURING MORNING RUSH HOUR.

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
HOLE BLOWN IN PAVEMENT, 10 OTHER CARS WERE DAMAGED. WINDOWS OF TWO BUILDINGS WERE SHATTERED AS HIGH AS 13 FLOORS OFF THE GROUND

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
3 PEOPLE KILLED AT LEAST 16 WOUNDED

COMMENTS:
AMICHAH RAJBANSI, HEAD OF THE SOUTH AFRICAN INDIAN COUNCIL WAS SUGGESTED AS THE TARGET. THE POSITION OF THE BOMB WITHIN THE VEHICLE WAS UNCLEAR. WRECKAGE FROM THE DATSUN WAS STREWN OVER 100 YARDS

000135

CAR BOMB INCIDENT REPORT

DATE: 7/13/1984

LOCATION (COUNTRY, STATE, CITY): SOUTH AFRICA, DURBAN

TARGET: NO DEFINITIVE TARGET

TARGET DESCRIPTION: NONE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
AFRICAN NATIONAL CONGRESS (ANC)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): APPROX. 65 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: NONE AVAILABLE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
CROWDED STREET OF AN INDUSTRIAL AREA JUST PRIOR TO THE BEGINNING OF RUSH HOUR

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
PEDESTRIANS WALKING ALONG THE STREET AND TWO ARMY TRUCKS PASSING BY AS THE DEVICE EXPLODED (SEE COMMENTS)

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
4 PEOPLE KILLED 27 WOUNDED

COMMENTS:
ALTHOUGH TWO ARMY TRUCKS WERE PASSING AS THE DEVICE WAS DETONATED, LOUIS DE GRANDE (MINISTER OF LAW AND ORDER) STATED THAT THE APPARENT PURPOSE OF THE BLAST WAS TO KILL AND MAIM CIVILIANS

000136

CAR BOMB INCIDENT REPORT

DATE: 12/21/1985

LOCATION (COUNTRY, STATE, CITY): SOUTH AFRICA, DURBAN

TARGET: NO DEFINITIVE TARGET

TARGET DESCRIPTION: CENTRAL DURBAN

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
AFRICAN NATIONAL CONGRESS (ANC)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: LIMPET MINE

DESCRIPTION OF VEHICLE USED: VAN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CONFUSION ENSUED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
POLICE ARRIVED ON THE SCENE

COMMENTS:
THE LIMPET MINE WAS ATTACHED TO THE UNDERSIDE OF THE VAN

000137

CAR BOMB INCIDENT REPORT

DATE: 5/7/1981

LOCATION (COUNTRY, STATE, CITY): SPAIN, MADRID

TARGET: SPANISH ARMY

TARGET DESCRIPTION: CAR USED BY SPAIN'S PARAMILITARY CIVIL GUARD

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
BASQUE SEPARATISTS (ETA)

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: ARMY CAR

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
VEHICLE WAS TRAVELING ON A ROADWAY IN A FASHIONABLE SHOPPING DISTRICT

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
ASSAILANTS PULLED UP TO THE CAR AT A RED TRAFFIC LIGHT AND TOSSED A
SHOPPING BAG CARRYING THE EXPLOSIVE ON ITS ROOF

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
THE THREE PASSENGERS IN THE CAR WERE KILLED INSTANTLY, SEVERAL BYSTANDERS
WERE INJURED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
ARMY PERSONNEL WERE INSTRUCTED TO REMAIN ON THE BASE UNTIL FURTHER NOTICE,
IN AN ATTEMPT TO PREVENT MORE TERRORIST KILLINGS

COMMENTS:
THE SPANISH GOVERNMENT HAS THUS FAR BEEN UNABLE TO COPE WITH ETA'S ACTS
OF TERRORISM

000138

CAR BOMB INCIDENT REPORT

DATE: 11/29/1981

LOCATION (COUNTRY, STATE, CITY): SYRIA, DAMASCUS

TARGET: NOT SPECIFIED

TARGET DESCRIPTION: AL-AZBAKIYA QUARTER OF THE CAPITOL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
FRONT FOR THE LIBERATION OF LEBANON FROM FOREIGNERS

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 200 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
CROWDED 3 LANE ONE WAY STREET NEAR THE CENTERS FOR THE MILITARY POLICE AND
ARMY RECRUITMENT (PROBABLE TARGETS)

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
CAR CONTAINING EXPLOSIVES WAS PARKED IN THE STREET

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
SECURITY OFFICERS SEALED OFF THE AREA AS FIREMEN ATTEMPTED TO RESCUE
TRAPPED VICTIMS.

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
3 FOUR STORY BUILDINGS WERE DEMOLISHED AND SEVERAL OTHERS BADLY DAMAGED.
ABOUT 12 CARS WERE WRECKED

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
64 PEOPLE WERE KILLED AND 135 WOUNDED

COMMENTS:
ALTHOUGH ANOTHER GROUP CLAIMED RESPONSIBILITY FOR THE ATTACK, THE MOSLEM
BROTHERHOOD WAS BLAMED. IT WAS REPORTED THAT THE DRIVER WHO ABANDONED THE
VEHICLE WAS ALSO KILLED IN THE BLAST

000139

CAR BOMB INCIDENT REPORT

DATE: 8/31/1981

LOCATION (COUNTRY, STATE, CITY): WEST GERMANY

TARGET: U.S. AIR FORCE AND NATO AIR COMMAND

TARGET DESCRIPTION: RAMSTEIN AIR FORCE BASE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
BAADER MEINHOF GANG MEMBERS WERE ACCUSED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: AUTOMOBILE

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
CIVILIAN AND MILITARY PERSONNEL WERE REPORTING FOR WORK

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
THE CAR CONTAINING THE EXPLOSIVES WAS PARKED IN A LOT IN FRONT OF THE
HEADQUARTERS BUILDING

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
GUARDS SEALED THE POST TO ALL BUT "ESSENTIAL" DUTY PERSONNEL

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
CAR WINDSHIELDS WERE SHATTERED, WINDOWS AND INTERIOR WALLS OF THE BUILDING
WERE BLOWN OUT

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
20 PEOPLE WERE WOUNDED

COMMENTS:

000140

CAR BOMB INCIDENT REPORT

DATE: 10/31/1982

LOCATION (COUNTRY,STATE,CITY): WEST GERMANY, GIESSEN

TARGET: DULLES

TARGET DESCRIPTION: U.S. MILITARY HOUSING AREA

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
BAADER MIENHOF GANG MEMBERS WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): 13-15 POUNDS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: STATION WAGON

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
PARKING LOT OF A U.S. MILITARY HOUSING AREA

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMB LADEN VEHICLE WAS PARKED IN THE FACILITIES PARKING LOT

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
WEST GERMAN POLICE TIGHTENED SECURITY AROUND MILITARY INSTALLATIONS

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
20 OTHER CARS WERE WRECKED. METAL, GLASS AND ROOF TILES WERE HURLED
THROUGH APARTMENT WINDOWS

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
TWO FAMILIES WERE EVACUATED AFTER DEBRIS WAS BLOWN THROUGH THEIR WINDOWS

COMMENTS:

000141

CAR BOMB INCIDENT REPORT

DATE: 12/14/1982

LOCATION (COUNTRY, STATE, CITY): WEST GERMANY, BUTZBACH

TARGET: SPEC. 5 RICKY SEUIS

TARGET DESCRIPTION: U.S. MILITARY SOLDIER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
NO GROUP HAS CLAIMED RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: VICTIM'S OWN CAR

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BOMB WITH PRESSURE PLATE WIRED TO A FIRE EXTINGUISHER PAKED WITH
EXPLOSIVES WAS PLANTED UNDER THE SEAT OF VICTIM'S CAR

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
BONN GOVERNMENT SET A \$20,000 REWARD FOR INFORMATION LEADING TO THE
BOMBERS

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
VICTIM WAS HOSPITALIZED

COMMENTS:
THE VICTIM'S CAR BORE A U.S. LICENSE PLATE

000142

CAR BOMB INCIDENT REPORT

DATE: 12/15/1982

LOCATION (COUNTRY, STATE, CITY): WEST GERMANY, DARMSTADT

TARGET: U.S. MILITARY

TARGET DESCRIPTION: SHOPPING AREA FOR U.S. MILITARY PERSONNEL

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
LEFT WING REVOLUTIONARY CELLS WERE BLAMED

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: WHITE MERCEDES BELONGING TO MILITARY PERSONNEL

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
PX PARKING LOT WITH NORMAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
PRESSURE SENSITIVE BOMB WAS PLACED UNDER THE DRIVER'S SEAT

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
NONE PRESENT

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
MINOR DAMAGE

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
THE BOMB EXPLODED AS THE ARMY CAPTAIN SAT DOWN IN HIS CAR

COMMENTS:
THE VEHICLE BORE U.S. LICENSE PLATES

000143

CAR BOMB INCIDENT REPORT

DATE: 8/8/1985

LOCATION (COUNTRY, STATE, CITY): WEST GERMANY, FRANKFURT

TARGET: U.S. MILITARY PERSONNEL

TARGET DESCRIPTION: U.S.A.F. RHEIN-MAIN AIR BASE

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
RED ARMY FACTION & DIRECT ACTION CLAIMED JOINT RESPONSIBILITY

EXPLOSIVE TYPE: UNKNOWN EXPLOSIVE WITH PROPANE OR BUTANE GAS

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN - 2 CANNISTERS OF GAS

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: VOLKSWAGEN SEDAN WITH FORGED U.S. FORCES PLATES

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
BETWEEN THE HEADQUARTERS AND A BASE DORMITORY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
VEHICLE WAS PARKED BETWEEN THE BUILDINGS IN A PARKING LOT 24 MINUTES
BEFORE THE EXPLOSION OCCURRED.

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
THE CAR WAS NOT SUSPECTED SINCE IT HAD AMERICAN FORCES PLATES

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
A HOLE 1 YARD DEEP AND 2 YARDS WIDE WAS BLOWN INTO THE GROUND. BUILDINGS
AND SURROUNDING AUTOMOBILES WERE HEAVILY DAMAGED.

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
THE BUILDINGS WERE EVACUATED AND SECURITY WAS TIGHTENED. 2 PEOPLE WERE
KILLED AND 16 INJURED.

COMMENTS:
THE ENTRANCE TO RHEIN-MAIN IS CONTROLLED WITH IDENTIFICATION CHECKS. IT
WAS LATER ALLEGED A FEMALE MEMBER OF THE RED ARMY FACTION LURED U.S.
SOLDIER EDWARD PIMENTHAL OUT OF A BAR

000144

CAR BOMB INCIDENT REPORT

DATE: 11/24/1985

LOCATION (COUNTRY, STATE, CITY): WEST GERMANY, FRANKFURT

TARGET: U.S. MILITARY PERSONNEL

TARGET DESCRIPTION: U.S. MILITARY SHOPPING CENTER

PERPETRATOR AFFILIATION (FULL NAME (ACRONYM IF ANY)):
PALESTINIAN TERRORISTS POSSIBLY ABU NIDAL'S GROUP

EXPLOSIVE TYPE: UNKNOWN

YIELD OF EXPLOSION (EQUIVALENT LBS. OF TNT): UNKNOWN

DESCRIPTION OF EXPLOSIVE DEVICE: CAR BOMB

DESCRIPTION OF VEHICLE USED: SILVER-BLUE METALLIC BMW 525 SEDAN

DESCRIPTION OF AREA PRIOR TO EXPLOSION:
NO UNUSUAL ACTIVITY

DESCRIPTION OF EVENTS PRIOR TO EXPLOSION:
BMW WAS PARKED IN A LOT BEHIND THE SHOPPING CENTER

NOTABLE DRIVER ACTIONS:
NONE

RESPONSE OF SECURITY PERSONNEL (IF PRESENT):
WEST GERMAN POLICE AND U.S. SOLDIERS IMMEDIATELY SHUT DOWN THE SHOPPING
CENTER AND SEALED OFF THE AREA

DESCRIPTION OF AREA FOLLOWING EXPLOSION:
42 CARS WERE DAMAGED, WINDOWS WERE SHATTERED IN BUILDINGS WITHIN A 100
YARD RADIUS AND A HOLE WAS BLOWN IN THE BACK WALL OF ONE SHOP

DESCRIPTION OF EVENTS FOLLOWING EXPLOSION:
35 PEOPLE WERE INJURED

COMMENTS:
THE PARKING LOT WHERE THE EXPLOSION OCCURRED CAN BE USED BY CIVILIANS.
THE TWO MEN WHO BOUGHT THE CAR MAY HAVE BEEN ARABS. ONE SHOWED A MOROCCAN
PASSPORT TO A USED CAR DEALER IN FRANKFURT, WHERE THE CAR WAS PURCHASED.

000145

CAR BOMBS: A STRATEGIC TOOL, BUT FOR HOW LONG?

What is the likelihood of car bombs remaining the principle strategic tool of terrorists? Let's review why the car bomb is being used now and its limitations.

The users can be broken into three groups: political terrorists (a very broad and encompassing term), philosophical extremists (including religious extremists), and foreign agents.

Why are car bombs the apparent weapon choice today? Why don't we see huge numbers of SA7's being flung at aircraft? We know they're very available, but terrorists rarely use them. There are three types of appeal that motivate any particular group to use a specific device:

- o Practical
- o Psychological
- o Philosophical

Currently all three factors combine to affect the user's decision in favor of a car bomb.

Practical Appeal

Ease of Fabrication: Explosives are readily available virtually anywhere in the world in any amount that is necessary. There haven't been many instances when damage to a particular target was limited as a result of nonavailability of sufficient explosives.

Knowledge and Construction of a Reliable Device: The bomb must explode at the right time or it does not make an effective weapon. There is no question that our various adversaries are well versed in preparing simple, straightforward and highly reliable fuzing systems. Vehicles are most certainly available in any size that is required.

Proliferation of Targets: There has to be a suitable target. Does the terrorist find a target to fit the bomb, or build a bomb to fit the target? The answer to that depends on what and who the individual adversary is, because terrorists and other perpetrators tend to be imitative rather than innovative, with a few notable exceptions. I suspect that some of our adversaries think along these lines: "Well, we know how to build car bombs because Achmid showed us in his school, so let's find something that we can go use this car bomb on." Others are, undoubtedly, going to take a more logical approach by first defining their target and then arriving at the conclusion that a car bomb is an appropriate way to attack it. There are plenty of suitable targets right now for car bombs.

Reliability of Effects: Most of the attractive targets are generally vulnerable to car bombs of any significant size. Here in the United States, we pour a lot of concrete, we use a lot of Jersey highway safety barriers, and so forth. As I travel around the world, I see that there is only limited use of barriers and other technologies that exist to counter car bombs. And because most countries are not taking any significant countermeasures,

the effectiveness of a car bomb is generally assured. Car bombs are without question very practical and hence very attractive as a terrorist weapon.

Psychological Appeal

Terrorist groups have one or more strategic goals. To move towards attaining that goal, they have a series of tactical objectives. The bomb and the victims are tools used to accomplish those objectives. What is it they wish to accomplish? It typically is not the destruction of some facility in and of itself.

They want to attract the attention of the media. In order for a psychological warfare campaign to be effective, there must be generation of propaganda. The media is the means for generating that propaganda. It is not necessary to crank out handbills in the basement, because a car bomb generates a horde of camera crews doing a much more thorough job than handbills could ever do. Television and the print media are very susceptible to sensationalism. Certainly the effects of the car bomb are nothing if not sensational.

The goal of generating this propaganda is to stimulate emotions, alter attitudes, and shape opinions in order to cause a behavior change in the target audience. The behavior change would be, for example, to force the withdrawal of U.S. forces from Beirut. As we know, the terrorists were very successful in doing that. Perhaps, at some future point, they will force withdrawal from a strategic facility in Germany. I have discussed this with many military people and they generally believe that we would never pull back from a base in Germany. I submit

that they are politically naive. No matter what our strategic plans are, it is the civilians, the politicians, that control the military--not the people in uniform. For anyone to believe that strategic need will prevent politicians in the United States from succumbing to popular political pressure is the height of naivete.

Philosophical Appeal

Power to the People: The car bomb represents the largest quantity of explosives that can practically be used as a tool to demonstrate the power of the people. At the turn of the century, when we had a significant anarchist movement in the United States, and we were also experiencing a transition to the use of dynamite, there was a movement that viewed this new "technology" of the bomb as being a way to bring about significant change. Their comments 85 years ago are equally applicable today. One notion is that the bomb represents power to the people, for it endows the people with enormous destructive capability. No one can argue that question. It ends the state monopoly on violence and the people are no longer forced to yield to state direction. Explosives are, without question, a significant power in the hands of the common people. Currently, we view explosives as the ultimate weapon that can be employed by subnational groups. I believe that this is no longer the case and will be one of the bases for change.

Moral Power: Conventional weapons arouse common prejudice and cloud the morality of violence. As Mao, and many others who wrote about these issues, very clearly pointed out, there has to be a separation between criminals and crusaders. Our adversaries

want to be considered crusaders. In the minds of the people they are trying to affect, their violence has to transcend the question of criminal use and become morally acceptable.

Mystical Power: This is significant given the number of religious extremist groups that see themselves as instruments of God's will exacting divine retribution. That sort of rhetoric has been repeated through many of the communiques and other publications of our adversaries. Years ago, and even more recently, they have written that they see explosives as their means of attaining God's will. But, I don't think explosives will continue to be viewed that way, particularly if the apparent effectiveness of explosive devices diminishes.

I predict a loss of appeal for the car bomb due to three principal factors. One, reduced effectiveness of the bomb itself. We are developing technical countermeasures and better building design that result in fewer available targets and fewer successful attacks on the available targets. That puts a big crimp in our adversaries' plan. If they have less to attack, and they have fewer successes when they do attack, the technique of car bombs is going to lose favor rapidly.

Terrorists are extremely vulnerable to the effect of failure. If they have failures, they will have difficulty attracting money and supporter. They must have success. We are, in a sense, forcing them to change. I am not arguing that we shouldn't progress as we are, but I am pointing out that the changes they make will be directly related to and dependent on our ability to minimize their success.

Next is the reduced media appeal. The media appeal of car bombs is obviously and clearly going down. Just read the Washington Post. In our office we clip the Post and a few other papers every day. We subscribe to NEXIS and we look at the media in great detail. Five years ago a car bomb that killed a few dozen people would be written up on page one with major headlines and multiple columns in the Washington Post. Today a similar incident is buried on page nine or in the second section. The public is becoming desensitized to the issue of car bombs and the number of deaths that car bombs cause. As we proceed along and develop better technical countermeasures, and the terrorists have few dramatic successes, they will find that the media will downplay them. I'm not saying that car bombs will not ever occur again; it would be naive to suggest that. Nor am I saying that the media will totally ignore them. But car bombs will no longer generate the level of propaganda that the adversary needs.

Also, as car bombs become more common, they will increasingly be viewed as criminal acts and will lose their identity as tools of crusaders. United States policy emphasizes the criminal aspect of terrorism. President Reagan has done a very good job of singling out Col. Quaddafi from his people and saying that it is he who is a great criminal, and not the Libyan people. Reagan is taking one of the steps that will reduce the appeal of car bombs: attributing to them a criminal, rather than crusader, connotation.

Future Projections

Practical Appeal: Whatever tactic comes next must be as easy to fabricate as the car bomb. There must be no significant increase in cost or scientific complexity to make the item.

Psychological Appeal: It has to have very high media appeal. Car bombs are limited fundamentally to killing about 250-300 people, due to the maximum probable density of people within the damage radius. Even at an event like the Olympics or a football game, the density is not enough to permit the deaths of more than this approximate threshold of 250-300 people. Whatever follows next has to cross that threshold for it to have great appeal.

Philosophical Appeal: Whatever the new tool is, it will be viewed as superviolence when the 250-300 person threshold has been crossed. Superviolence, in the hands of the people, is a very powerful tool for those bent on extortion or millennial destruction.

What are some of the possible alternatives? Let's examine several possibilities.

Jumbo Jets: One tactic that meets these criteria that I've laid forth is attacking a jumbo jet. A jumbo jet, when full, crosses the barrier of 300 people. There is a high density of people and the jumbo jet is very vulnerable to explosives. Depending on how the explosive is introduced, for example by ground crew, there's no reason why the Air India disaster will not repeat itself over and over again.

Cruise Ships: They also have a very high density of people. There are arrangements of explosives that will break the back of any cruise ship floating and sink it a lot faster than the people could be evacuated. That makes them a somewhat attractive target.

Chemical and Biological Agents: These agents can be very practical and effective. There is a significant aura of odium that surrounds any suggestion of their use. That odium meets some of our philosophical and psychological requirements and would be viewed as a new plateau, earning a designation like "the ultra-scientific and mystical power".

Nuclear Agents: Although some people may argue that it is possible to build a fissile device, I disagree and think that at the present time only a dispersal type device is practical. A dispersal device could throw ionizing material up in the air and let it float down, a la Chernobyl. If that had been deliberate, imagine how many column inches would be devoted to reporting it and the resultant deaths. What a powerful tool--no atom bomb, no big mushroom cloud, just a lot of ionizing material floating around the sky. It is a major horror, and major horror attracts major networks. It would certainly be equal to chemical and biological agents in its scientific and mystical power appeal.

Let's compare these ideas in terms of the three types of appeal discussed earlier. Jumbo jets earn only a 5 for practicality, because access is difficult. For the psychological score, jumbo jets get a 10. On the philosophical side, I'm going to give it a 5, because once again, it's still explosives, it's not new, so it doesn't have the value of something that is really

new and really horrible. So we come up with a score of 20.

The cruise ships are practical to attack. They rate a 10 psychologically, because of the death toll. I give them a 5 philosophically, for the same reason I did on the jumbo jets.

Chemical and biological agents rate 10's all the way across. They would be very practical. Do you realize we had a biological terrorism incident in this country in 1915?

Here in Washington, D.C., in the suburb of Chevy Chase, a German agent, Anton Dilger, set up a bottle plant for the production of several different bacteria. He chose anthrax, glanders, and meloditus. The last two were not good choices; anthrax was an exceptionally good choice. He grew it in about two weeks with nothing more than flat whiskey bottles, some growth media and a seed culture. After two weeks, he washed it off with warm water and made multiple kilograms of very dense anthrax soup. He failed when it came to dissemination, because he used direct inoculation of horses, sheep, and other animals headed toward our war in the east. If he had been more successful, I think we would be more conscious of the potential for this type of attack. It's not new; it was done here 70 years ago. This is not a difficult technique and it could have significant impact, both philosophically and psychologically.

Regarding nuclear items, it's not practical to make a fissionable weapon. It would be psychologically devastating and it would philosophically fill all of the appeal notions that I have put forth. So it gets a 25.

<u>FUTURE POSSIBILITIES</u>	<u>APPEAL</u>			<u>TOTAL</u>
	<u>Practical</u>	<u>Psychological</u>	<u>Philosophical</u>	
Jumbo Jet	5	10	5	20
Cruise Ship	10	10	5	25
Chemical and Biological Agents	10	10	10	30
Nuclear Agent	5	10	10	25

This simple comparison demonstrates the overall appeal of chemical and biological terrorism. Although it does not represent the result of an in-depth, careful study, it is based upon years of experience and on numerous discussions on the topic.

How would the adversary employ chemical or biological agents? There are three possible choices: chemicals, toxins, (the nonliving poisonous byproduct of a living organism) or a biological itself--something that is alive and disease-causing. Anthrax typifies the biologicals I feel are likely to be used. Anyone who has seen a photograph of a anthrax victim will recognize the psychological appeal of biological terrorism. There is significant philosophical appeal also, particularly to a religious or anarchist group seeking millennial destruction.

I've seen a notebook taken from a SWAPO guerrilla in Namibia after he had undergone instruction by Cubans or Soviets. It contains extensive notes on chemical and biological warfare. The Soviets or their Cuban surrogates obviously feel they are justified in raising these issues. These careful notes are very re-

vealing as to the level of interest on the part of the adversary in fomenting this kind of violence.

There are at least five unclassified examples of the use of chemical, biological or toxin weapons by terrorists or other subnational adversaries within the last eight years. In many of these incidents, toxins were used. One of them, ricin, is about a thousand times more toxic than GB nerve gas and is primarily used as a projectile contaminant associated with small arms and clandestine devices. BTX, botulinum toxin, which can be used as a projectile contaminant or disseminated as an aerosol or in the water, is the subject of considerable interest on the part of our adversaries. CBT agents are no longer limited to use by governments; terrorists have specifically, unarguably been involved in the manufacture and intended distribution of them as well.

What are the threat levels? Groups or individuals without specialized skills are restricted to using agents they can buy or steal, agents with limited effectiveness. Adversaries possessing specialized skills can manufacture their own. They can make any agent we have now, and some we have not chosen to use. Adversaries that benefit from a patron state can obviously get anything the patron state has access to. We owe our French colleagues a great debt for selling over a ton of GA nerve agent to Col. Quadaffi some years ago. I doubt that he had intended to use that to control bugs on his petunias. What he is doing with it is not a subject for this particular discussion, but there is no question that those who sponsor terrorism have the tools required to move in the direction of CBW, when they choose to do so.

There is no lack of literature available that describes standardized chemical agents, and this literature has been reprinted in the terrorist press. Arsine, carbonylchloride (phosgene), cyanogen and nickel carbonyl are all examples of agents available in pressurized cylinders. None of them require special licensing or have meaningful restrictions on their purchase. All are proven effectively toxic.

For ease of manufacture, the lethal chemicals that suggest themselves based on what has been written in the terrorist's own literature include the fluoroacetates. These are systemic poisons; they interfere with the Krebs cycle; there is no antidote; they are easy to make; and they are approximately as lethal as our current range of nerve agents. The organophosphates (nerve agents), which are very similar to many insecticides and no more difficult to manufacture, are also frequently mentioned.

Four hours of research at a university library revealed a formula for safely processing small batches of nerve agent. It is less complicated and less dangerous than refining heroin from opium, and much easier than making LSD. In the toxin and biological area, clostridium botulinum, the source of botulinum toxin, is very easy to grow, as is anthrax.

How will the agent be disseminated? What are some options that meet the practical requirements that I set forth? Aerosol spray, explosives and injection suggest themselves. The spray device could be handheld, vehicle mounted, or of course aircraft mounted. The Israelis sell a device to spray tear gas for "police applications". However, this item doesn't meet any of the normal tactical applications criteria for a "pepper fogger"

type device. Rather, its capability to shoot powder or liquids with an adjustable nozzle suggest a battlefield device for spraying nerve agents or similar toxic substances.

A vehicle with a sprayer has been used and it was disgustingly effective. Creating an aerosol cloud of anthrax in a housing area at 4 or 5 o'clock in the morning during the time of atmospheric inversion would be absolutely devastating. Although there is not the density of people required when using an explosive, it is moot because a car spreading powdered agent can achieve any particular level of effective dose desired.

Explosive dissemination can be in place or from standoff position. A chemical delivery system does not have to be complex. A 1.1 gallon paint thinner can, filled with a chemical agent and with four feet of det cord wrapped on the back, can contaminate a fairly small area by liquid splash. Putting more det cord on the back, and a little bit of a buffer like a few layers of cardboard, will provide a delay allowing the device to be tossed up in the air. When it ruptures in the air, it will create a crude, but probably thoroughly effective downwind aerosol cloud.

The IRA has put multiple large bore mortars in the back of a sand-filled truck and uses about 40 pounds of explosive load per mortar round. It would not be difficult to substitute the main explosive charge with a chemical agent and use it in this manner to attack a military base. If we substitute the military base for a crowded football field it is entirely possible to create a major disaster.

Injection into water is another technique. Dumping an agent in a reservoir is not effective, but putting it directly into the water distribution system after the final treatment stage can be devastating. The spray device is, however, the more likely method of dissemination due to ease of use and some degree of controllability.

In summary, my limited analysis indicates a gradual inevitable shift from car bombs to another tactic. Some users are clearly more interested in making change and willing to accept change than others, so we will see those adversaries beginning to switch over to chemical and biological agents for their greater appeal. Most likely the more technologically oriented German groups will be among the first. Since they are anarchistic in their orientation, the use of these agents will definitely appeal to them.

7:bomstrat.1ec

NOTES
ROBERT H. KUPPERMAN
DEFENSE RESEARCH INSTITUTE, INC.
MAY 15, 1986

1. Terrorism has become a strategic tool of warfare. It is the direct implement of the weak and the deniable proxy of the strong.
2. Terrorism is theatre -- at times a violent theatre of the absurd. It is systematic political extortion in which innocent civilians are targets for murder and kidnaping.
3. Not all terrorists are the same. Generally speaking few want to kill lots of people. One may loosely categorize terrorist groups:

Separatists	(IRA, ETA)
Religious Zealots	(Islamic Jihad)
Territorial Needs	(PLO)
Nihilists	(RAF, Action Direct)
Racists	(Ku Klux Klan, Covenant, neo-Nazi groups)

4. There is always a progression of tactics: kidnaping, assassinations, highjackings of aircraft, and ships and even massive bombings. High-tech terror to follow.
5. The targets to date are business men, diplomats, military officers, civilian and military facilities, airports and airplanes, ships, trains, computer systems, electrical power grids and pipelines.
6. Terrorists generally are not terribly innovative though there are exceptions. Bombings and shootings will remain highest on their list -- so will the use of hand-held rockets.
7. NATO and the United States are the primary targets in the mid-east and in Europe.
8. The terrorists objective is destabilization, to erode the confidence in ourselves despite our recent military successes.
9. American civilians and military, diplomats, military installations abroad, and U.S. diplomatic facilities will remain the primary targets.

10. Remember, terrorism is theatre. The attacks have high symbolic value. Think of the media circus that TWA 847 caused in June 1985.
11. Small and big bombs, including car and truck bombs, will be used over and over again.
12. The best defense is timely, accurate intelligence so that we can thwart terrorist missions.
13. Failing that, we need passive defenses, many of which exist today; barriers or traps to stop a truck, various sensors (explosive sniffers, radiological sensors, neutron imaging), big buffer zones, physical structures employing energy absorbing materials (baffle designs and foam), and composite armor to protect installations and cars.
14. But is this enough? Or in light of its effect on our conduct of diplomacy, is it too much? Have the terrorists already won if our embassies are moving to the suburbs in order to acquire the needed land and better counter-surveillance activities?
15. Will the days of face-to-face diplomacy end?
16. Will we be forced to conduct much of the United States' business through inter-active computer and closed circuit television.
17. And even if we opt for a more cumbersome means of diplomacy, will we have covered the wide spectrum of possible threats -- chemical, biological and radiological -- or more mundanely a suicidally piloted plane with lots of C-4.
18. Intelligence collection and proactive measures aside, are we headed towards a bunker mentality? Can America's foreign policy be conducted under these conditions?
19. The Congress will be asked these questions as many diplomats are now asking them.
20. Congress has begun to hack away at the State Department's embassy enhancement program. Some one-half billion dollars has already disappeared.
21. Indeed, the greatest disaster of all in this new found world of terrorism experts and opportunism, would be a long lull in which terrorists do nothing.
22. Our counter-terrorism efforts are characterized by a cycle of apathy to hysteria to apathy. Terrorism has a short "half life". If the terrorists don't hit large embassies with big truck bombs within the next eight months or so the embassy enhancement program may become a victim of Gramm-Rudman and a welcome apathy about terrorism.

23. We need more creative solutions. For example, many tens of millions of dollars have already been expended in blast shelter designs for civil defense. The money has already been spent, although the nuclear civil defense program is moribund. We might wish to think of embassies that exist largely below ground, which are quite blast resistant and in which we can control the environment substantially. Because less land is required, embassies can remain in cities and we can avoid the image of concrete mausoleums. In the end, such creative solutions may prove really cost-effective.

REFLECTIONS ON NORTHERN IRELAND

by

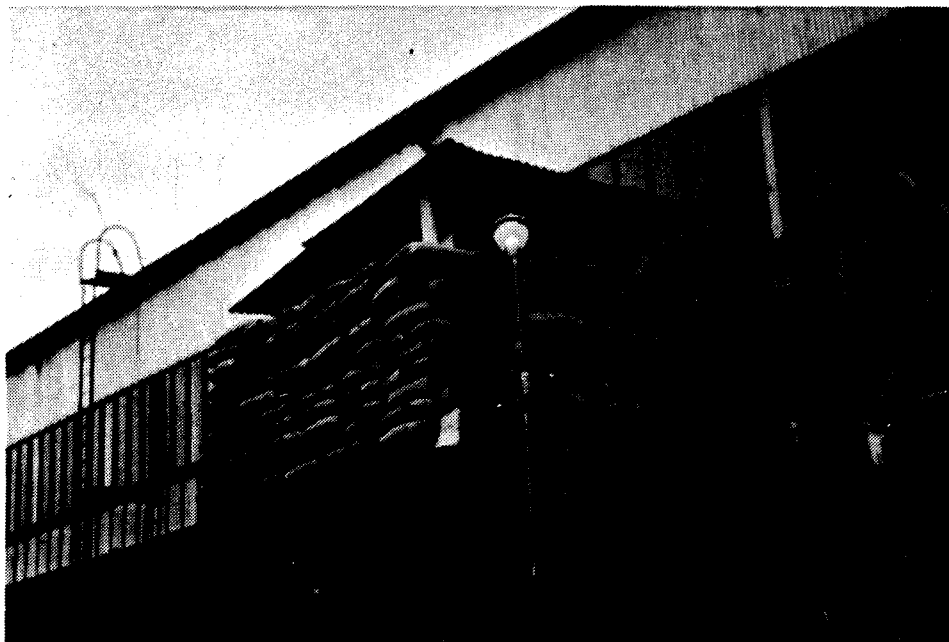
Colonel G. A. HEWISH MBE
British Liaison Officer, Engineers

Lieutenant Colonel C. L. ELLIOTT MBE BSc
Defence Fellow, Southampton University, U.K.

Colonel G. A. Hewish MBE's presentation gave the history and evolution of military engineering to defeat terrorist attacks and to support security force operation in Northern Ireland from 1969-1979.

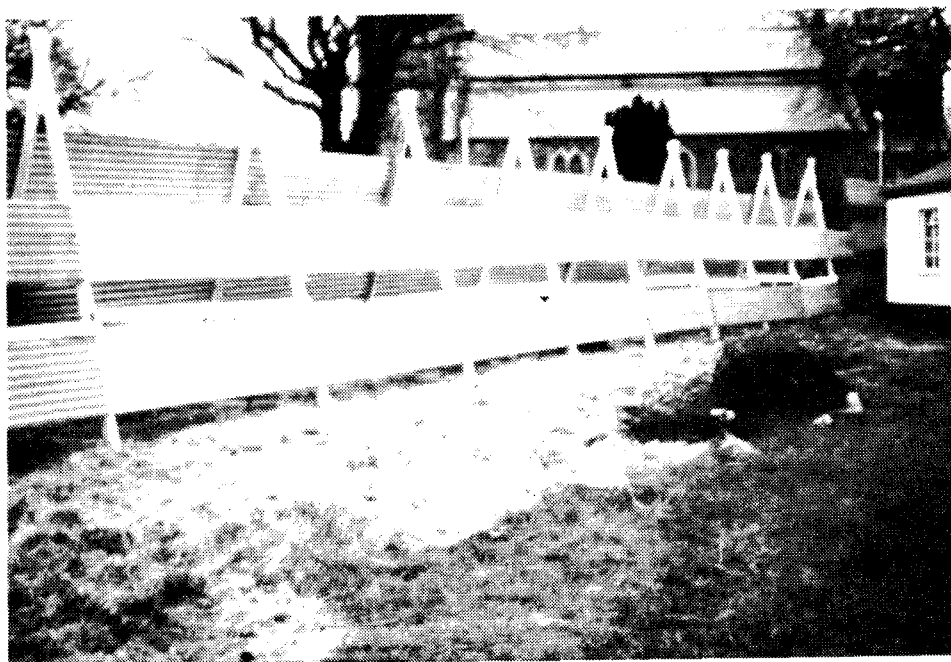
Color slides showed that during the period 1969-1973 temporary engineering expedients such as sandbags and corrugated iron were very widely used. Politically this seemed desirable since structures were not "permanent and therefore could be easily removed when the problem was solved. From an engineer materials and design point of view it reflected the state of the art during those early days, and design and techniques evolved daily.

Phase 1: Engineering 1969-1973



Slide 1 Elevated Sandbag Sangar. Early Days 1969-70

000165



Slide 2 Cover From View Screen

Early days 1969-70. 'A' Frame construction lightweight.
Vulnerable to wind damage.



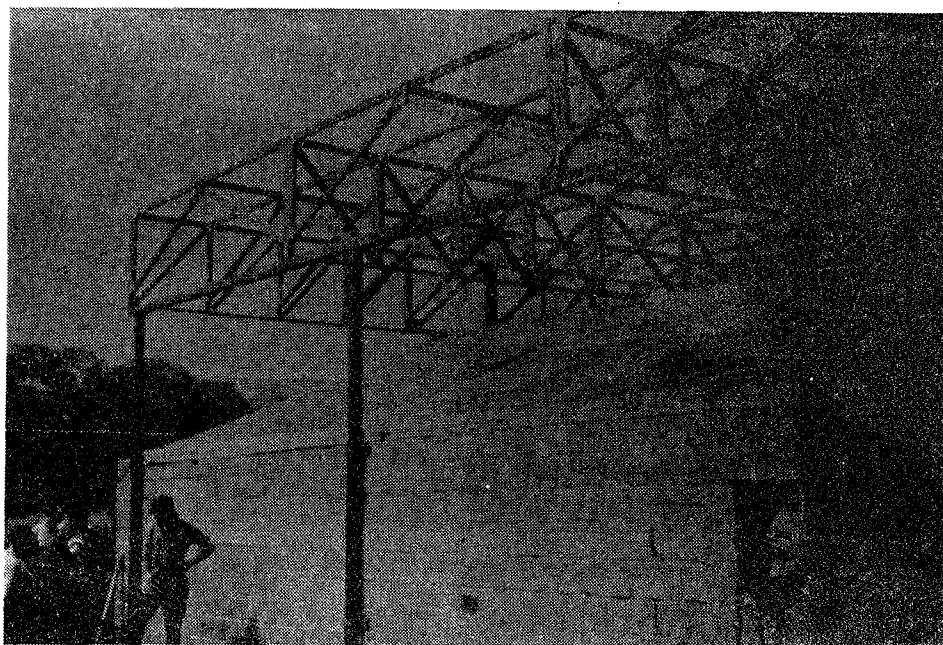
Slide 3 Entrance to Security Force Post

Hardened and includes early design of blast wall. 1970-71



Slide 4 Anti-Missile Protection

Grand Central Hotel, Belfast 1974 protection designed to defeat hand-thrown missiles, rockets and to force stand-off distance in a car bomb attack.

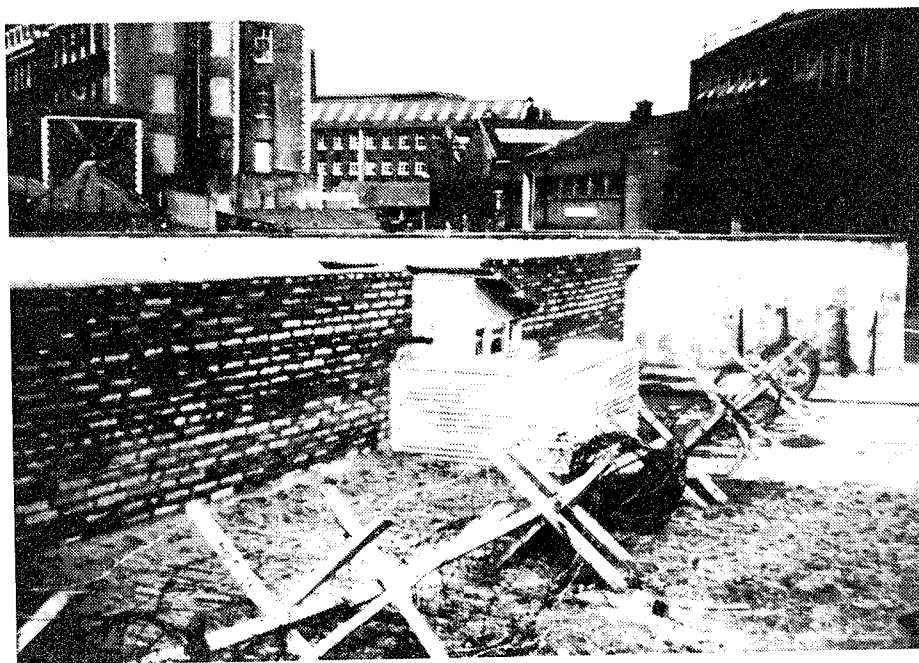


Slide 5 Anti-Mortar Screen

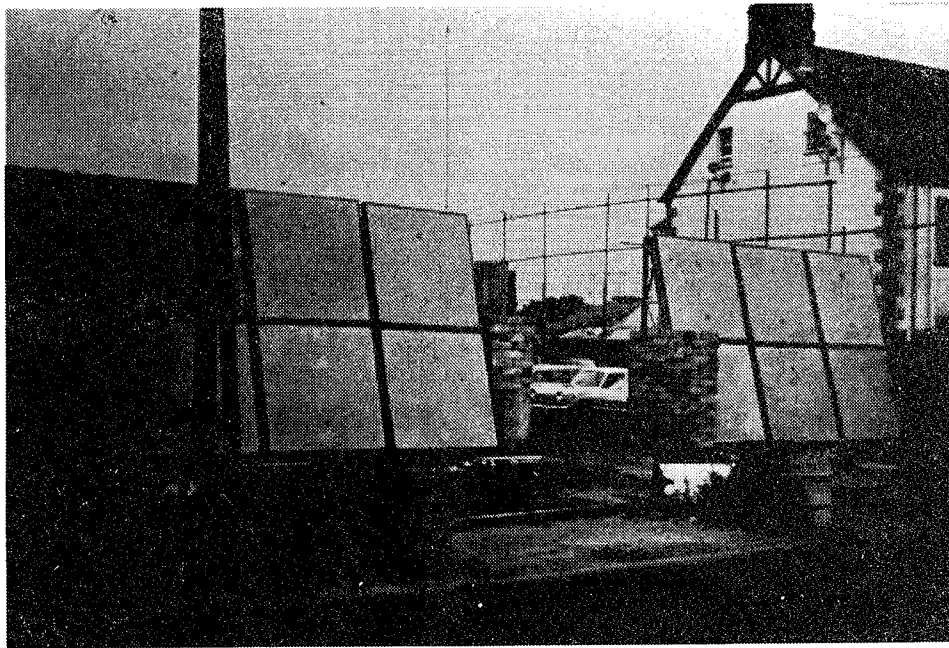
1974 attempt to detonate mortar before it penetrated roof.



Slide 6 "Sleeping Policeman"
Road humps designed to slow a vehicle.



Slide 7 Improved Sandbag Sangar
1971-72 Saw sandbags being clad with corrugated iron to slow deterioration.



Slide 8 Rapid Assembly Protective Wall (RAPW)

1972-73. Wooden structures to screen-off rival communities. 4M high and in 2M bay lengths.

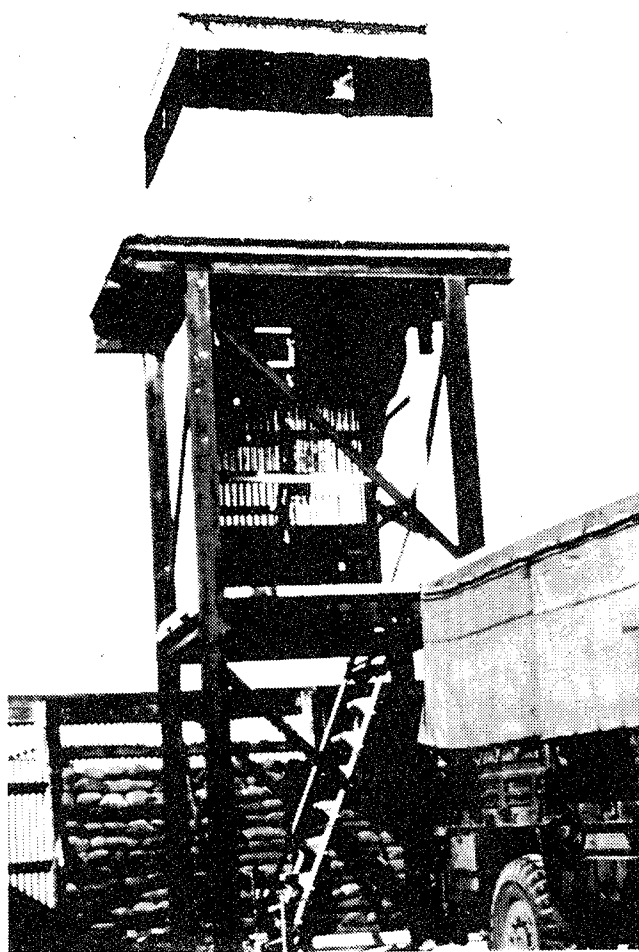


Slide 9 Portable Sight Screen

1972-75. Used for events, marches and to give cover from view protection to engineer works parties.

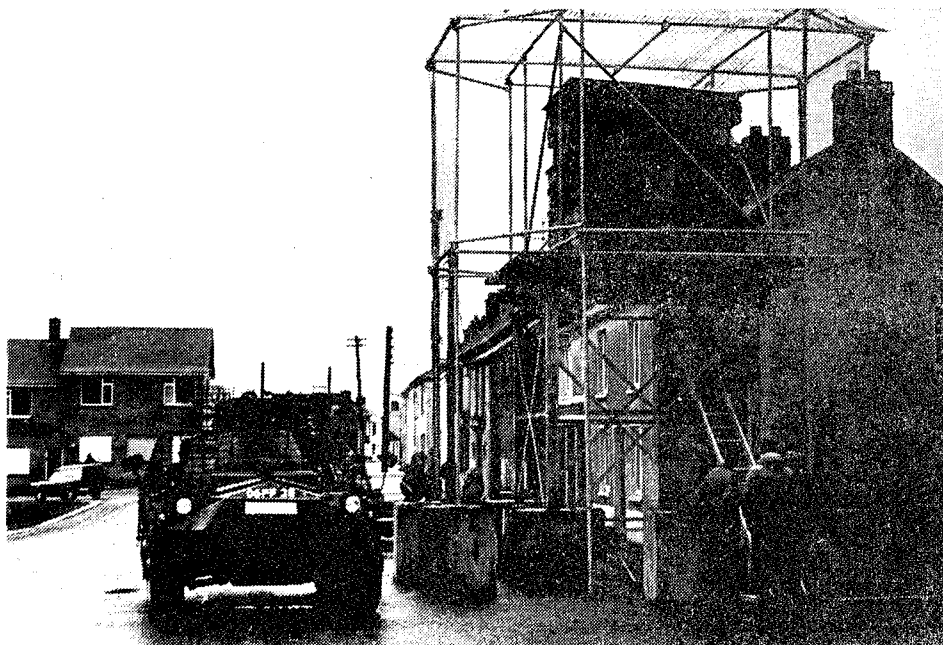
By 1974 more permanent structures were appearing which illustrated the problem was persisting and that to defeat the increasingly sophisticated terrorist attacks which included rocket, mortar and car bomb attack, better protective measures were needed. Further slides showed that from 1973-1979 there was extensive use of high density concrete blocks and Christchurch blocks to replace sandbags and button-on fencing to replace much of the corrugated iron.

Phase 2: Engineering 1973-1979

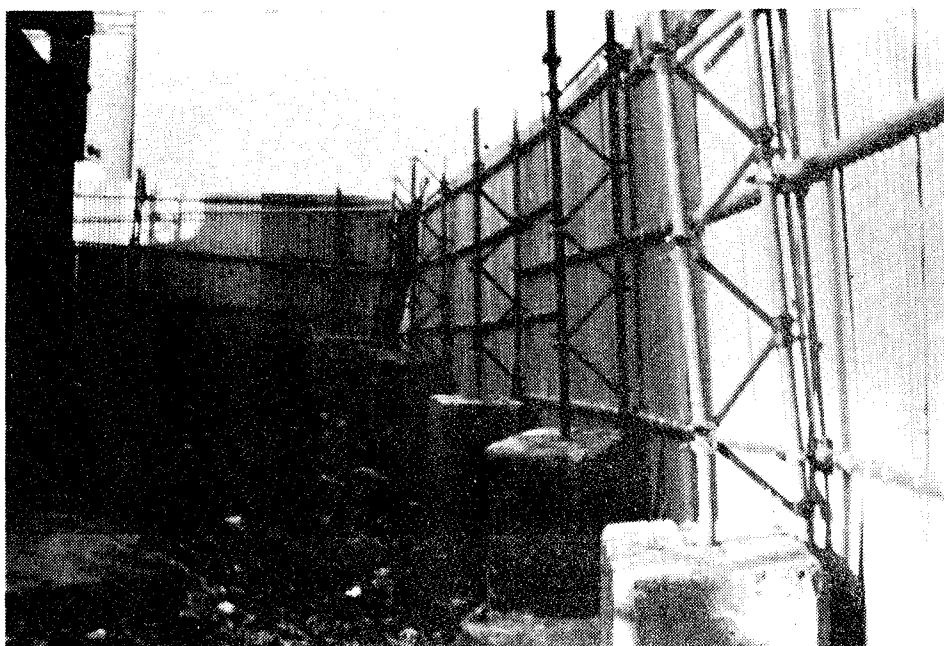


Slide 10 The High Density Concrete Block (HDCB)

1974. Seen here used to build on elevated sangar. Cleaner, tidier, better protection and more structurally sound. Embrasure concealed by band of black paint.

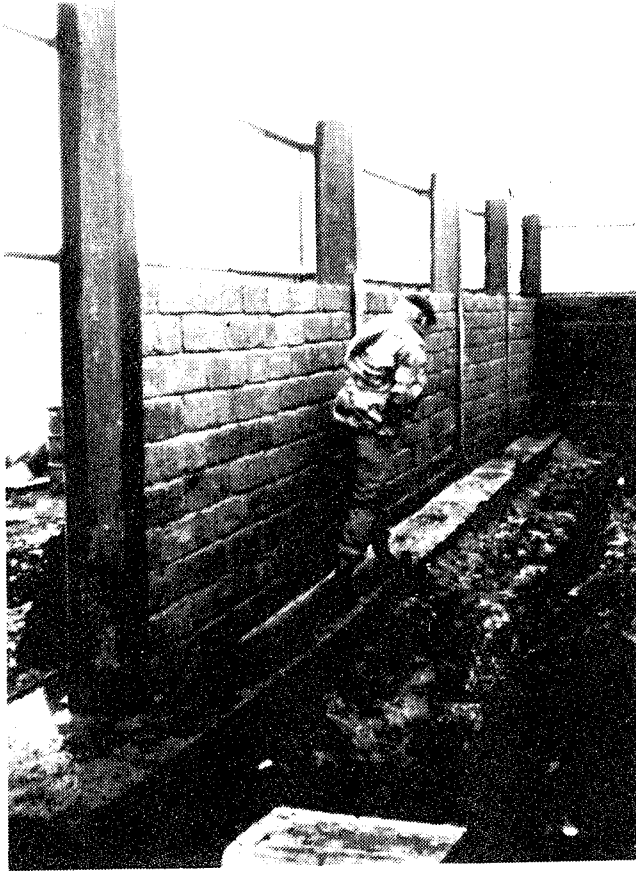


Slide 11 More HDBC with Anti-Rocket Screen etc.



Slide 12 Cover From View Screen

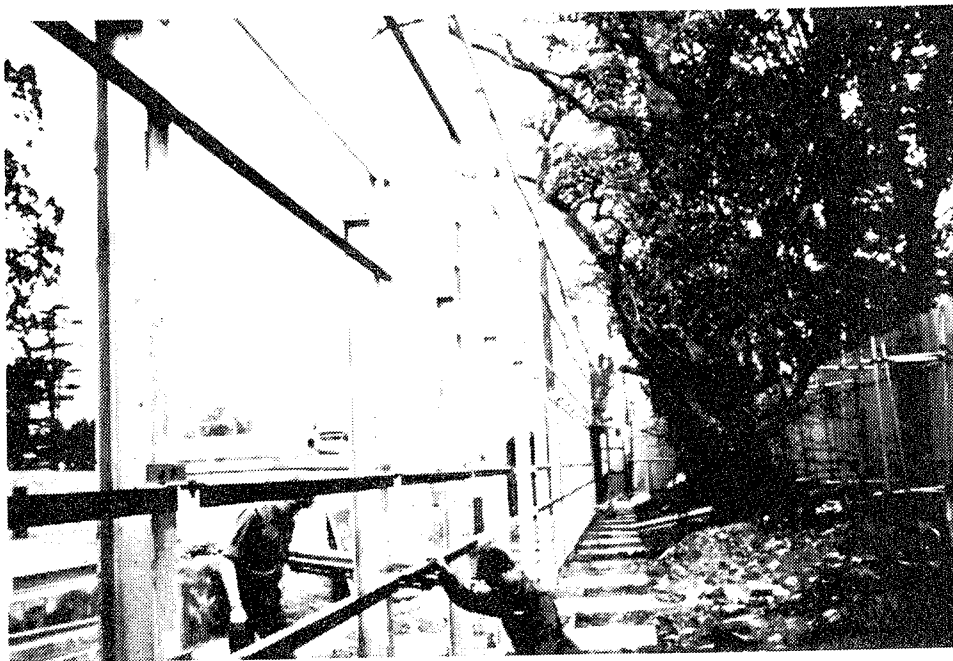
Perimeter fence, braced by concrete blocks and tubular scaffolding.
Pre 1974.



Slide 13

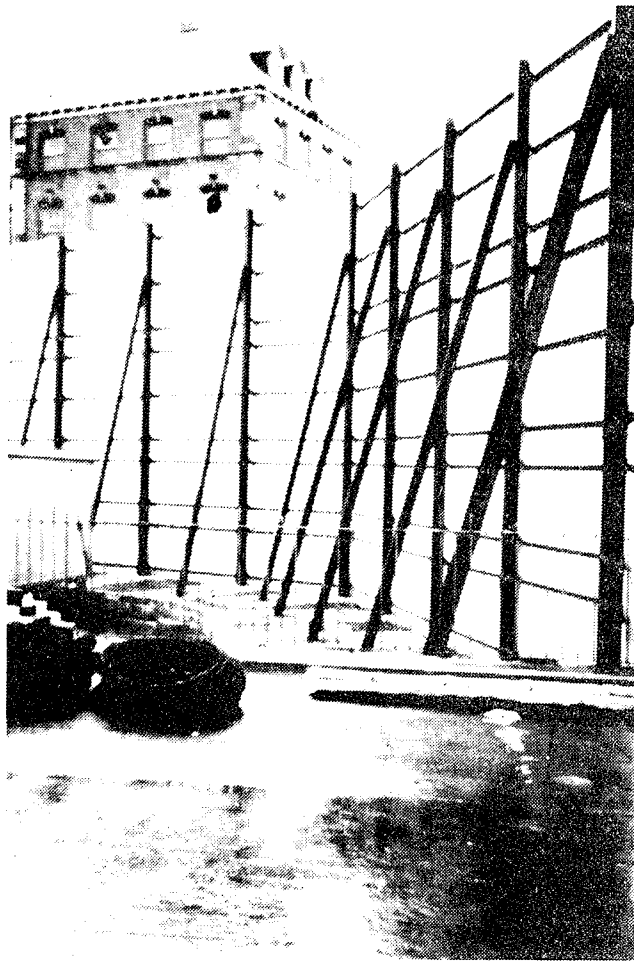
Perimeter Fence

This design gave protection from small arms fire as well as cover from view. RSJs replaced tubular scaffolding and these fences stood up better in tough weather.

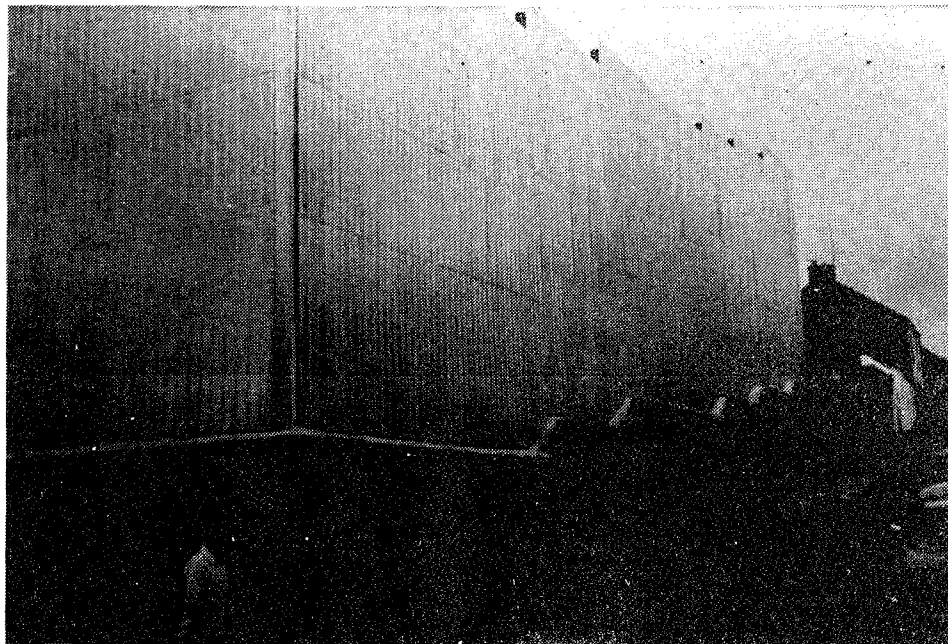


Slide 14 Button-on Fencing

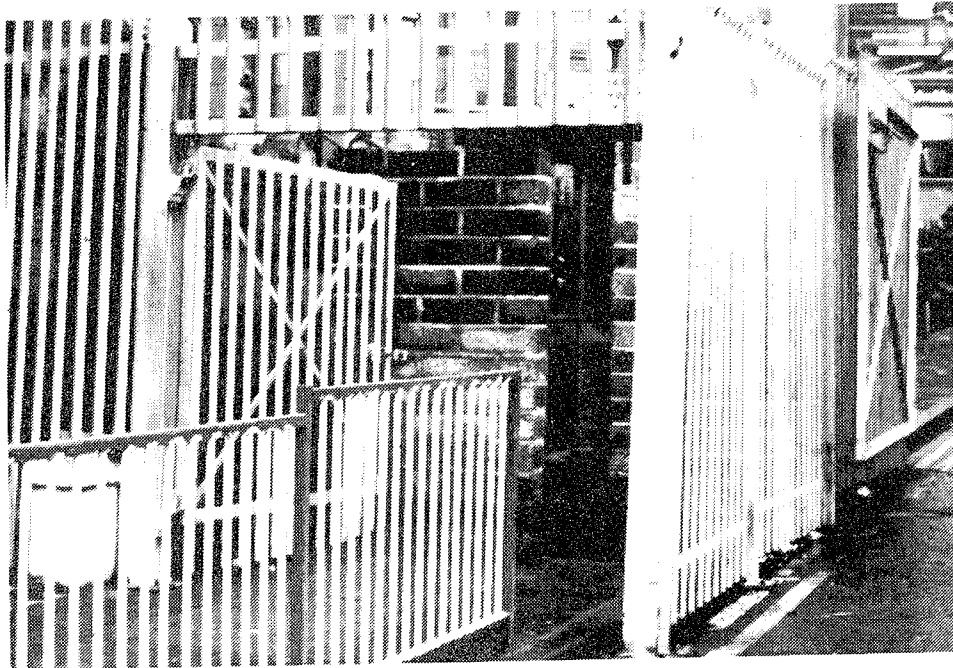
Replaced corrugated iron fences and could be built on standard designs to heights of 3.0M, 5.5M, or 8M.



Slide 15
Button-on Fencing
Flax Street Mill, Belfast.

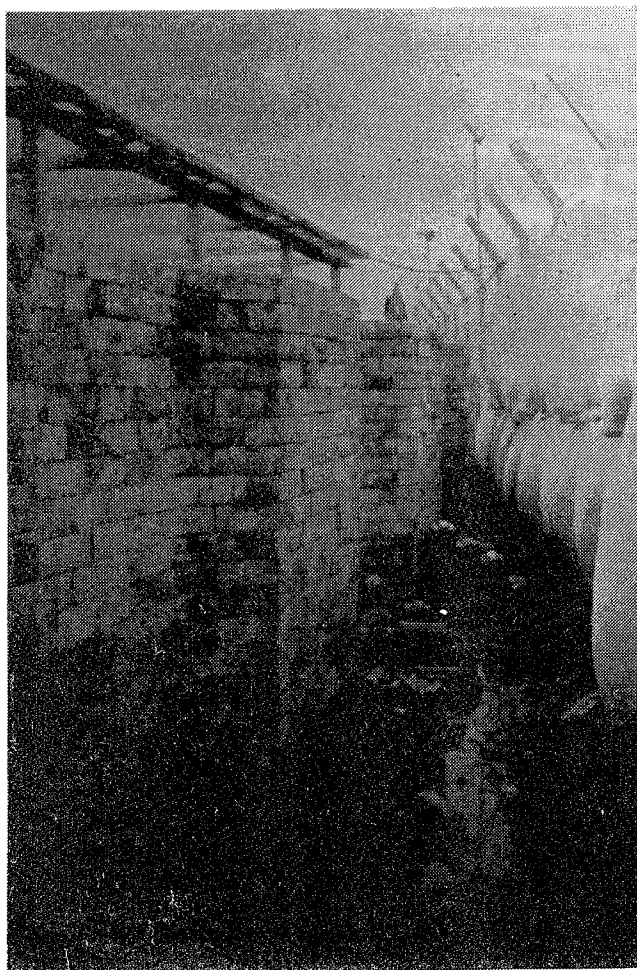


Slide 16 Button-on Fencing



Slide 17 Pedestrian Controls

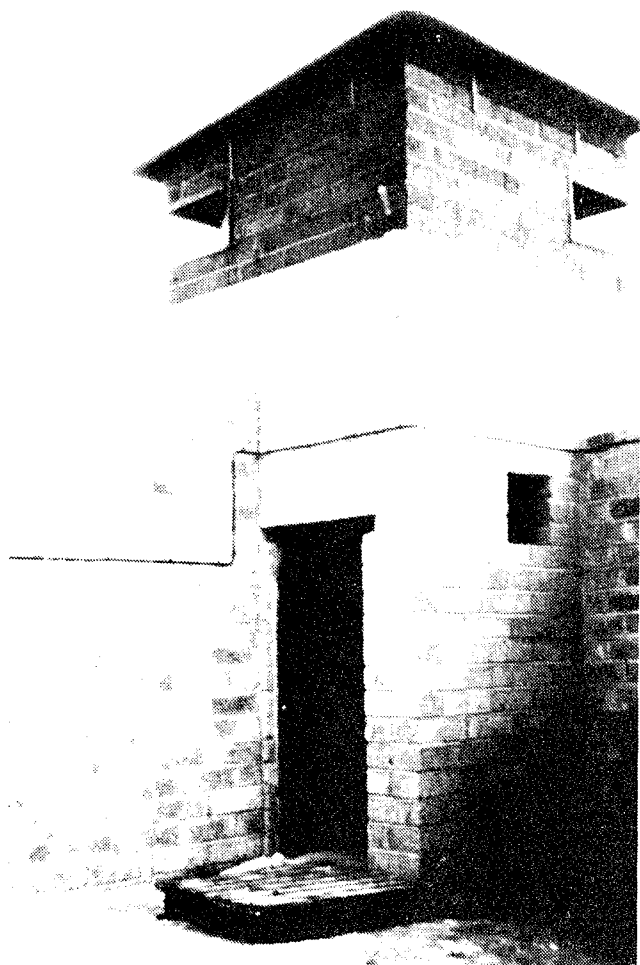
Manned barricades to deter hand carried explosive devices.



Slide 18

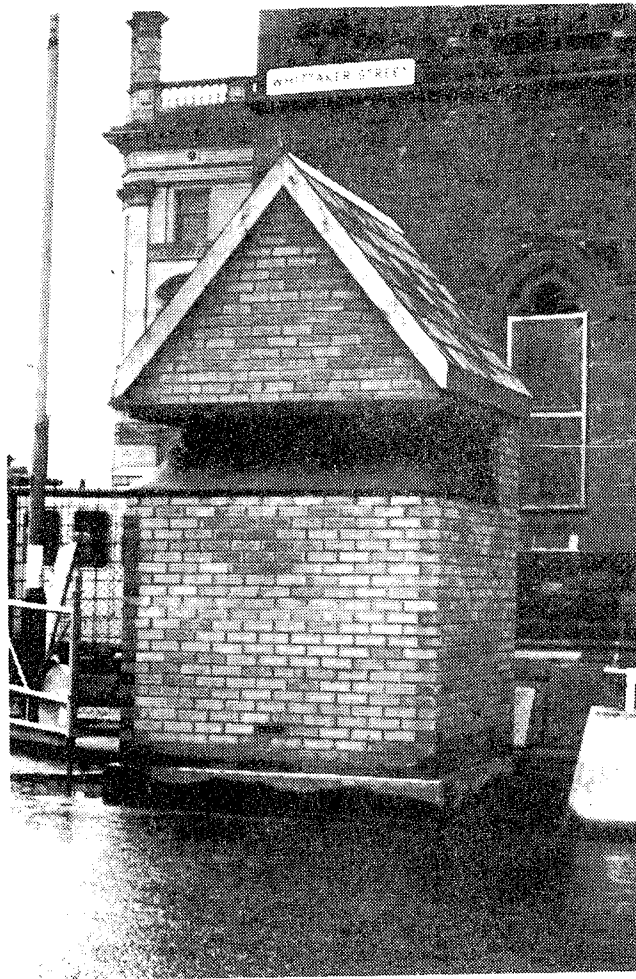
Christchurch Block Wall

A dry stone wall using nesting, angled, interlocking rapidly assembled blocks. No vulnerable mortar joints.



Slide 19 HDCB Climax

The HDCB about as sexy as they ever got!! - 1978-79.



Slide 20 Meanwhile

A non-military attempt at a more aesthetic sangar. The shape of things to come?

The learning process had been continuous and we were seeing engineering designs which were not so obtrusive; did not have oppressive security overtones and yet were proving safe and immune to certain of the terrorist threats.

Thus from 1979 to date a new style of fortification evolved.

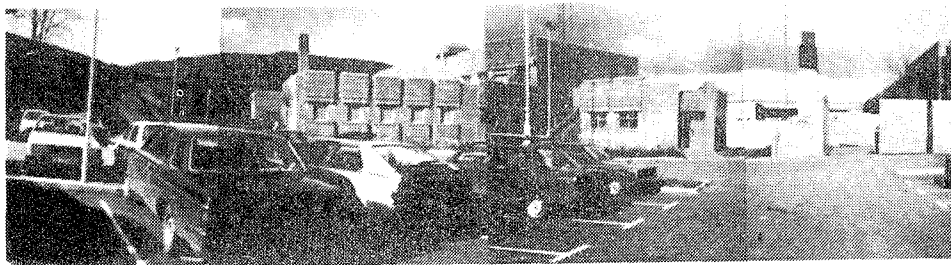
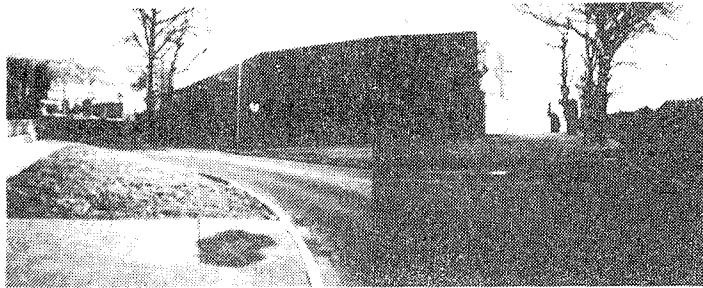
Colonel Hewish handed over to Lt Col Elliott to cover the period 1979 to date.

I am doing a defence fellowship at Southampton University in the United Kingdom, trying to write some guidelines for the construction of ordinary buildings so they give better protection against terrorist outrage.

I did my last tour as a soldier in Ulster in 1979, at about the time that COL Hewish's story stopped. I visited the province again only four weeks ago. Nothing could have prepared me for some of the changes that have occurred since I was last there. Northern Ireland is more pacified and appears more prosperous now than I could have dreamt was possible ten years previously, and that is an important point to make.

I will start by describing the new police stations that are now being built in the province to resist all forms of attack, including car bomb attack. I will then tell you about the urgent programme that is going on to resist one specific attack against all existing police stations, that is from the mortar. Finally, I'll give you a very superficial review of how commercial buildings in Ulster have changed or should change to cope with the car bomb threat.

Since 1979, the Police have had supremacy over the military in the fight against terrorism and they have made a courageous bid to try to return to some form of consensus policing. This was impossible whilst they lived in fortresses, which discouraged contact with the local population and which gave the impression that the police were themselves under pressure from the population.



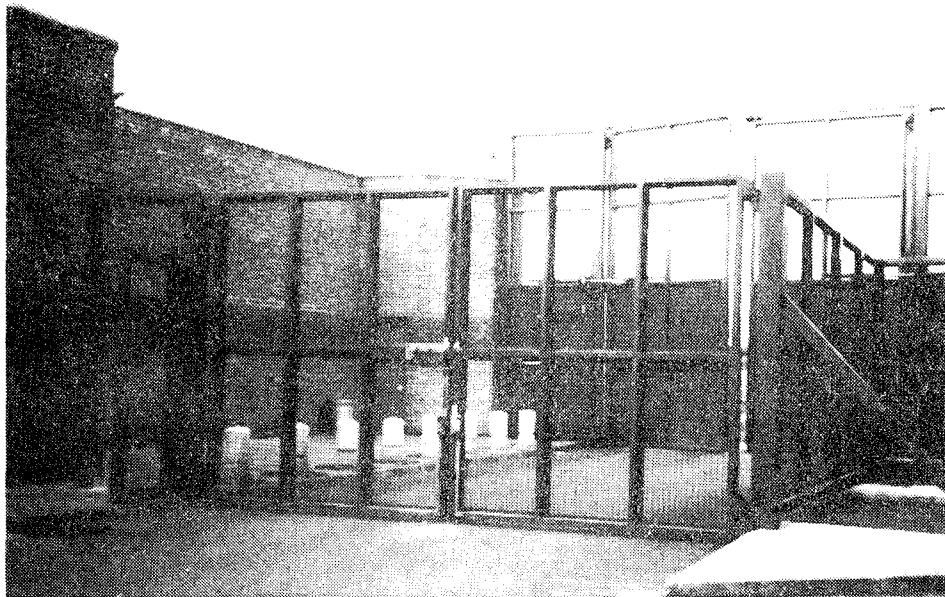
Slide 21

The Royal Ulster Constabulary (RUC) has started to rebuild their police stations to look like this (slide 21), the new RUC station at Woodburn. The top view is from the road outside and the bottom view is of the station inside. You will see that it looks little more than a well protected, factory compound; but it is as secure against terrorism as the old tin sheet, bollards and hanging nets that you've seen from COL Hewish so far.

You will notice the following features:

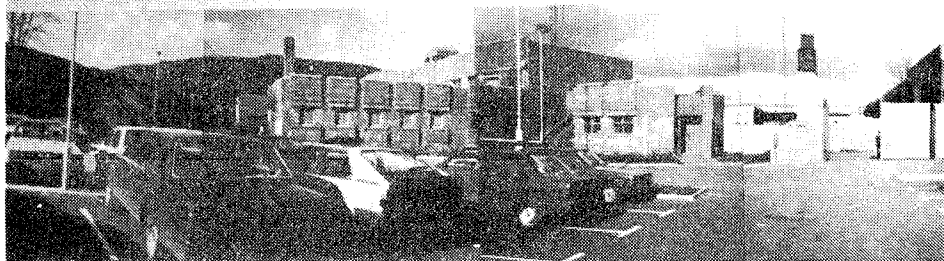
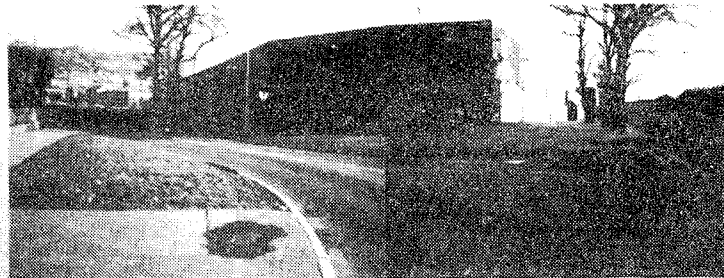
(a) that there is an outer blast wall, which is brick faced to make it look attractive. It has a profiled sheet topping to defeat the satchel bomb and to give cover from view (it could easily be removed when the security situation gets better). The outer perimeter blast wall and fence provide a stand-off against vehicle and package bombs for the police station inside.

(b) The old watch towers have gone, they have been replaced by a front sanger which is heavily armoured (but, again, appears unobtrusive) and with CCTV zoom pan and tilt cameras.



Slide 22

(c) There is a barbican (slide 22), that is sort of air lock into which vehicles must pass before entering the compound and this has been constructed as inoffensively as possible. It receives goods inward and defeats the proxy car bomber.



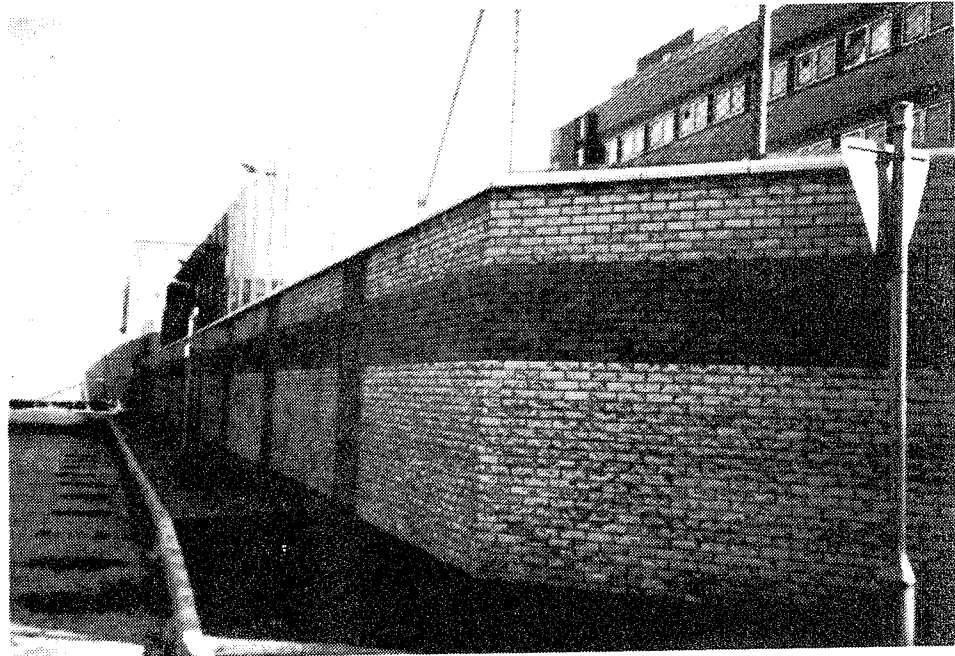
Slide 23

(d) There is a "pod" on the front of the station (slide 23) where the desk officer sits and receives the population. This is part of, but separate from, the main station - to minimize the effects of placed bombs or

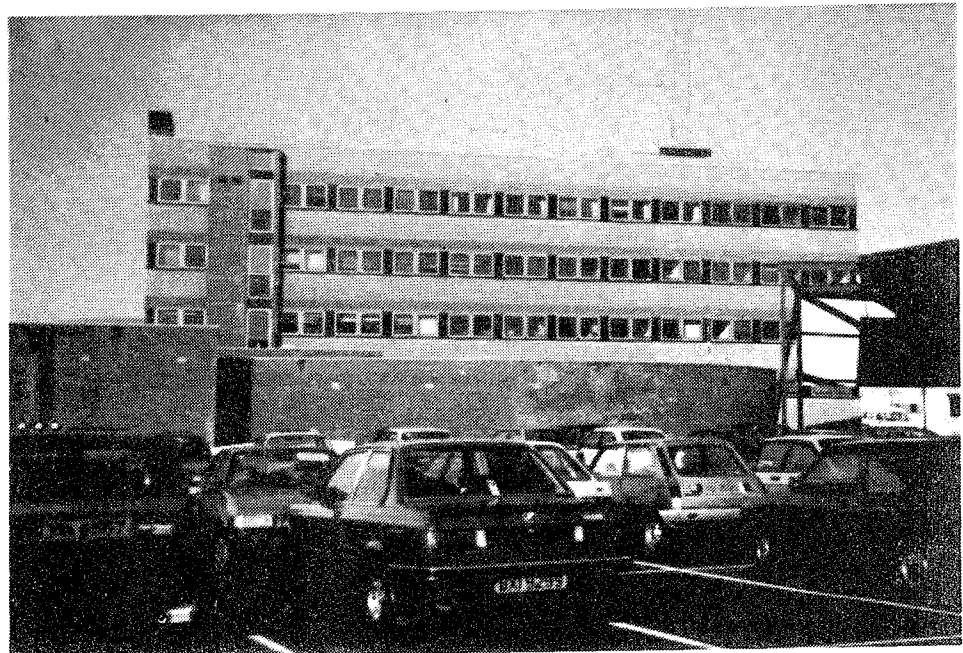
proxy package bombs being carried in. The main station is cut off and secure from that front part and the "pod" is designed to vent an explosion through its roof.

(e) The building is proof against multiple hits from AP rifle fire, blast and mortar attack. This is achieved by having a strong steel frame to the building blast, and ballistic proof cladding and 27mm laminated glazing, rising to 50mm laminated glazing in vulnerable areas.

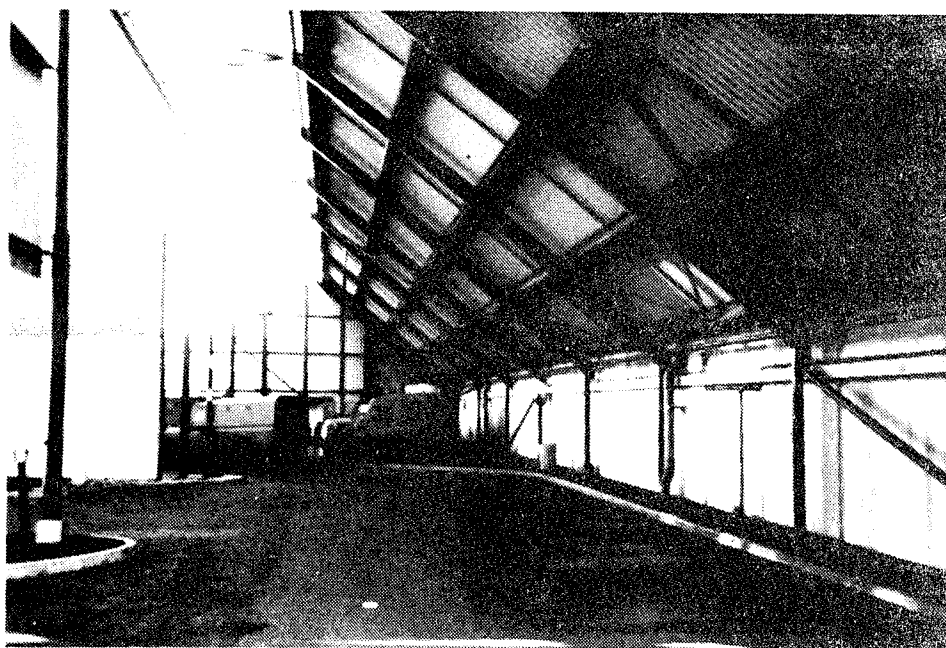
Here is an example of a second station at Grosvenor Road, near the Falls Road in Belfast.



Slide 24



Slide 25



Slide 26

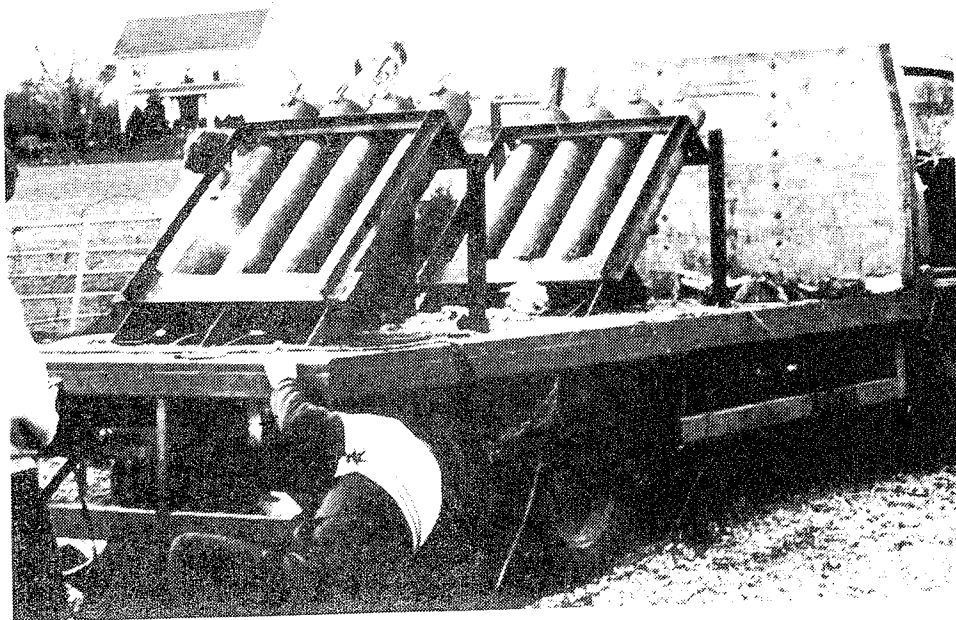
This slide shows the inside of the blast wall and the elaborate arrangement to give cover from view using steel profile sheet.

Of great significance is that neither of these stations have been attacked by the Provisional IRA, or even daubed with graffiti (which is a sharp barometer of local feeling) in the last 1 and 2 years that the stations have been opened. During the same period, level of attacks against the old type of station has continued unabated.

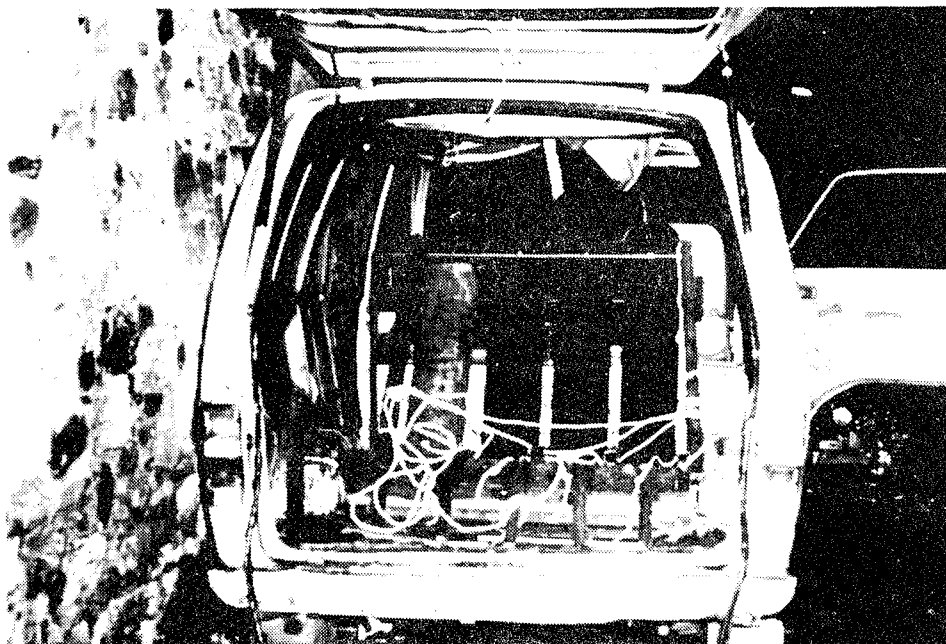
This excellent move towards normalization has been interrupted by the need to provide all existing RUC Stations with protection against mortar attack, as a result of the strong emotional reaction to the deaths and injury in mortar attacks of policemen. The mortar is delivered from a frame on a lorry (slides 27 & 28), van (slide 29), or the ground (slide 30)



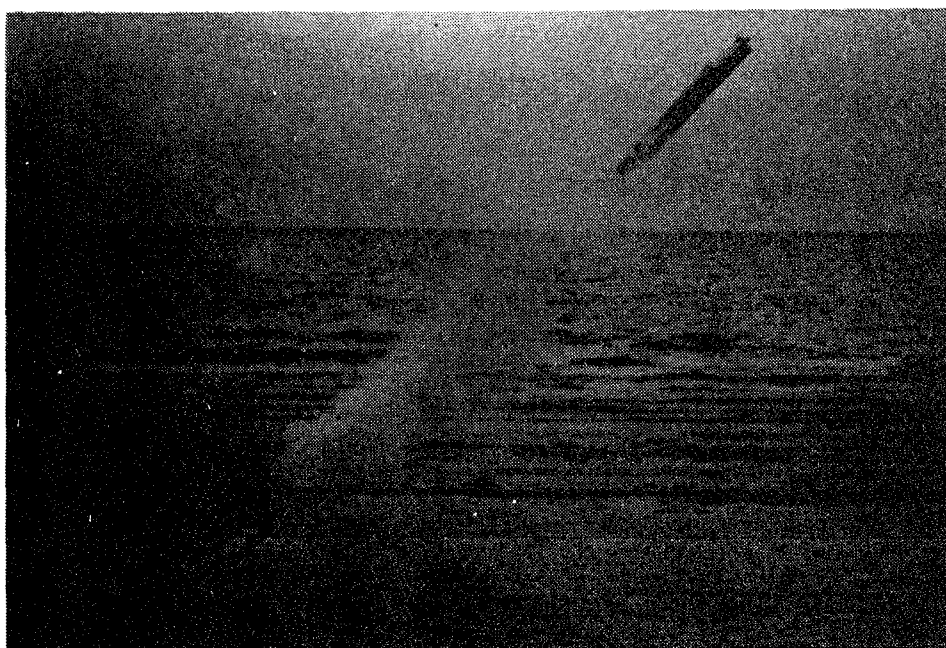
Slide 27



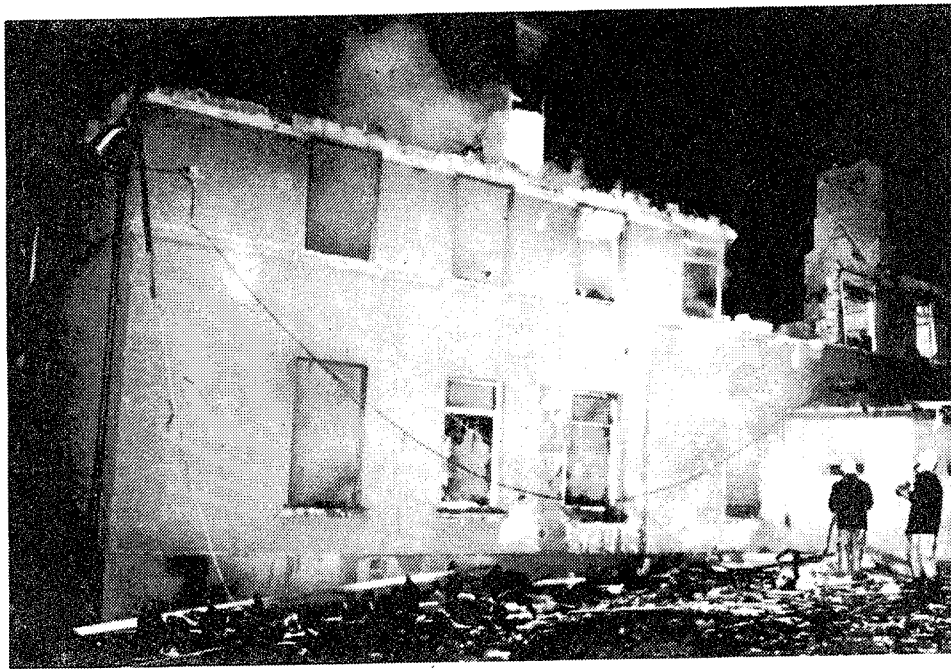
Slide 28



Slide 29



Slide 30 Takes off....



Slide 31

....and does this....

I cannot say too much about this mortar protection programme, since I have not had the chance to seek the permission of the Royal Ulster Constabulary so to do, although I think I could answer any individual questions outside afterwards.

It's sufficient to say the Army is back doing some of the construction work, because of intimidation of building workers; that the end result of this crash programme inevitably has more in common with a bunker, than with a community police station, and that one solution has been to provide 2 feet cover of mass concrete. The RUC has started an extensive programme to find a lighter solution; they are looking into using a composite construction of steel and concrete, adding in polymers and fabrics to reduce the microcracking (hence the spalling due to the kinetic energy impact before detonation of the bombs). Spaced construction has been looked at; however, it is judged to be too complicated, and thus too expensive, and it does not give the best protection against current provisional IRA mortars. One feature of all these systems is that the building, in giving protection to the occupants, will itself be damaged and the Royal Ulster Constabulary are trying to find a solution that will allow damaged areas to be easily lifted out and new components put in. However, this approach requires some form of lapping between the different panels and this has proved very difficult to achieve at reasonable cost.

Finally, in contrast to the progress made in the design of police stations, progress with commercial buildings has been slow although a balance has been achieved to allow normal life to go on. When visiting Ulster I found examples of the following measure to combat terrorist explosives:

(a) As you are probably aware the center of cities and towns in Ulster are now generally closed off to vehicle access, using either concrete barriers or barriers alongside individual shops, in the form of flower pots. This is a very successful measure (the only limitation to it is the local traders, who feel that they would prefer to risk car bombs, than risk the loss of trade).

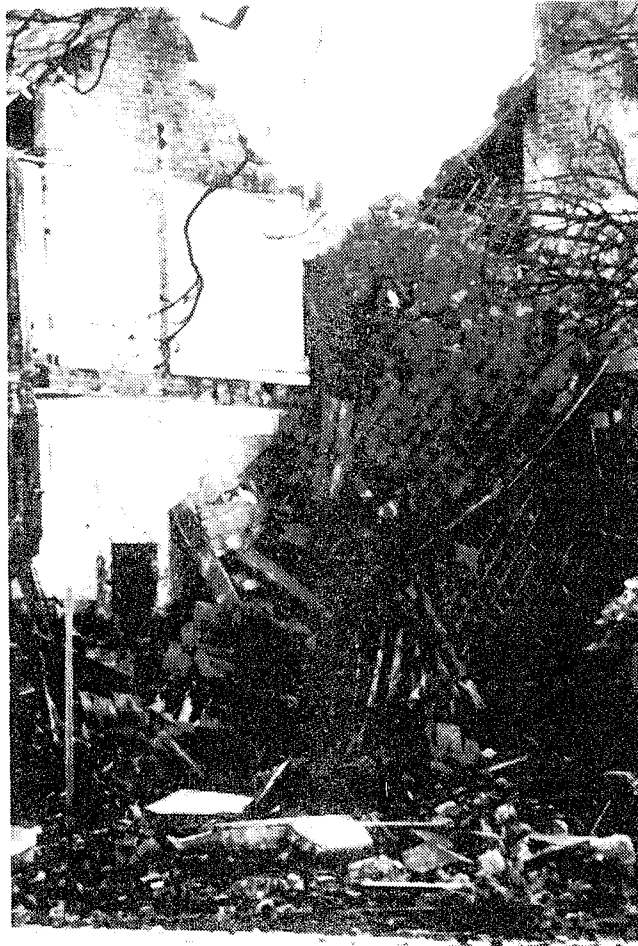
(b) There are a few commercial buildings which are constructed with a blast wall at street level, usually using spaced walls filled with gravel or sand. Many buildings use net curtains and antishatter film on their windows. There are a few examples of earth banks, landscaped with daffodils on the top, to protect buildings against the blast from vehicle bombs and stop the vehicles themselves from getting close. And there is one building (which was built as a bank and is now a computer shop) which was built with a concrete, raised apron around the front, through which there was a narrow gap and ramp for customers, achieving distance between the possible bomb threat and the building itself.

(c) One building got so fed up with being bombed, that it clad itself in frangible G.O.P. panels which fly off and can be replaced (slide 32).



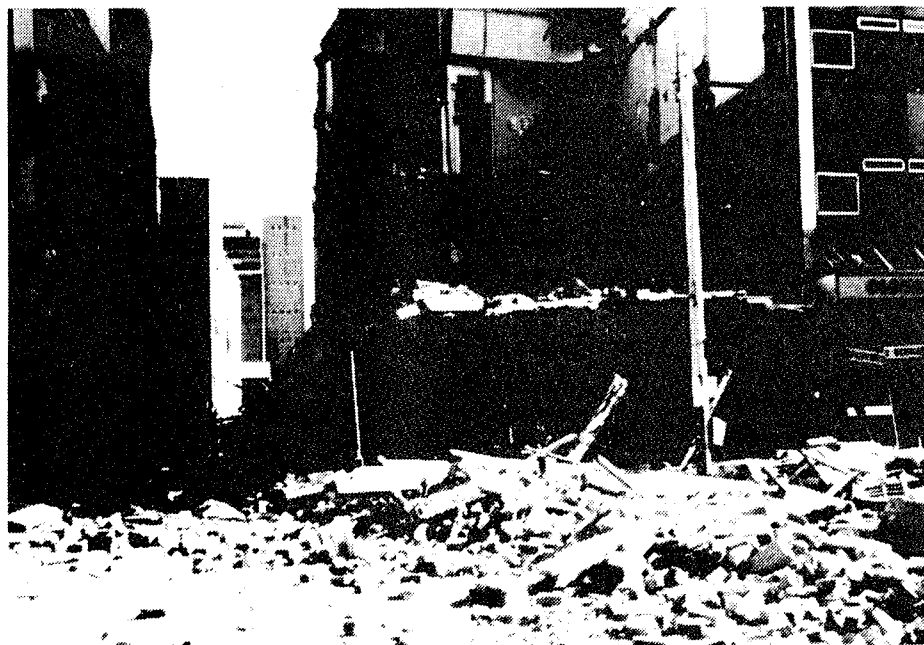
Slide 32

In my study I have been looking at the collapse of buildings and the damage that could be done to the occupants by secondary missiles.



Slide 33

The move away from load bearing walls, seen here in this slide (# 33) with a collapse of the building from only 30 lbs of explosives, has meant that fewer people are now injured by collapse. However, the introduction of framed buildings has resulted in much more use of glass, with obvious hazards.



Slide 34

Here are the results of a car bomb that exploded last summer in Ulster. It contained 500 lbs of homemade explosives, roughly 220 lbs equivalent of TNT. A load bearing brick building, 3 stories high here, has completely disappeared.

A framed building next door suffered no collapse, the loads found an alternative path and because of the fortuitous positioning of a reinforced concrete diaphragm sway wall, there was little danger inside from secondary fragmentation.



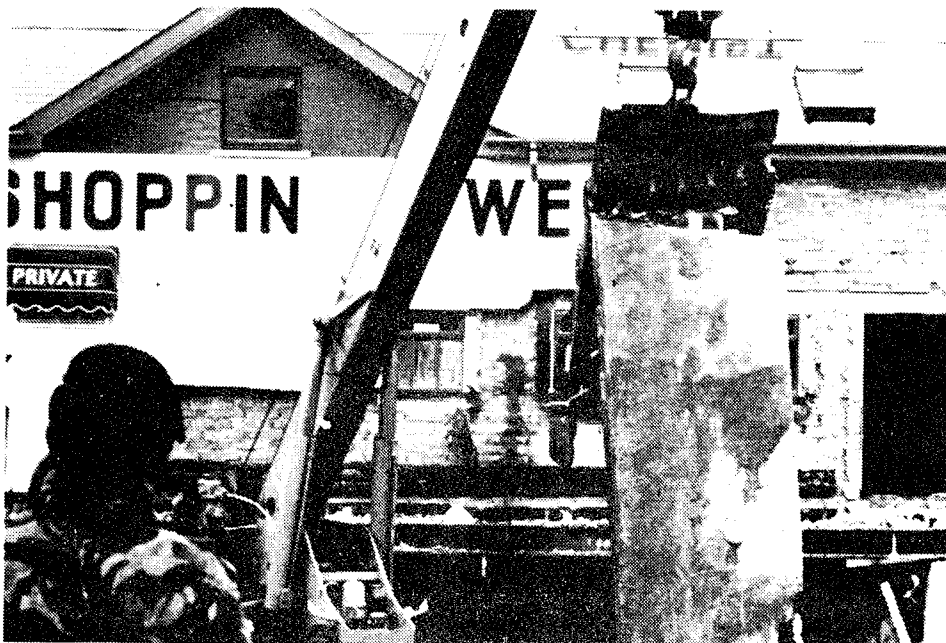
Slide 35

Across the street a long frame building was completely deglassed (slide 35). Luckily there were no casualties, because a 20 minute warning was given, but who could say that they could rely on that?

As a second example, here is a modern frame building that suffered from being low rise and lacking in continuity across the joints in construction.



Slide 36



Slide 37

A small bomb (which in fact was a package bomb, but which could just as easily have been a small car bomb) knocked out one of the stanchions, and the roof then progressively collapsed. The roof collapse killed more than 16 and injured many more.

I hope that I have given you a flavour for developments in Ulster. Further information could be had by a direct approach to the Royal Ulster Constabulary, if you wished.



Slide 38

In conclusion, it is remarkable how Ulster has learned to live with the car bomb, admittedly not of the size that is found in the Middle East, and has prospered once certain measures have been adopted (slide 38). There are few new solutions and, indeed, any solution that produces a bunker generally precludes the use for which the building was originally designed. However, as one threat is contained, or partly neutralized, the point of aim of the terrorist inevitably changes and our priority now is to protect the Security Forces against attack from mortars. On a final gloomy note, I do not see why in the future, the mortar should be any less of a threat to an American Embassy than the car bombs that you now suffer.

DAMAGE CAPACITY OF CAR-BOMB DEBRIS:
NO TEXTBOOK SOLUTIONS

Phillip T. Nash
Patricia K. Bowles

Southwest Research Institute
San Antonio, Texas

INTRODUCTION

Car bombs have become a common threat used by terrorists to attack a wide variety of targets. Most of the efforts in defending against car-bomb threats have concentrated on building barriers to deny access of the vehicles or providing structural designs sufficient to withstand the blast loads resulting from the explosive laden vehicles. While some attempts have been made to define typical threats which might be expected, loadings from car-bombs are extremely complex and are not easily defined. Explosive quantities are generally unknown so threats can only be estimated. A further complication is defining possible debris emanating from the exploded vehicle and its effect on surrounding property and personnel. The purpose of this paper is to emphasize the importance of considering car-bomb debris as contributing significantly to damage potentials. Although some methods exist for characterizing debris loadings for certain ideal conditions, car-bomb explosions are far from the ideal conditions which can be modeled. There are no textbook solutions to predict loadings from car-bomb debris. Nevertheless, the problem is severe and calls for keen engineering judgment to think beyond standard practices to provide the levels of protection demanded.

DAMAGE MECHANISMS

Several damage mechanisms are provided by car bombs. First, the kinetic energy of the vehicle at impact is used to destroy barricades and gain entrance to the selected target. Blast loads from the vehicle can have damage potential to nearby structures or people in the area. Furthermore, the explosion tears the vehicle apart launching parts and debris in all directions. The flying debris also becomes a hazard to nearby structures and people. Impact of the debris against building components removes building material thus degrading its structural strength and imposes additional dynamic loads on the facility. The damage shown in Figure 1 was created when an acetylene bottle accidentally exploded in the trunk of a passenger car in a motel parking lot. Blast loads and debris from the vehicle removed most of the glazing in the motel. Parts from the vehicle were launched in all directions. Note the large metal portion of the fender which impacted the building near the roof structure. Debris from the car varied from small fragments to large steel sections. In another accident shown in Figure 2, a tank car exploded near a grain elevator causing failure of the office building wall resulting in several deaths and injuries.

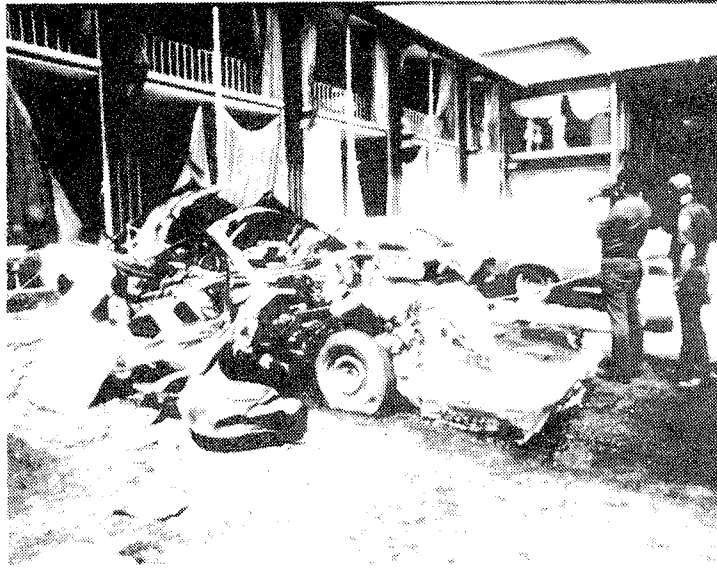


Figure 1. Accidental Explosion in Car Trunk



Figure 2. Accidental Explosion Near Office Building

DEBRIS HAZARD PREDICTION - STANDARD TECHNIQUES

Most damage prediction techniques have been developed for military applications for design of protective structures such as the aircraft shelter shown in Figure 3. In these designs, a specific threat is usually defined, the structure is designed to defeat that threat, and designs are validated through extensive testing. The design generally includes thick or heavily reinforced walls and special attention to designs of the entrances. The threats are usually cased explosives which can be idealized as cylinders completely filled with high explosives.

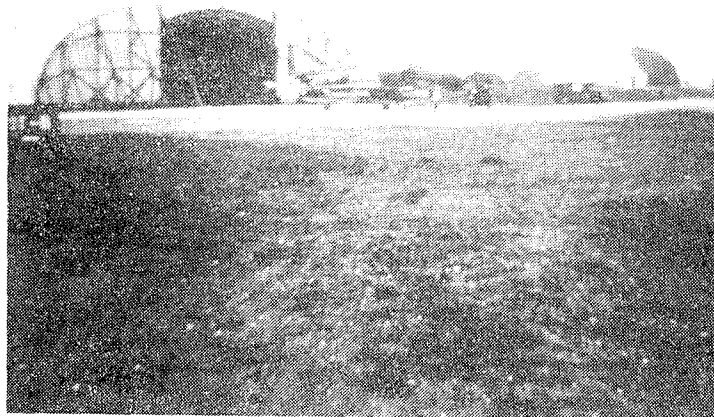


Figure 3. Protective Structure Design

Over the years standard techniques have been developed to determine fragment sizes, shapes and initial velocities from explosions involving cased explosives. Some weapons have even been designed to break up in a particular fashion making it easier to determine fragment loadings on structures. In other cases, experiments are performed to gather information on case breakup characteristics. Once the initial fragment conditions are determined, the maximum distance a fragment will travel and inflight trajectory characteristics can be predicted with a high degree of accuracy. Thus, an analyst can determine which sections of a structure are susceptible to damage by fragment impact by knowing how far fragments travel and their energy upon impact.

Penetration capabilities of the fragments against building materials have also been studied for years. Equations and techniques have been developed to predict penetration into materials such as concrete and steel. However, considerable variation in experiment and prediction is noted for even near ideal conditions.

CAR-BOMB DEBRIS HAZARD - NON-IDEAL CONDITIONS

Structures usually targeted by terrorists are not protective structures. The office building shown in Figure 2 is closer to the type which might become the victim of a terrorist attack. And the nature of the bomb is far from the idealized cased explosive. In a car bomb, the ill-defined explosive loads the inside of the vehicle resulting in a wide variety of fragment and debris sizes and descriptions. A number of unknowns must be resolved when trying to describe loadings from a car bomb including the explosive quantity, its position in the vehicle, how the vehicle will break apart and others. When faced with these unknowns, the design engineer must avoid the temptation to solve only those problems for which there are solutions. One possible set of steps which can be followed in describing debris loading from a car bomb is given in the following sequence:

- o Select a reasonable fragment breakup pattern for the vehicle based upon the explosive quantity and location, and the structural weakpoint of the expected vehicle. Several breakup patterns may need to be examined.
- o Determine the initial velocity of the various fragments based upon the impulsive blast load imparted to each fragment using impulse-momentum principles.
- o Consider penetration capabilities of the fragments in their worst-case orientation at impact with each possible target.
- o Combine the impact energy of the fragments with the blast loads imparted to each target to determine the structural response.

Although larger debris may not penetrate a wall or roof section as easily as high speed small fragments, the damage from impact of these debris can be tremendous. The extreme damage potential for large debris is illustrated in Figure 4. A large steel hatch door was thrown from a rocket motor cylindrical test cell during an explosive accident. The hatch impacted a structural beam supporting the roof which was grossly distorted from the impact loads. The blast loads had minimal effect on the steel frame because of the small exposed area. However, the impact loads from the flying hatch were devastating.

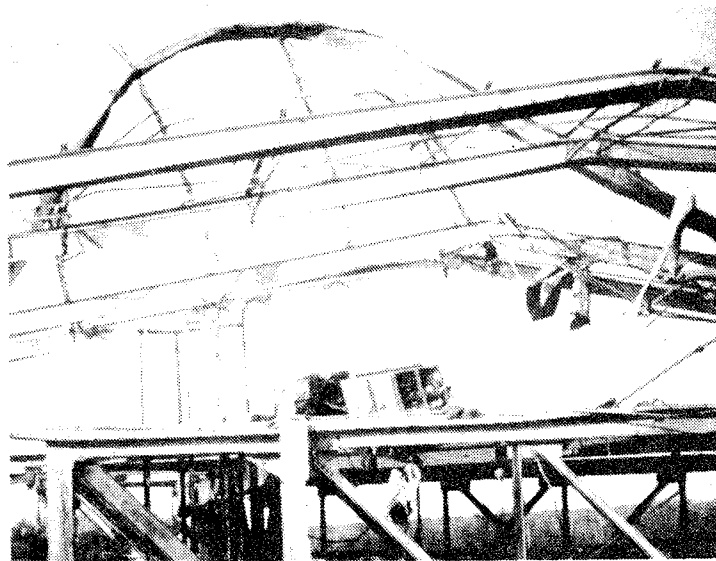


Figure 4. Structural Response to
Large Debris Impact

CONCLUSIONS

Observations from accidental explosions have demonstrated the tremendous damage potential of the resultant debris. The same sort of damage potential can be expected from car-bomb debris. Unfortunately, expected debris is not easily defined and is often ignored in the assessment of facility protection levels. Although hard to define, debris impact loads contribute significantly to damage potential. There are no textbook solutions to predicting debris loadings and keen engineering judgment must be used in designing facilities to resist car-bomb attack.

REFERENCES

1. Baker, W. E., Westine, P. S., Kulesz, J. J., Wilbeck, J. S., and Cox, P. A., Jr., "A Manual for the Prediction of Blast and Fragment Loading on Structures," DOE/TIC-11268, U. S. Army Corps of Engineers, Huntsville, Alabama, September 30, 1980.
2. Baker, W. E., Cox, P. A., Westine, P. S., Kulesz, J. J., and Strehlow, R. A., A Short Course on Explosion Hazards Evaluation, Copyright 1978, Southwest Research Institute, San Antonio, Texas.
3. Structures to Resist the Effects of Accidental Explosions, Department of the Army Technical Manual TM 5-1300, Department of the Navy Publication NAVFAC P-397, Department of the Air Force Manual AFM 88-22, Department of the Army, the Navy, and the Air Force, June 1979.
4. Healey, J., Werner, H., Weissman, S., Dobbs, N., and Price, P., "Primary Fragment Characteristics and Impact Effects on Protective Barriers," Picatinny Arsenal Technical Report No. 4093, Amman and Whitney, Consulting Engineers, New York, New York, December 1975.
5. Gurney, R. W., "The Initial Velocities of Fragments from Bombs, Shells and Grenades," Report No. 648, Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland, September 1947.

19 June 1986

For the Defense Research Institute

From William J. Mulligan

There follows the essence of the Friday night address given by VARICON INTERNATIONAL's William J. Mulligan, who has spent 16 of 27 years outside the U.S. working from dozens of U.S. embassies and consulates, among them Rome, Milan, Trieste, Naples, Palermo, Florence, New Delhi, Bombay, Madras, Calcutta, Copenhagen, Helsinki, Stockholm, Oslo, Salisbury, Tokyo, Kobe, Sapporo, Hong Kong, Taipei, Bangkok, Saigon, Djakarta, Manila, Bonn, Frankfurt, Hamburg, Munich, Paris, Vienna, Islamabad, and Karachi, as well as five years with the U.S. Mission to West Berlin.

Subject of Address: Intelligence Gathering for Early Warning in
Defense of the Fixed U.S. Installation Abroad

N.B. Given the varying directions of audience questioning, the Speaker was several times drawn off the primary subject to deal with problems relating to host country considerations in respect to retrofits of established U.S. embassies or the construction of new embassies in endangered areas abroad.

The Speaker first addressed the problems associated with protecting a fixed position which, in effect, equates with protection of any U.S. embassy, consulate, legation, or military command situated on foreign territory.

Military members of the audience were enjoined to think in terms of defensive circles of protection and the information that can and should be available from the combat patrol, the reconnaissance patrol, or the picket line deployment of forces.

In the same sense, those charged with the protection of U.S. embassies abroad must do the same. Within any U.S. diplomatic structure abroad (where there is a U.S. Marine presence), the Marine command post and the Marine roving patrols within the walls of the installation comprise the heart of the physical intelligence collection system. The next ring is composed of either a private-hire police force (as in Rome) and a force of host country national police or both.

000197

The next outer ring is configured in accordance with the nature of the surrounding geography. Normally, it is composed of neighboring hotel managers and doormen, close-in taxistand operators, the concierges of nearby inns and apartment houses, headwaiters of restaurants-----all of whom embassy administrators and security officers should stay in close contact. The purpose, naturally, is to get timely tipoffs on the presence of strange-acting visitors in or around the area so as to pre-empt a violent event in the making.

The concluding point in respect to the above was that whether the U.S. installatiuon is an embassy, a military post, or a U.S. business office, the same set of principles will obtain. There must be fixed rings of intelligence collection, unobtrusively static and mobile observers who are intimately familiar with their own sectors in the immediate neighborhood.

A second increment in gaining intelligence within any installation, particularly a U.S. embassy, is to be found among certain members of the embassy staff in any foreign capital city:

There are number of these:

There is the DCM (Deputy Chief of Mission) whose contacts cut across host country foreign ministry, security, military, and police lines at the ministerial levelk;

The embassy's Political Officer who has host country foreign ministry contacts in considerable depth and breadth;

The embassy's Security Officer whose contacts in the host country's foreign ministry and police circles are those which provide the day-to-day tactical foreknowledge basic to the betterment of the embassy's security position;

The embassy's Office of the Defense Attache whose contacts within all locally positioned military echelons provide useful data; and

The embassy's senior intelligence representative who in almost every case has the widest array of intelligence gathering capabilities available in any embassy.

In several countries, particularly those with which the U.S. has military alliances or defesne treaty involvements, there exists a wide circle of U.S. military intelligence helpmates whose talents and information can supplement other data. These military intelligence and security echelons should and can be used to advantage. The USAF OSI, the Navy's NIS, the Army's CID and G-2 offices are among them. Furthermore, non-military components sometimes positioned in a foreign country can contribute. In some areas, the U.S. Secret Service, the FBI, and DEA has representations. All these one or two-man organizations can be of help. So, use them.

And, finally, outside the embassy family, there are among the host government offices a wide range of intelligence which can be shared with the appropriate U.S. officers inside the embassy. In Rome, U.S. Embassy representatives have contact with Italy's foreign intelligence arm, with its internal security arm, with the Carabinieri which has a sort of elite national guard function, with the local police, and with the Customs Police. In Japan U.S. Embassy officers have close contact with the National Police Agency and the Public Safety Investigation Agency, Japan's key public security arms. In New Delhi, similar contacts exist with the Research and Analysis Wing, the foreign intelligence arm, and with the Investigation Bureau which handles internal security matters.

Both U.S. military installations far afield from the center of a country's primary political activity and U.S. business offices in a foreign country should have recourse to this combined base of data if the American anti-terror job in any foreign country is being properly managed.

Given the nature of some presentations at this gathering, it was readily clear that, for those with any serious intention of gaining contracts with the Department of State in the area of constructing new embassies or retrofitting old and immovable ones, there was a most pronounced shortfall in understanding between that which might be feasible abroad and that which was outright impossible.

This is a significant subject requiring much better understanding by U.S. contractors with intentions to work abroad.

TECHNICAL AND LEGAL CONSIDERATIONS OF CAR BOMBS

Recently, various clients of mine have expressed concern over and have become sensitive to the legal considerations of many security-related activities, especially car bombs. We are currently facing a significant problem: we are developing new technologies for dealing with car bombs without giving due consideration to the legal ramifications.

Some of the particularly active measures of defeating car bombs will run afoul of our legal advisors. What is technically superior may not be legally palatable. It's unfortunate that some good technology may go unused, but in the long term, the legal considerations will override the practical ones. We all need to be aware of the legal ramifications of car bomb protection methods and know the parameters within which we can operate.

Let's examine how car bombs are employed. Almost all the discussion addresses only one possible scenario. There are, however, a minimum of four scenarios, all of which have already taken place, that we should be considering. The target that we normally consider when we talk about car bombs is a fixed target such as a building. Our focus has been excessively narrow and we're looking at the problem only from the predominant standpoint of protection of a building. This error will lead to further difficulties because our adversaries have noticed our mistake and will react accordingly.

A terrorist can accomplish his/her goal with the use of a vehicle full of explosives against targets other than buildings. We need to spend more time looking at how to defend other types of targets, particularly mobile targets, like a car. What we have not addressed well at all is the case of a moving target and a moving vehicle full of explosives. This situation occurred most recently in the assassination attempt against the Emir of Kuwait. Both vehicles were in motion. The assassin vectored his vehicle across the road to go after the Emir. Protecting against this type of incident presents some intriguing technical challenges, but if we can build space shuttles and artificial hearts, we can probably figure out a way to solve that problem, too. We definitely need to address that question.

Let's look at some of the legal questions first, and more specifically, let me address private companies and their position. Private companies, corporations of any kind, have an absolute legal responsibility to protect their employees from all foreseeable harm. Defense contractors are included in this group. Let's hypothesize about a potential adversary such as Quadaffi. He has threatened a terrorist attack here in the United States, and has manifested the capability to do so. A corporation could be identified as a probable target by virtue of similar targets being attacked in the past. Legally, that corporation is wide open for a successful suit based on failure to take due standard of care and to protect its employees from such an attack. This is one aspect of the corporation's liability. Corporations and defense contractors must take positive precau-

tions, and must be able to prove that they have exercised all due care in the protection of their employees.

Secondly, there is a liability for harm caused by the use of a device that the corporation manufactures. Firearms manufacturers are now experiencing innumerable lawsuits when products have been improperly used in the commission of a crime during which someone was injured with a weapon. Currently, the manufacturers are winning these lawsuits on the basis that the weapon was misused, i.e., it was not manufactured for the purpose of committing a crime. What are the ramifications for manufacturers of either active or passive defensive systems against car bombs?

If a device causes a car bomb to detonate and is the proximate cause of injury to a third party, because he was driving along the street at the same time a terrorist and his car bomb showed up, that device's manufacturer is absolutely liable. No question--that is not misuse of a device under legal parameters: that is what it was built to do. This is an issue that needs to be discussed with legal counsel.

How can liability be minimized? I investigated this question for some of my clients and would like to share some of the results of intensive research. All private companies are going to be liable for both of these situations, under common tort law. The various attorneys I talked to were unanimous in their opinion.

In public agencies, particularly at the federal level, employees can be, and are, successfully sued for negligence if action(s) they take is/are the proximate cause for injury to people or property. Many people believe that the federal gov-

ernment can't be sued. That is absolute nonsense. It is possible to sue not only the government but its individual employees as well. It is often said that if the employee does not have discretionary authority in what he did, he can't be sued: another misconception. When I worked for Secret Service, I was told the same sort of things. Many of us are in a significant position of personal liability, as are our agencies.

Both the agency and the involved employees are liable under the Federal Torte Claims Act, Title 28 U.S.C. The act indicates that if an agency, or an individual has a policy, standard, or procedure, that results in harm to individuals or property irrespective of whether the action takes place domestically, or abroad, and involves U.S. nationals or foreign nationals, the agency can be sued. The responsible person who recommends in a memo to his/her superiors the purchase of a piece of equipment which stops a car bomb by blowing it up, simultaneously injuring a bystander, that responsible person is liable! The Act does state that the Attorney General must defend him. There is some protection, but the liability remains, the agency is liable if it was their policy that this device be used, and the manufacturer of the device is vicariously liable under this Act and subject to potential civil suits directly.

You might say, "Well, so what?" If this things goes off, we save the day, and if we get sued for a few million bucks, well, really what does that matter? Where it matters, I think, is that we may accept the consequences of the lawsuit as fair exchange for being able to beat the bomb, if your attorney lets

you get away with it. We cannot afford to expend R&D dollars on equipment and ideas that are potentially going to cause liability problems to consumers and therefore be withdrawn from use. None of us can afford wasted efforts.

From the technical standpoint, we have three things that we need to do. First, we need to identify which car is a bomb. Second, we have to come up with a technique to neutralize the car bomb, perhaps by preventing its detonation, or by causing its detonation at some specific place. I think that's a bad idea. However, it is something that at least three or four manufacturers purport to do and have already demonstrated the capability to do. But users are running a big risk and I think their legal counsel will not allow it. Third, we must seek means to limit the damage to possible targets in the event the bomb does, in fact, go off.

Let's examine each one of these in detail. First is identification. There are a number of passive and active techniques for identifying that a vehicle is a bomb. The use of a dog can be effective; I don't know of any better technology than a German Shepherd's nose to determine if there is explosive in a vehicle.

But there are limitations. The vehicle has to be halted, the dog doesn't like to work when it is hot or noisy, the dog does not like the car exhaust over an extended time, and the dog has a very short duration of operating effectiveness. Dogs are not a totally satisfactory answer when you have a high throughput rate of vehicles going into an underground garage where the vehicles are queued up, waiting to be inspected. All the factors

that work against a dog are present; the dog's reliability goes down and there is no way to know it. A dog can be a great tool, but only when the vehicle is stopped and under the right environmental conditions.

The vapor detectors that work by various technical means to ascertain the presence of explosives work satisfactorily within their operating parameters: if the vehicle is in a garage or an area with motionless air and the vehicle has been sitting there a while, the temperature is within limits, and the explosive to be found is not C4 or another type with a low vapor pressure. A trunkful of dynamite in a warm place will readily be found.

We conducted a series of not terribly scientifically sound experiments in our parking lot for a particular client. They needed an answer right away, so we gathered together a group of vapor detectors, put plenty of explosives in the vehicle, and proceeded to test the detectors. They did identify the trunk filled with dynamite, if the vehicle sat still. However, like dogs, the detectors could not solve the problem of finding explosives in a moving vehicle.

When a vehicle is in motion, the only clue to a bomb is the behavior of the vehicle. That's not a lot to work on and demands awfully quick judgment. Vehicle behavior refers to the way the vehicle is being operated. By the time the threat is ascertained it can easily be too late to react. Available reaction time depends, of course, on the situation. The short reaction time afforded when a moving vehicle is involved presents a great technical limitation.

None of these detection methods create any great legal problem according to the legal people I checked with on the subject. They are passive, or noninvasive to the vehicle. However, they are very limited in the instances that they can be used and in their effectiveness.

One active detection method is a physical search, which requires being able to get into the car. The same client who asked us to evaluate at the vapor detectors had to move 700 cars through a garage in about an hour and fifteen minutes and the entrance would only pass two cars at a time. They wanted to do a physical search.

The difficulty that we ran into right away was determining the size of the item being searched for. The client wanted us to find any explosive. A preliminary analysis quickly revealed that it would not be possible to detect every item due to the time limitation. The only feasible way to check vehicles is to predetermine exactly what size and volume we are looking for. We decided not to search for a small amount of explosive, i.e., under a pound, because the damage with that amount of explosive will be minimal. If it blows up, the car is destroyed, but the facility is still secure. This could be embarrassing but damage is limited.

The manpower required and other problems encountered in checking a vehicle to find explosives smaller than a volume of one tenth of a cubic foot (about five pounds of explosives) make such a search impractical and cost prohibitive. An item of that size can be placed in most vehicles, and anything smaller than that is not going to do enough damage to warrant a search. In

other words, a threshold of acceptable damage must be established. Otherwise, the vehicles cannot be moved through quickly enough.

The biggest problems in conducting a physical search are the gas tank and the back seat. It's not feasible to take back seats out, because of the time and experience required to replace them after a search.

The irony of searching vehicles is that the two most common places to find explosives are under the back seat and in the gas tank. Terrorists know where we can't search and that's where they put their explosives. I know of no way to check the inside of a gas tank other than by x-ray.

We had some fiber optics manufacturers show us how they check the gas tank with one of their devices. If there are sticks of dynamite in the gas tank, you might see them with an optical device. However, we conducted an experiment during which we cut the gas tank in half and welded in a partition to keep the explosives dry because gasoline would dissolve the C4. Aware that he was participating in a test, the fiber optics technician examined the tank, and reported seeing gas, walls, and debris. But no explosive. He knew we had modified the gas tank and never made the connection that he was only seeing half of the volume that would normally appear in a full-sized gas tank.

If the company representative did not catch this deception, while knowing he was supposed to find something, then it becomes highly unlikely that bomb search technicians would discover it, especially while working under the pressure of time. Yet, gas tanks are a favorite location for explosive devices, and the

scenario I described is not an unlikely one. We are dealing with a qualified adversary who knows what he is doing. We need a better way of looking at the gas tank and under the back seat. We need some technology development because current technology is not solving the problem.

Recently a foreign government had a problem checking cargo containers for weapons. Checking a car for bombs and a cargo container for weapons present similar challenges. This particular government built an x-ray machine that looks like a car wash with a traveling boom overhead, and put it in a building. The vehicle comes into the building, parks, the boom with x-ray sources passes over it, and they can see inside. There is a health hazard due to the high power used, but it surely did work. That type of arrangement could be an answer to our particular problem because it was fast, and it was pretty thorough. They were only looking at one axis, however, and I think we would need to look at two axes.

Neutron devices are another possibility. A neutron scanner can count the number of neutrons reflected off of lightweight molecules. The British HED is a great example. It's an outstanding tool for inspecting car doors and roofs and other parts with limited depth in which the explosive could possibly be found. You can, without any difficulty at all, find one and a quarter pound M112 C4 blocks every time with just a slightly trained operator. There is limited depth penetration with this technology, and you can't look in the gas tank because it will see the gasoline and indicate it as an explosive since it is hydrogenous material.

What about the legal question of these two devices? They do work, and under some circumstances, are an appropriate answer, and the only problem is health physics. We are dealing with instruments that use radiation sources of several different varieties, and we were not able to come up with a way of using the device safely. We become liable if any personnel are injured, self-inflicted or otherwise. The neutron devices that we are currently using all employ live sources, and this presents a legal problem. X-ray devices take so much output power to penetrate the vehicle and the gas tank that as the implement passes by the window, you get a moment of intense radiation on the opposite side of the vehicle and outside of the building as well. With a device that powerful we will encounter significant problems with usage approval from OSHA, etc. It's a technology that works and a technology that could potentially be developed to be employed safely. However, it is not currently practical for health and safety reasons.

The passive means of neutralizing are primarily barriers. A problem with fixed barriers, i.e. concrete blocks or fences around a building, is that we always put in an entryway. This is what allowed us to be defeated in Beirut. We had a hole in the barrier. The pipes and other devices were in place to prevent vehicular entry, but the terrorists got a bigger vehicle and went over the pipes. Anytime we have a hole in the barrier, we have opened ourselves inevitably to defeat no matter what we do to block that hole. The only way that a barrier is effective is if there are no vehicle passable gaps. This requires a transfer from the outside vehicle to an inside vehicle.

What about movable barriers, e.g. rising bollards? The Saudi Embassy's barrier is two big posts that recess into the ground. They are about eight inches in diameter and capable of puncturing a hole through the floor of a Mercedes, up through the back seat, and lifting the car right up in the air. Despite all the training the guards receive, there are still inadvertent activations of the bollards resulting in damage to vehicles. The Ambassador is very security conscious and if it were not for him the device would be discontinued. Their solution is to buy the injured party a new car and thereby obviate law suits. Unfortunately, we do not all have the monetary resources of the Saudis. Inadvertent activation of these movable barriers is a real problem with tremendous legal complications. It is reasonable to assume that legal complications will prevent the use of certain barriers by corporations.

Another example of an active system is RF jammers, which thwart detonation of any device that uses a tone or digitally coded signal. There is most likely no legal problem with them, as long as they don't turn off pacemakers or interfere with similar equipment. This interference problem needs to be dealt with; I suspect that the subject has not been adequately addressed by manufacturers of RF jammers. If you manufacture a device that turns off somebody's pacemaker, you are very liable for a lawsuit.

We are not focusing on the whole picture when we develop these bright methods for defeating car bombs. Our focus is too narrow and we're headed for grave disappointment. We cannot

expend valuable R&D monies only to be brought up short by legal counsel. We must take into account all aspects, including legal ramifications, when developing new technology.

One particular active RF device that works well is an antenna beneath the road. When you pass an electrical blasting cap over it, the cap fires. When I asked the developer of the unit how it would affect a pacemaker, he hadn't thought about it. I then queried him as to what would happen when his device sets off an intruder's bomb, and a third party is injured. That is proximate cause and he would be absolutely liable, by either common tort law or the Federal Tort Claims Act, for any injury suffered by that person. His answer was that this device was for foreign markets. If the device is used by foreign nationals, then no problem exists. However, if the device is used by a U.S. Embassy, and if no Status of Forces Agreement specifically prohibits it, then an injured foreign national may sue. What RSO had the great idea to put this device in? What official agreed? Who manufactured the item? The RSO, the approving authority, the manufacturer, and the Ambassador are all directly or vicariously liable under this and other acts. There are no easy answers to the problem. We cannot operate in a vacuum, but must take into account all these causes and effects.

Vehicular bomb threats must be eliminated by stopping the vehicle. Intentionally exploding the bomb is a very questionable idea. If you want to stop the vehicle, there are a couple of ways that will probably work. One of them is liquid disruption. A five gallon pail of water with explosives wrapped around the circumference and on the tail end, pointed toward the vehicle and

detonated from the rear, will throw a volume of water. And, depending on the amount of explosive, the water will have a significant velocity; theoretically, around a few thousand feet per second. If five gallons of water (approximately forty-one pounds) are accelerated at a few thousand feet per second, the resultant energy potential is enormous: enough to stop or significantly slow down almost any vehicle that we could conceive of. Eliminating the driver has minimal effect.

Water has realistic potential to be used as a means of dismantling a car bomb, if the bomb was found in a car that was parked. Many groups have used a water cannon in bomb disposal activities. However, instead of shooting at the bomb, a larger cannon could be used to stop the car, thus allowing the technicians to deal with the bomb. The water is very promising from the standpoint that it isn't going to go very far, and is going to disperse quickly, especially if it misses the target.

The use of projected explosives has been suggested a number of times. I'm aware of at least one facility with that policy. There is a 75mm recoilless rifle bolted down at a strategic spot near the entrance to the facility. It's not a very well engineered idea. Unfortunately, shaped charge rounds don't have enough energy to stop the vehicle. We experimented with this idea some years ago, and found it unsuccessful in stopping a vehicle in almost all cases.

From the legal standpoint there are liability problems if the projectile fails to hit the target. Where does the projectile go? What does it detonate on? And what damage will it do?

A possibility is erecting a barrier opposite the entrance outside so that if the projectile misses, it hits the barrier, under whatever arc of traverse it has available to it.

Small kinetic energy weapons, i.e., rifle, shotgun or handgun, are often the only weapon provided to guards for practical reasons. It is either the only weapon that is affordable or in some cases, the only one that is allowed. Does that mean that the guard has no capability? No, it means that his weapon and ammunition must be selected carefully, especially considering that his tool will not have enough kinetic energy to stop the vehicle. What he can do is, hopefully, eliminate the driver. That is not the best alternative but it's better than nothing.

However, two things must happen. First, he's got to hit the driver, and second, he's got to transfer enough energy in the form of the wound to that driver so the driver can no longer operate the vehicle. A regular nonexpanding 158 grain lead round-nose bullet, out of the typical S&W Model 10 revolver will not do it. Hitting the driver will probably not incapacitate him. The selection of ammunition, when the only option is using small arms, will determine that guard's level of effectiveness. Volume of fire, in and of itself, is not an answer.

I point to the Washington Monument situation in which the problem was created by an individual with his truck. When he tried to leave the monument, the D.C. police attempted to stop him and opened fire. The exact number of rounds has never been officially determined, however, a guess of 100 rounds is probably realistic. The individual was hit two or three times, but the vehicle didn't stop for 100 or 150 yards. The problem was accu-

rate placement of the rounds. They didn't hit him, and had insufficient energy transfer when they did hit him. You've got to eliminate him quickly so that he can't move. That's a question of selection of the proper ammunition and training.

With handguns, the ammunition has to penetrate the doors and windows and still have enough energy left. An appropriate round for this is the French THV round -- more so than any other. It has excellent penetration through thin metal, and extremely high energy transfer. This is the only round I know of that combines both of those characteristics. With a shotgun, buckshot doesn't work. It won't go through the door of the car reliably. Rifled slugs are the only ammunition a guard can use that has any chance of getting through the vehicle and hitting the driver with a high enough energy transfer rate to do damage.

With rifles and light machine guns, the choice of ammunition almost doesn't matter. Any ammunition is going to be relatively adequate, as long as a hit is scored. I think that the M16's that the D.C. Police used didn't hit him, and most likely because they were too far away, it was a moving target, and it was dark.

We need to provide for all of these elements. It is not sufficient that we give the guard a gun and a hundred magazines of ammunition and tell him to stop anyone. We've got to set the stage in terms of lighting, and whatever else we can do to maximize this fellow's probability of hitting the intruder. This is the low budget way of dealing with the car bomb problem. And unfortunately, many of us, or our clients, are exactly in that position. They don't have the budget to do some of the things they want and need. If they've got to rely on that guard, then

we have an obligation to equip the guard with proper ammunition and the proper environment to maximize his effectiveness.

7:legalbom.lec

COMMITMENT TO COMBAT TERRORISM

Phillip G. Hough
Sheraton National Hotel
Arlington, Virginia

17 May 1986

000217

COMMITMENT TO COMBAT TERRORISM

GOOD AFTERNOON,

INTRODUCTION

- I. THE PROBLEM
- II. U.S. COMMITMENT
- III. PRESS RELATIONS WITH TERRORISTS
- IV. PROPOSED SOLUTIONS
- V. CONCLUSIONS
- VI. CHALLENGES

INTRODUCTION

A FORM OF WARFARE HAS EMERGED AND INCREASED THAT WE HAVE NOT PROPERLY UNDERSTOOD AND MORE IMPORTANTLY HAVE NOT EFFECTIVELY DETERRED.

THE PROBLEM, SIMPLY STATED, IS THAT INTERNATIONAL TERRORISM HAS NOW REACHED EPIDEMIC PROPORTIONS. RECENTLY, IN A SPEECH THAT I ATTENDED RIGHT AFTER WE RETALIATED AGAINST LIBYA, ADMIRAL WATKINS, CNO, REFERRED TO THE STATE OF THE WORLD TODAY AS ONE OF A "VIOLENT PEACE". IN 1968, THE FIRST YEAR THAT ANY STATISTICS WERE KEPT, THERE WERE 20 FATALITIES WORLDWIDE ATTRIBUTED TO TERRORISM. LAST YEAR, THERE WERE OVER 900! THAT'S A 4500 PERCENT INCREASE! AND AS YOU KNOW AND I AM SURE YOU DISCUSSED

THIS WEEK, 51 PERCENT OF THESE TERRORIST ACTS ARE CARRIED OUT WITH EXPLOSIVE DEVICES! THE PROBLEM IS NOW -- RECENTLY TERRORISTS HAVE:

-- BOMBED THE TRAIN STATION IN BOLOGNA, THE AIRPORT TERMINAL IN FRANKFURT, THE EIFFEL TOWER IN PARIS, NEPAL'S ONLY FOUR-STAR HOTEL, TWA, AIR INDIA AND AIR LANKA JETLINERS, AIRLINE OFFICES IN MADRID, VIENNA, LONDON AND LISBON, AND THE AMERICAN EXPRESS OFFICE IN LYON;

-- PLANTED A BOMB IN THE LUGGAGE OF A PREGNANT WOMAN BOARDING A FLIGHT AT LONDON'S HEATHROW AIRPORT BOUND FOR TEL AVIV, AND ABOARD FRANCE'S PRESTIGE TRAIN (TGV).

--AS RECENTLY AS LAST EVENING IN PARIS, THE HEADQUARTERS OF INTERPOOL WAS ATTACKED BY TERRORISTS WITH GUNS AND EXPLOSIVES.

WHILE WE (THE U.S.) SEEM NOW VERY PREPARED AT THIS TIME TO FIGHT/DETER CONVENTIONAL OR EVEN NUCLEAR THREATS, THIS UNCONVENTIONAL THREAT IS STILL NOT DEALT WITH EFFECTIVELY OR PROPERLY. THE TASK IS EXTREMELY DIFFICULT, BUT BY NO MEANS IMPOSSIBLE.

IN THE PAST WE, THE UNITED STATES, THE LARGEST/FREEST DEMOCRACY ON EARTH, HAVE MET OUR GREAT CHALLENGES WITH VIGOR, IMAGINATION, CREATIVITY, AND RESOURCES.

WHEN WE WANTED TO WIN THE RACE TO PLACE A MAN ON THE MOON, WE MADE IT A NATIONAL PRIORITY, ATTRACTED TALENTED PEOPLE WITH MANAGERIAL AND TECHNICAL SKILLS, AND IMPORTANTLY ALLOCATED LARGE AMOUNTS OF FUNDS TO SOLVE THE PROBLEMS.

WHEN WE WANTED TO END WWII QUICKLY TO SPARE THE MOST AMERICAN LIVES, WE PUT OUR RESOURCES BEHIND INVENTING AND DEPLOYING THE ATOM BOMB.

SDI IS ANOTHER VAST TECHNICAL PROBLEM THAT THIS ADMINISTRATION HAS COMMITTED TO AND GENERAL ABRAHAMSON, A SKILLED AND DEDICATED AMERICAN, HAS BEEN GIVEN THE RESOURCES TO TRY TO SOLVE THIS HUGE PROBLEM - BETWEEN 3 AND 4 BILLION DOLLARS THIS YEAR ALONE.

I SUBMIT TO YOU THAT THE TECHNICAL/OPERATIONAL AND PLANNING PROBLEMS OF DETERRING, STOPPING, OR ELIMINATING CAR BOMBS AND IED'S OF ALL TYPES OVERSEAS AND IN THE U.S. IS ALMOST AS COMPLEX AS SOLVING THE STRATEGIC DEFENSE INITIATIVE. ITS COMPLEXITY IS DUE TO THE RANDOM NATURE OF THE BOMB ATTACKS, THE INCREASED SOPHISTICATION OF THE DEVICES, AND THE INFINITE NUMBER OF POTENTIAL TARGETS. WE, THE U.S., ARE A PRIME TARGET BECAUSE CITIZENS AND FACILITIES ARE ACCESSIBLE TO THE PUBLIC; OUR POLICIES, VALUES, AND CULTURE ARE OF AN OPEN NATURE, AND THE MODERATE, PRO-WESTERN GOVERNMENTS WE SUPPORT ARE OFTEN THOSE THAT TERRORISTS ARE TRYING TO DESTABILIZE.

WE, AS SDI, NEED INNOVATIVE TECHNOLOGY AND CREATIVITY APPLIED TO HELP SOLVE OUR PROBLEMS. IF ANTI-TERRORIST TECHNOLOGY WERE BEING PROPERLY FUNDED, IT WOULD ATTRACT LARGER COMPANIES AND LARGER NUMBERS OF COMPANIES AS WELL AS THE SMALLER, INNOVATIVE COMPANIES MUCH THE SAME AS THE SDI HAS NOW.

LET'S ASK OURSELVES HONESTLY AS A COMMUNITY WHEN THE LAST INNOVATIVE OR TECHNOLOGICAL BREAK THROUGH HAS TAKEN PLACE IN OUR ANTI-IED TOOLS. THE BRITISH, OF COURSE INVENTED THE DISRUPTOR AND WENT THROUGH 19 ITERATIONS OF THE WHEELBARROW BECAUSE OF THEIR CRITICAL NORTHERN IRELAND SITUATION. NOW THAT WE HAVE BEEN FORCED TO COME UP WITH THE NATIONAL PRIORITY--FIGHTING TERRORISM-- WE NEED THE MANAGEMENT ATTENTION AND FUNDING. I BELIEVE IT IS UP TO ALL OF US HERE TO PRESENT OUR CASE TO CONGRESS AND THE ADMINISTRATION.

UNTIL WE ACCOMPLISH THESE TASKS, I BELIEVE WE WILL NOT COME REMOTELY CLOSE TO ACCOMPLISHING THE GOALS OF TECHNOLOGICALLY DEALING AND DEFEATING TERRORIST BOMBING ACTIVITIES.

WE AMERICANS, I BELIEVE, HAVE DIFFICULTY IDENTIFYING WITH EVIL AND VIOLENCE AS POLITICAL MEANS WITH THE EXCEPTION OF RADICAL ELEMENTS IN THE 60'S. AMERICANS GENERALLY WORK THEIR POLITICS THROUGH VOTING AND DISCUSSION AT THE LOCAL CHURCH OR SCHOOL, NOT ON AIRPORT TARMACS WITH MACHINE GUNS OR IN SUICIDE BOMBING MISSIONS.

WE THEREFORE HAVE DIFFICULTY UNDERSTANDING THAT THERE ARE GOVERNMENTS WHICH FUNNEL MONEY AND SUPPORT TO TERRORISTS WHO DISRUPT WORLD EVENTS AND DESTABILIZE AMERICAN PEACE-KEEPING EFFORTS.

THE GLAMOROUS IMAGE OF TERRORISTS OR RADICALS FIGHTING FOR CAUSES FUELED BY THE PRESS--BLAME AMERICA FIRST, LAST, AND ALWAYS.

...WHICH BRINGS UP

PRESS RELATIONS WITH TERRORISTS

● THE BASIC PROBLEM OF AMERICAN PUBLIC UNDERSTANDING OF TERRORISM IS NOT ONLY IN OUR PERCEPTION OF EVIL BUT IN THE MEDIA'S PORTRAYAL OF RECENT TERRORIST EVENTS. RARELY DO TELEVISION VIEWERS SEE MURDERS PERFORMED--THE NETWORKS DIDN'T COVER LEON KLINGHOFFER'S MURDER NOR ROBERT STETHAM'S, NOR DID THEY GET FOOTAGE OF THE BABY BLOWN OUT THE WINDOW OF A TWA AIRPLANE. YET THEY DO COVER SLICK, SEEDY, MASKED GUNMEN IN

DESIGNER JEANS FONDLING PISTOLS AND POINTING THEM AT AMERICANS...
OR IN HIDEOUTS WITH SUITS AND TIES OR IN OTHER FORUMS SPEWING
ANTI-AMERICANISMS, OR EVEN ON A FARM TRACTOR LIKE KADAFI. THESE
TERRORISTS AREN'T "GREAT GUYS"--THEY KILL AND MAIM AND PLAN TO DO
MORE. THEY AREN'T ALWAYS COMPLETELY DUMB EITHER--IN FACT, THEY
HAVE QUITE A GOOD RECORD FOR PRESS MANIPULATION. DURING THE TWA
HIJACKING, FOR EXAMPLE, AMERICAN TELEVISION CONFERRED TACIT
LEGITIMACY ON THE SKYJACKERS BY INTERVIEWING THEM ON NATION-WIDE
BROADCASTS. FOR TODAY'S TERRORISTS, ALL THE WORLD IS INDEED A
STAGE. ABOVE ALL ELSE, TERRORISTS SEEK LEVERAGE, A WAY OF
EXERCISING INFLUENCE BEYOND THEIR ACTUAL MEANS. AS ONE RECENT
ARTICLE IN "PSYCHOLOGY TODAY" POINTED OUT, THEY ARE LIKE THE
WIZARD OF OZ, FRIGHTENING FROM OUT FRONT, BUT BEHIND THE SCENES
THEY ARE REALLY RATHER INCONSEQUENTIAL FIGURES PULLING AT A
SERIES OF LEVERS. WE, AS SECURITY AND COUNTER-TERRORISM
PROFESSIONALS, SHOULD TRY TO PRESENT THEM AS THEY ARE AND HELP
THE AMERICAN PUBLIC UNDERSTAND. HELP CONGRESS UNDERSTAND.

SOME RECENT EXAMPLES OF THIS SENSATIONALISM:

● ROONE ARLEGE, PRESIDENT OF ABC NEWS, HANDED OUT SILVER
PENS FROM TIFFANY & CO. IN NEW YORK TO PRINCIPLE PLAYERS IN ABC'S
COVERAGE OF THE HIJACKING OF TWA FLIGHT 247 WHICH WERE ENGRAVED
WITH THE FOLLOWING MESSAGE: "ABC NEWS, HOSTAGE CRISIS, 1985".

● I WONDER WHETHER OR NOT SAM DONALDSON GOT ONE OF THOSE SILVER TIFFANY PENS FOR HIS UNPUBLISHED PERFORMANCE IN A WHITE HOUSE PRESS BRIEFING ON JULY 2ND AFTER THE CRISIS HAD ENDED. THE FOLLOWING DIALOG TOOK PLACE DURING THAT BRIEFING: 2 JULY 1985

DONALDSON: I want to go back on Stethem. He was certainly a victim of terrorism and many would think him a martyr in this case, but can you tell us how the President means it when he says he's a hero ?

SPEAKES: Because he's an American serviceman serving abroad and in a situation that, is now apparent, was dangerous and he died surely--in the service of his nation because he was wearing the nation's uniform.

DONALDSON: Well, no one would quarrel, I think, with the description you just gave. But I...

DONALDSON: But from the dictionary definition of heroism and hero, I think, would not be satisfied by the description you just gave.

Q: Oh, come on.

SPEAKES: I would suggest you and Peter do a talk through and you take the side that is not a hero and see how that helps your "Q" rating.

DONALDSON: Well, let me just tell you something. (Laughter.) I don't make my living off a "Q" rating. Words mean something. Words mean something. And it does not detract...

DONALDSON: I'm asking a question.

SPEAKES: Okay. The President believes he's a hero. He called him a hero to his--to the dead man's brother.

DONALDSON: Can you give us...

SPEAKES: Now, do you want to call the dead man's brother and tell him he's not a hero, you go right ahead.

I FIND THESE KINDS OF QUESTIONS, AS I AM SURE YOU DO, FROM THE PRESS, UNBELIEVABLE.

● ANOTHER NBC NEWS PROGRAM AIRED AN EXCLUSIVE INTERVIEW WITH WANTED TERRORIST ABU ABBAS (GENERALLY THOUGHT TO HAVE BEEN THE MASTERMIND BEHIND THE ACHILLE LAURO HIJACKING WHERE INVALID LEON KLINGHOFFER WAS BRUTALLY MURDERED AND THROWN WITH HIS WHEELCHAIR INTO THE SEA) WITH THE GROUND RULES THAT HIS WHEREABOUTS NOT BE DISCLOSED. IN IT, ABBAS USED THE FORUM TO WAGE WAR ON ALL AMERICANS AND THREATEN THE PRESIDENT'S LIFE. WHY DIDN'T HE JUST BLOW UP THE CAMERAMAN ? THE ANSWER IS OBVIOUS--NBC WERE BEING USED.

● PRESIDENT REAGAN HIMSELF ASKED THE AMERICAN SOCIETY OF NEWSPAPER EDITORS IN A RECENT SPEECH JUST WHAT THEY THOUGHT ABOUT NABIH BERRI'S PRESS CONFERENCE IN WHICH AMERICAN JOURNALISTS WERE ALLOWED TO QUESTION HOSTAGE TAKERS AS WELL AS THE HOSTAGES --THEN THESE SAME JOURNALISTS WENT FREE WHILE THE HOSTAGES WERE TAKEN TO THEIR PRISON. ISN'T THERE SOMETHING THERE ? IT MAY BE FREEDOM OF THE PRESS...CERTAINLY NO OTHER FREEDOMS TO THE AVERAGE AMERICAN.

● THE PUBLIC HAS A RIGHT TO BE INFORMED, BUT A FREE PRESS
MUST BE A RESPONSIBLE. THE PRESS MUST NOT SENSATIONALIZE
EACH AND EVERY INCIDENT TO PROVIDE FUEL FOR FUTURE TERRORIST
ACTS. THIS OBVIOUSLY MAKES OUR COLLECTIVE JOB HARDER. THE
AMERICAN PRESS MUST NOT BECOME THE "STAGE MAKERS" FOR THE "PETTY
STARS" OF INTERNATIONAL TERRORISM. THE AMERICAN PRESS MUST
BECOME A PARTNER IN THE WAR AGAINST TERRORISM.

COMMITMENT TO COMBAT TERRORISM

PROPOSED SOLUTIONS:

WHAT MORE DOES IT TAKE ? MORE CONGRESSIONAL PARENTS AFRAID TO FLY TO WASHINGTON TO VISIT THEIR SON OR DAUGHTER ? SEVERAL MAJOR TERRORIST INCIDENTS IN THE UNITED STATES ?

THE BOTTOM LINE IS THAT SECURITY COSTS MONEY. WE DON'T DEFEND THIS COUNTRY WITH AIRIE FAIRIE SLOGANS--WE USE REAL WEAPONS, REAL SOLDIERS, FOR REAL THREATS. LIKEWISE, WE NEED REAL EQUIPMENT, CREATIVE STRATEGIES, BETTER TRAINING, STRICT ENFORCEMENT, BOUNTIES IF NEEDED, CEASELESS HUNTS FOR IDENTIFIED TERRORISTS, AND PROSECUTION AND EXTRADITION TO THE EXTENT OF THE LAWS. FURTHERMORE, WE NEED TO PUT OUR TECHNOLOGICAL SUPERIORITY SKILLS TO SEARCHING FOR CLUES OF THE GUILTY AND NEVER GIVE UP. THE SUCCESS OF THE RECENT AIR STRIKE ON LIBYA WAS FOUNDED ON COMPLETE PROOF OF LIBYAN INVOLVEMENT IN THE BERLIN DISCO BOMBING--WE GOT THE EVIDENCE.

● THE MEDIA: THE VICE PRESIDENT'S TASK FORCE REPORT ON COMBATTING TERRORISM OF FEBRUARY '86 PROPOSED A PARTIAL SOLUTION: "THE SOLUTION TO THESE PROBLEMS IS NOT GOVERNMENT-IMPOSED RESTRAINT THAT CONFLICTS WITH THE FIRST AMENDMENT'S PROTECTION OF FREEDOM OF SPEECH AND THE PRESS." THE MEDIA MUST SERVE AS THEIR OWN WATCHDOG. JOURNALISTIC GUIDELINES HAVE BEEN

DEVELOPED FOR USE DURING WARTIME TO PROTECT LIVES AND NATIONAL SECURITY, AND IN SOME CIRCUMSTANCES SHOULD BE CONSIDERED APPROPRIATE DURING A TERRORIST SITUATION. INDIVIDUAL MEDIA ORGANIZATIONS HAVE DISCUSSED PROFESSIONAL REPORTING GUIDELINES, AND ETHICAL STANDARDS HAVE BEEN ADOPTED BY SOME MEMBERS OF THE PRESS, INCLUDING TELEVISION NETWORKS. HOWEVER SURPRISINGLY, AS OF NOW, THERE IS NO INDUSTRY CONSENSUS ON EITHER THE NEED OR THE SUBSTANCE OF SUCH GUIDELINES. WE SHOULD CALL FOR A CONSENSUS FOR THE PROTECTION OF THE U.S. AND OUR CITIZENS, POSSIBLY A COMMISSION HEADED BY A SENIOR RESPECTED T.V. COORESPONDENT SUCH AS DAVID BRINKLEY TO PRODUCE GUIDELINES THAT ALL MAJOR T.V. NETWORKS WILL PROFESSIONALLY AND MORALLY FOLLOW.

● PRESIDENT REAGAN SAID ON JUNE 18, 1985, THAT "AMERICA WILL NEVER MAKE CONCESSIONS TO TERRORISTS--TO DO SO WOULD ONLY INVITE MORE TERRORISM--NOR WILL WE ASK OR PRESSURE ANY OTHER GOVERNMENT TO DO SO." U.S. POLICY IS DIRECT. WE MAKE NO CONCESSIONS, PAY NO RANSOMS, PERMIT NO RELEASE OF PRISONERS, NOR DO WE AGREE TO OTHER ACTS THAT MIGHT ENCOURAGE ADDITIONAL TERRORISM. WE MAKE NO CHANGES IN U.S. POLICY BECAUSE OF TERRORISTS' THREATS OR ACTS.

● JUST THE FACT THAT YOU ARE HERE ON SATURDAY AFTERNOON AND NOT PLAYING GOLF OR TENNIS SHOWS THE EXTENT OF YOUR COMMITMENT. TERRORISM IS THE WAR OF THE 80'S AND BEYOND WE MUST FACE IT AND DEFEAT IT. WE IN INDUSTRY MUST DO OUR PART AND WORK EVEN CLOSER WITH OUR GOVERNMENT COUNTER-PARTS TO INSURE WE ARE VICTORIOUS. THANK YOU FOR YOUR TIME.

REPORT OF THE
DOD COMMISSION ON BEIRUT
INTERNATIONAL AIRPORT
TERRORIST ACT, OCTOBER 23, 1983

20 DECEMBER 1983

000229

PREFACE

On 23 October 1983, a truck laden with the equivalent of over 12,000 pounds of TNT crashed through the perimeter of the compound of the U.S. contingent of the Multinational Force at Beirut International Airport, Beirut, Lebanon, penetrated the Battalion Landing Team Headquarters building and detonated. The force of the explosion destroyed the building resulting in the deaths of 241 U.S. military personnel. This report examines the circumstances of that terrorist attack and its immediate aftermath.

PART SIX - 23 OCTOBER 1983

I. THE TERRORIST ATTACK

A. Principal Findings.

Five eyewitnesses described a large yellow Mercedes Benz stakebed truck traveling at a speed reportedly in excess of 35 MPH moving from the public parking lot south of the BLT Headquarters building through the barbed wire and concertina fence, into the main entrance of the building where it detonated at approximately 0622, Beirut time, on Sunday, 23 October 1983. The truck penetrated the perimeter barbed and concertina wire obstacle (See Figure 6-1), passed between guard Posts 6 and 7 without being engaged, entered an open gate, passed around one sewer pipe and between two other pipes, flattened the Sergeant of the Guard's sand bagged booth, entered the interior lobby of the building and exploded.

An eyewitness was defined as an individual who actually saw the truck but not necessarily its driver. Four of the eyewitnesses are Marines who were members of the guard: three lance corporals and a sergeant. The other eyewitnesses was a Marine corporal who had just returned from a security patrol. Their accounts are detailed and corroborative.

In general, based on descriptions provided by the eyewitnesses who saw him, the driver of the truck was a young adult caucasian male with black hair and mustache and wearing a blue or green shirt, open at the front. No other individuals were seen in the truck by the eyewitnesses.

A similar yellow Mercedes Benz type truck was observed at about 0500 by the sentry on Post 6 entering the parking lot south of the BLT Headquarters building. The truck circled once, then exited to the south. Because that truck did not stop, it was not reported.

A truck was observed by the sentry on Post 6 accelerating westward and parallel to the wire barricade (See Figure 6-2). The truck then abruptly turned north, ran over the wire barricade, and accelerated northward between Posts 6 and 7.

The sentry on Post 7 heard the truck as it ran over the wire, then observed it and immediately suspected it was a vehicle bomb. He inserted a magazine in his M-16 rifle,

chambered a round, shouldered the weapon, and took aim but did not fire because by that time the truck had already penetrated the building.

647
Both sentries realized the truck was, in fact, a "car bomb" and therefore took cover within their respective bunkers. One sentry hid in the corner of his bunker and did not observe the detonation. The other sentry partially observed the detonation from behind the blast wall to the rear of the bunker. He saw the top of the building explode vertically in a V-shape. He then took cover inside his bunker for protection from the falling debris.

The sentry on Post 5 also spotted the truck as it accelerated northward into the building. The truck passed so quickly that he could not react in any way although he understood the truck's purpose. He was unable to take cover in his bunker and was knocked to the ground by the blast; however, he escaped uninjured.

A reconnaissance NCO was standing near a water trailer located approximately 25 meters east of the southeast corner of the building. He had just returned from a security patrol. He was facing east when he heard an accelerating engine behind him. Thinking it was a large Marine truck speeding, he turned westward and saw the terrorist's truck accelerating from left to right in his field of vision. He, too, immediately suspected the truck's hostile purpose. As the vehicle entered the building, he turned to run for cover in a nearby shower gutter but was knocked down by the blast.

Meanwhile, the Sergeant of the Guard was at his post located at the building's main entrance (south). His post was a small booth-shaped structure, similar in size and positioning to that of a ticket vendor's booth in a movie theater. The structure had been reinforced with a double-wall of sandbags around its girth.

The Sergeant of the Guard was alone at his post, facing inward (north) toward the lobby, when he heard noises to his rear, to include a high-revving engine. He turned and saw the truck closing rapidly on his post as it passed through the open gate of the permanent (Lebanese-constructed) fence (See Figure 6-3). His first reaction was a surprised question: "What is that truck doing inside the perimeter?" or thoughts to that effect. Immediately thereafter he realized the truck was hostile and ran out of his post and across the lobby toward the rear entrance (north). As he ran, he repeatedly yelled "Hit the deck! Hit the deck!" and glanced back over his shoulder as the truck continued toward

the front entrance. He saw the truck breach the entrance (the cab was apparently too tall for the height of entrance archway) and without hesitation, run easily over his guard post and come to a halt near the center of the lobby. As the Sergeant of the Guard continued to run, there was an interval of one to two seconds between the truck's halt and its detonation. He actually saw the detonation which he described as being "more orange than yellow." He was then blown through the air, struck the ground, and was seriously injured. He came to on the roadway on the north-west side of the building's rubble as the debris fell around him.

When the truck exploded (See Figure 6-4), it created an oblong crater measuring 39' by 29' 6" and 8' 8" in depth (See Figure 6-5). The southern edge of the crater was thirteen feet into the lobby. To create such a crater, the explosion penetrated and destroyed the concrete floor which measured 7 inches in thickness and which was reinforced throughout with 1 3/4" diameter iron rods. Because of the structure of the building - it had a large covered courtyard extending from the lobby floor to the roof - the effect of the explosion was greatly intensified. This was caused by the confinement of the explosive force within the building and the resultant convergence of force vectors. This "tamping effect" multiplied the blast effect to the point that the bottom of the building was apparently blown out and the upper portions appeared to have collapsed on top of it. The force of the explosion initially lifted the entire building upward, shearing the base off its upright concrete columns, each of which was 15 feet in circumference and reinforced throughout with 1 3/4" diameter iron rods. The building then imploded upon itself and collapsed toward its weakest point - its sheared undergirding.

The Federal Bureau of Investigation (FBI) assessment is that the bomb employed a "gas-enhanced" technique to greatly magnify its explosive force which has been estimated at over 12,000 pounds effective yield equivalent of TNT.

The FBI Forensic Laboratory described the bomb as the largest conventional blast ever seen by the explosive experts community. Based upon the FBI analysis of the bomb that destroyed the U.S. Embassy on 18 April 1983, and the FBI preliminary findings on the bomb used on 23 October 1983, the Commission believes that the explosive equivalent of the latter device was of such magnitude that major damage to the BLT Headquarters building and significant casualties would probably have resulted even if the terrorist truck had not penetrated the USMNF defensive perimeter but had detonated in the roadway some 330 feet from the building.

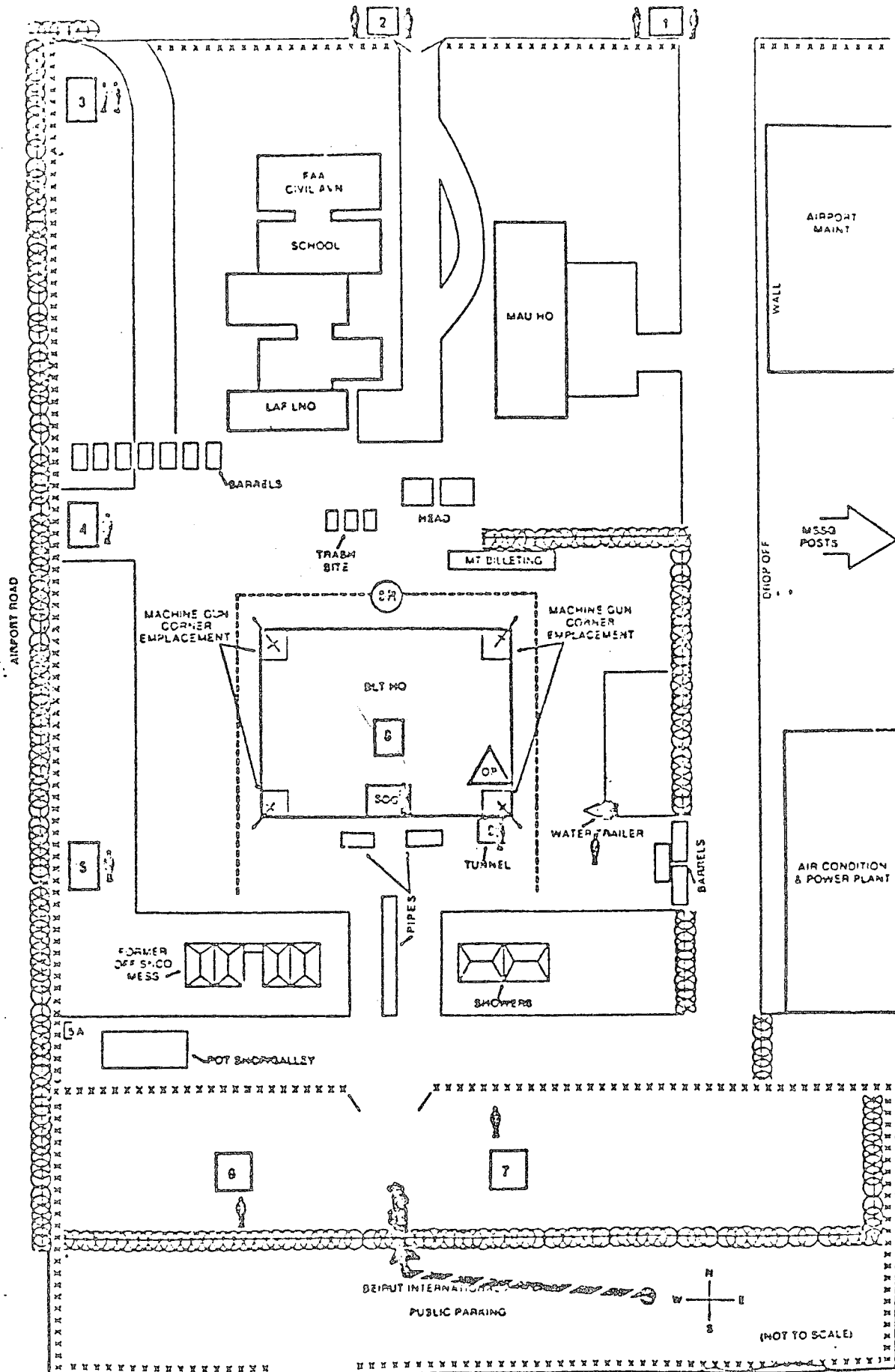


Figure 6-2

000234

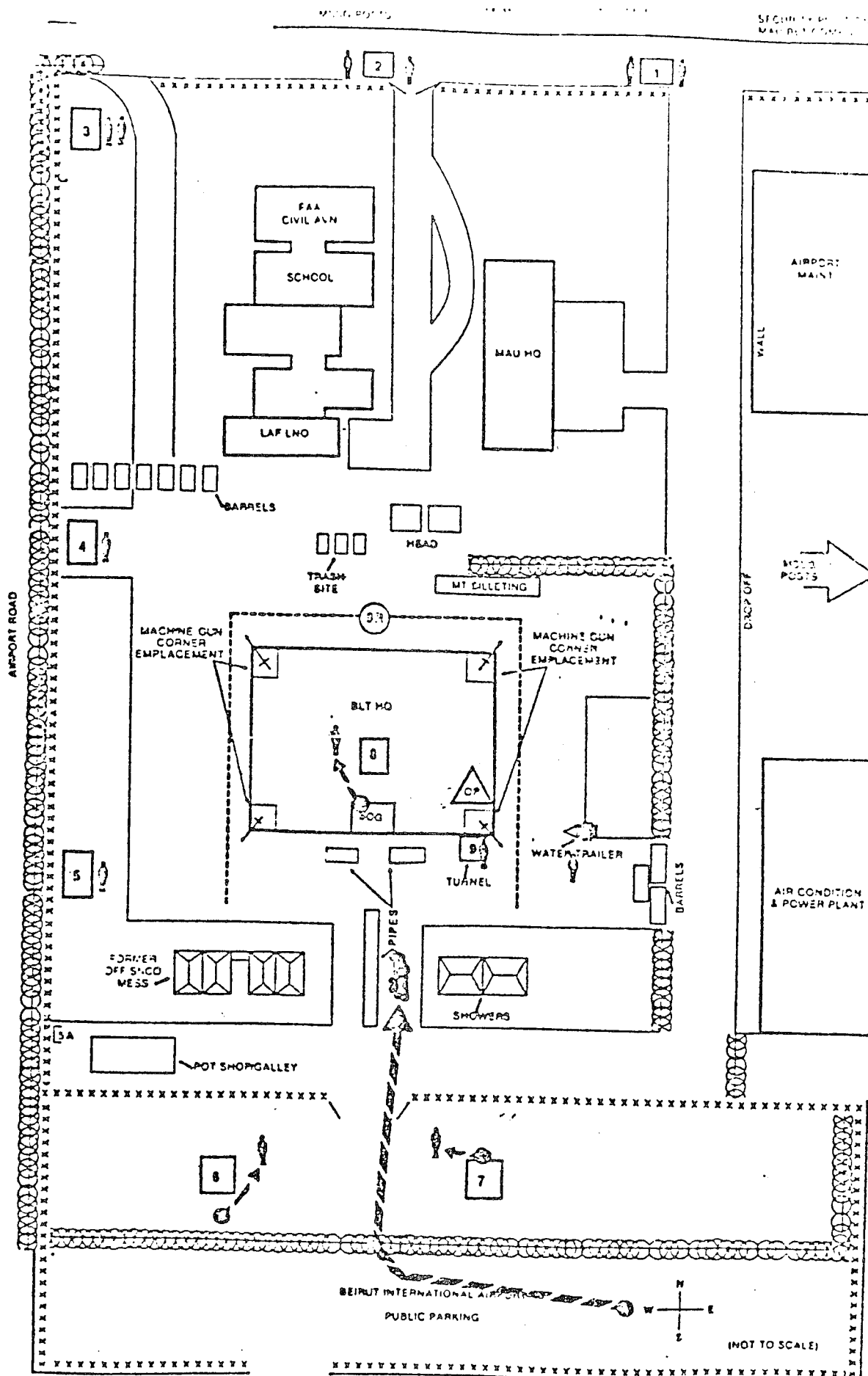


Figure 6-3

000235

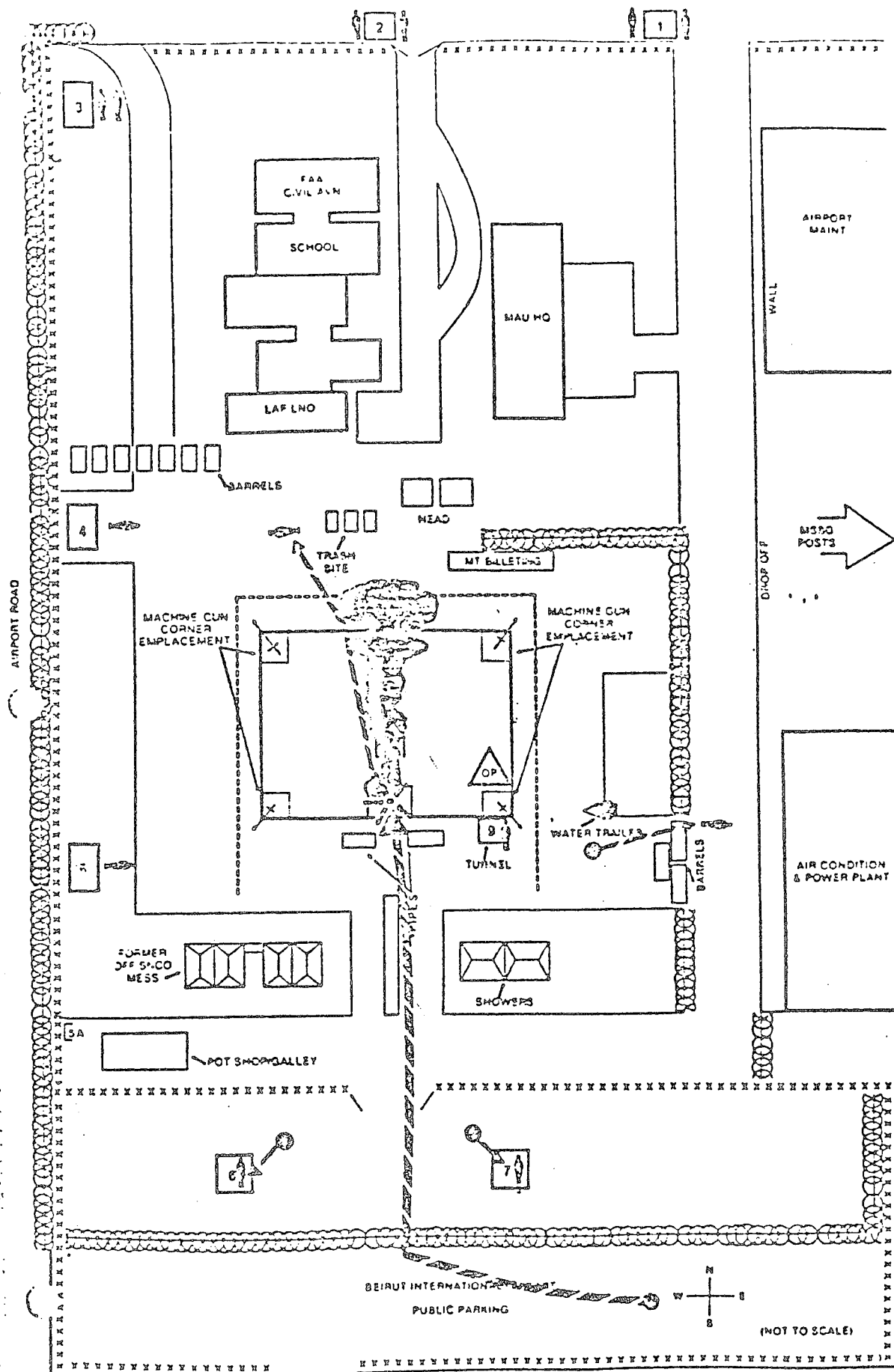


Figure 6-4

000236

HUMAN FACTORS IN IDENTIFICATION DOCUMENT DESIGN
AND THEIR EFFECT ON THE VISUAL VERIFICATION PROCESS

ID CARDS AND BADGES - WHAT ARE WE REALLY SEEING?

By
William Norman CPP
and
Robert D. Burgener

One difference between an identification document that serves as a first line of physical security screening and one that is little more than a nuisance to everyone, may be found in the way the information needed for verification is presented.

It is not a question of how attractive the design is, what matters is if the arrangement of shapes and colors register in the mind of the person looking at the document. An ID with too much information (visual stimulus) may overload the viewer's capacity and produce only a blurr. In that situation, the wrong people will be allowed access and legitimate users will be frustrated by a system that does not work.

Any method of identification, except perhaps for one-on-one personal recognition, involves some elements of chance that a counterfeit document or imposter will turn up in an attempt to beat the system. With the wide use of ID cards and badges, the old saying "what you see is what you get" has a particular bearing in terms of security.

Given the various products and approaches available to reduce tampering and complicate counterfeiting, the authors went back a step further to learn how the information that appears on such documents is selected. Our goal was to determine the extent to which the design of the document affected the speed and error rate of the verification process.

With the emphasis on technology in the entry/access control environment, little attention seems to have been paid to the physical design of the document and the role it plays in the screening process.

Competition for space within the limited area of most identification documents such as a driver's license, company or military identification card or badge, is a reflection of the almost mutually exclusive roles the small rectangle of paper or plastic is asked to play. Most people involved with identification documents agree the purpose of such devices is to provide a portable record of a person's physically identifiable characteristics that is permanently bonded to a record of that person's entitlements such as a qualification to operate a motor vehicle, enter a work place or have access to a secure area. Problems arise when we try to do all of this on the same side of a two-inch by three-inch card.

The use of machine readable cards imposes certain restrictions on our choices of size and shape for

identification documents due to the standards established, initially by the credit card industry, to insure compatibility with the card reader equipment. With the choice of overall dimensions out of the way and leaving the card reader technology decisions for another discussion, the authors approached the question of what goes on the surface of the document.

In trying to determine who is reasonable for what goes on an identification document, the trail led from the personnel department to graphic artists to health and benefit administrators in a design-by-committee approach in which the security office's contribution focused on selecting a vendor with most tamper-proof product.

Considering the photo ID card which is carried in an employees' wallet or purse or the photo ID badge worn on a chain or clip as the most common forms of personal identification in use today and the document most frequently used for entry and access; the idea of back-end design, from the perspective of the security people who are asked to look at hundreds of these documents each day, seemed reasonable.

In interviews with security personnel from guard posts at high traffic points of entry to supervisors responsible for training and security force performance, the common denominators in what they said they looked for when requesting identification documents were:

- o Does the document being presented resemble one that you know to be authentic?
- o Does the person presenting the document resemble the person whose photograph appears on the document?

Because of the wide variety of color and other coding systems in use, little if anything else on the document registered with the guard or was even scrutinized unless the person presenting the document aroused some suspicion for other reasons.

Verification of identification documents is usually not a security person's only job and even at designated entry control points, the process of visual verification takes place with all the distractions of any normal work environment. While it may not be possible to control the volume of people using a particular entrance, thus placing additional pressure on the security personnel to maintain an acceptable throughput rate, it would certainly seem to be in everyone's best interest to make the document as easy to check as possible.

In high security environments, identification documents are usually surrendered to security personnel for close scrutiny, a procedure that is both desirable and practical. Generally, fewer people must be screened at these locations and time is less of a factor. But if a company issues ID cards to all employees and expects those

documents to limit perimeter access, the documents must be designed to simplify the visual verification process.

What security officers actually see when an identification document is presented depends on a number of factors, some more easily controlled than others. The physiology of how we see is rather simple: light strikes the receptor sites contained within the lens of the eyeball. The process becomes more complex as light is translated into neural impulses that are traced to the optic center of the brain where image processing occurs.

Visual discrimination is the process of sorting out shapes, intensities, and contrasts that comprise the images that enter the field of vision. There are physical limits on the amount of stimuli we can handle before the brain becomes overloaded. Visual noise affects the brain in much the same way static interferes with the ability to focus on specific sounds.

A number of studies have established the physical limits of human perceptual processing abilities. One such study was conducted by the Federal Aviation Authority (FAA) to determine the number of aircraft a controller could track accurately on a radar screen. This study produced the so-called five plus or minus two theory, which says an average person can accurately repeat somewhere between three and seven numbers or letters

presented in a flash card test. Increasing the quantity of images (numbers or letters) reduces accuracy.

Recent industry work in the design of display terminals (CRTs) for computers and word processors has extended the knowledge of stress factors and the way they affect the visual perception process. Specifically, physiological experiments have contributed to a better understanding of the function of color and contrast as it affects viewability and eye fatigue.

Professor M. Horowitz, a research psychiatrist, discusses a third element in the perception process in his book Image Formation and Cognition: "The prevalence of illusions . . . suggests that perception, memory activation, and fantasy share at least in some part the same channels of image formation."

In some cases, individuals react to the color or shape of an object based on previous experience with similar objects. This form of perceptual shorthand helps people deal with large volumes of visual information, but it can also cause them to overlook important details.

In his book Psychology of Learning, Howard Egeth (et al.) refers to negative transfer, in which old behaviors (experiences) inhibit the learning of new responses. Think of the chaos that would accompany as simple a perceptual change as reversing the meanings of red and green traffic lights.

These observations suggest that the use of humans as document checkers involves a high risk in itself because they can react to an unrelated experience and allow persons with green cards to pass and stop anyone with a red card. Keep in mind, though, that this same human process of composite image formation senses nervousness in a person presenting a fraudulent ID or spots a misplaced insignia on the uniform of an imposter.

In light of research on perception, it becomes apparent that the amount of information that appears on an ID card affects a security officer's ability to discriminate between fraudulent and legitimate cards. But, while few people would consider overloading a computer, they don't hesitate to issue ID cards with so much graphic garbage (politely called visual stimuli) it is virtually impossible for security officers to perform the visual discrimination necessary to make a pass/no pass decision. Clearly, by making identification documents complex by including corporate or department logos, postage stamp size photographs, and lines of numbers or letters on one side of the card makes accurate visual verification more difficult.

A popular argument in favor of intricate designs on identification documents says the more complex the document, the more difficult it is to counterfeit. Watermarks and hidden designs may have served a purpose in

the days of ink and paper, but the mass produced ID card eliminates the uniqueness once considered an essential element of a good identification document. Adding elaborate seals or borders is not likely to help the identification process. In fact, from the point of view of the person charged with scanning the card, it makes matters worse.

The limited space on the surface of an ID card and the competition for the attention of security personnel who must scrutinize its contents demands that the roles of identification and record-keeping be separate. To be an effective identification document, the information needed for visual verification -- a picture, a signature, and an expiration date -- must not be encumbered by the information needed for record-keeping purposes. Social security numbers, birth dates, physical descriptions, ranks, and other personal details can be encoded on a magnetic stripe or printed on the reverse side of the card.

Some private sector and government organizations have already moved in this direction, using ID cards with a signature or printed name and a large photograph that covers two-thirds or more of one side of the card. When asked why they had changed, security professionals in these organizations credited common sense and experience. Since common sense is not always so common, it seemed

appropriate to look for evidence to support the notion that in identification documents, less is better.

The field of physiological psychology offers some answers. Behavioral psychologists have produced several well-documented studies on the role of stress and work environment on the performance of security personnel. Certainly the emotional and physical condition of the person involved in performing the visual verification affects how thoroughly the verification process is carried out. But what factors beyond the control of the security officers also influence how the verification process is performed?

The human factors involved in the design of road and building signs may not seem to have much to do with identification documents. However, the same rules concerning the use of color, spacing, and contrast that influence a person's ability to absorb information quickly do apply. Drivers don't want to slow down on an expressway to read a sign that has too much information cramped into the space. In the same way, employees do not want to slow down for security personnel who must scan superfluous information on an identification document.

In the Human Factors Design Handbook, author Wesley E. Woodson outlines the key issues that influence the effectiveness of visual displays:

- o Legibility. ID cards should not have frayed edges or crease marks that make it difficult to detect tampering. The size of the photograph of the card, as well as the way the photograph is displayed also contribute to the card's legibility.

- o Size in relation to viewing distance. Since machine-readable IDs are becoming more prevalent, the size of the document falls under the control of the international standards set for the card reader industry. Except in instances where the card is viewed electronically, the distance between the bearer and the checker may vary from a few inches (the ID is surrendered to the security officer) to several feet (the bearer holds the card up as he or she moves past the security point). The checkpoint may range from a controlled mantrap or passageway to an entire entrance foyer or roadway.

- o Clarity of meaning. Coding systems must be simple to avoid depending on the speedy recall of complex images. Any time you mix codes or include several codes on the same side of a card, the identification process becomes more difficult. For example, only one background color should be used on a card, and it should clearly have only one meaning. The security officer should not have to decide whether red means the card expires in June or the bearer has a top level of clearance. Using two colors as

codes on the card only increases the chance that the codes will be confused.

o Location of the ID card during the check. The card must be placed in a spot convenient for the bearer, a consideration that usually overrides the needs of the security officer who must check its validity.

Another factor not mentioned by Woodson, color, also plays a crucial role in the ability to distinguish between legitimate and fraudulent cards. In tests using basic signal detection techniques, subjects are asked to sort through several identification cards in a short period of time, roughly equivalent to the time a security person is exposed to an ID card presented at a control point. The subjects are asked to separate the card by expiration date, for example. The colors used on the accepted cards are then compared to the colors used on the cards that were rejected. Often in such experiments, incorrect data is accepted if the color is "official looking" and correct data is rejected if the background is red, a color associated with "stop."

The results of a test of this sort do not prove that red should be avoided as a background color. Rather the real issue is the use of primary colors rather than pastels or other shades. The number of colors people can consistently identify accurately is limited. Therefore, researchers favor basic colors -- red, green, yellow, and

blue -- instead of tones that can vary with the viewer's perception and the available light.

Finally, Howard Egeth, a professor of psychology at Johns Hopkins University and co-author of several books on learning behavior, reports that experiments in England found witnesses were able to identify a suspect more easily from a three-quarter profile view rather than from a full-face mug shot. While additional tests are still being completed, changing the angle from which an identification photograph is taken is a simple adjustment that can be put into effect at no cost and improve the identification process immediately.

All of these factors -- legibility, size, illumination, clarity, location, and color -- argue in favor of keeping the format of an identification document as simple as possible. The cards must be designed from a physiological standpoint, not purely an aesthetic one. In many cases, vendors who make cameras for producing ID cards are willing and quite able to provide different formats, ones that can accommodate a larger picture, for example. But because these alternatives are not in demand at present, they are not marketed aggressively. As a result, the user may have to bring up the result and explore what alternatives are possible and cost effective.

The many variables that must be considered when designing an identification card prevent the development

of a few hard and fast rules. Once parameters have been established, however, a card ultimately has to be designed to benefit the user -- the person who must decide whether each card bearer can legitimately be allowed to enter the premises. In high-security environments where security personnel are trained in the technical intricacies of identification, such elements as fingerprints can be used realistically. But a simple identification card, with a three-quarter profile picture, a signature, and an expiration date on a background of primary color, is appropriate for most installations most of the time.

About the Authors . . . William P. Norman, CPP, is director of security for the Embassy of New Zealand in Washington, DC. He is a member of ASIS and the Society's Standing Committee on Physical Security.

Robert D. Burgener is a specialist in human factor research on applications of new technologies in the field of Security.

Copyright 1984, 1986 R. D. Burgener & Associates
13013 Narada Street
Rockville, MD 20853
301 933-9043/933-1032

BACKGROUND COLOR OR
PATTERN INDICATES
LEVEL OF SECURITY/
ACCESS
CLEARANCE

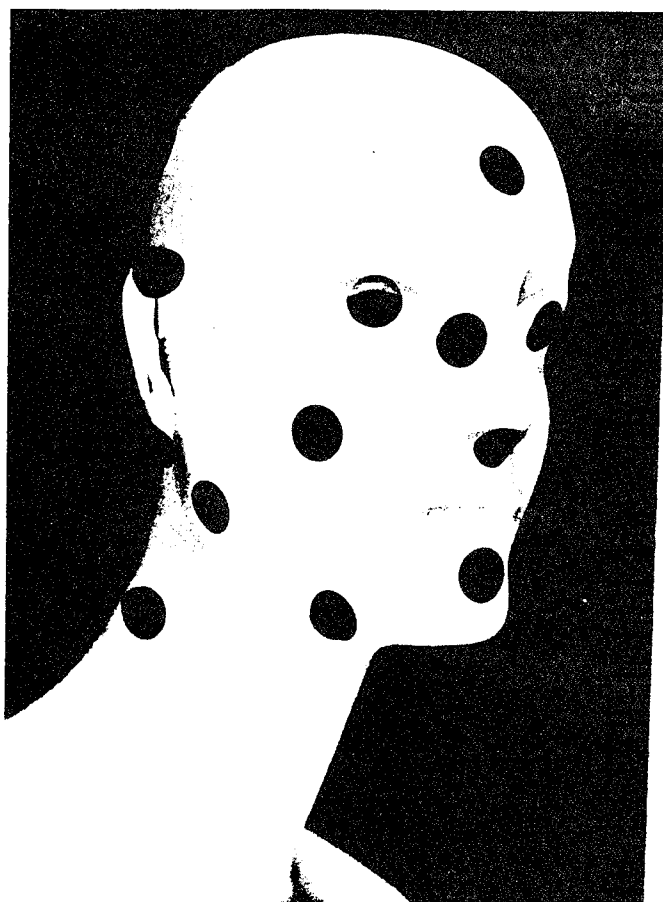
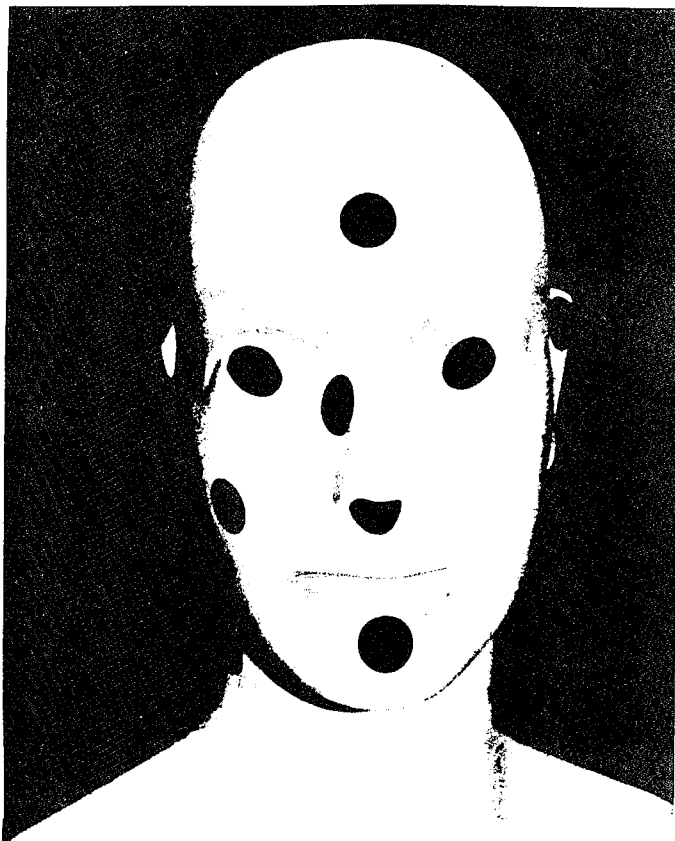
THREE QUARTER profile
photograph occupies 60%
or more of card surface

BEARER'S Signature

EXPIRATION
DATE OR OTHER
CODE WHICH GIVES
DOCUMENT LIFE-
CYCLE.

BASIC DESIGN CRITERIA

R.D. Burgener



A three-quarter profile photograph used on an ID card provides security officers with more information than the traditional, full-face mug shot. In the photograph on the right above, the nose, lips, and chin appear with greater contrast against the neutral background than they do on the left against other skin tones. The three-quarter view also gives a full picture of the ear, including the identifying shape of the ear lobe. (Photo by Robert Burgener, with assistance from Craig D. Chucker)

000251

PROFILES, PATTERNS, & SYNDROMES :
BEHAVIORAL SCIENCE
FOR SECURITY PROFESSIONALS

by Edwin A. Schmidt, CPP

(703) 256 - 4047

March 27, 1986

revised April 11, 1986

ForS-255 SECURITY MANAGEMENT I

THE GEORGE WASHINGTON UNIVERSITY

Copyright by Edwin A. Schmidt, CPP, 1986.

000253

ABSTRACT

Protection strategies need to be based upon the assets being safeguarded as well as the threats which might cause loss and the mechanisms available. Human factors remain a significant, and often enigmatic, concern for security practitioners. The wide range of human situations facing the security profession poses a variety of problems in identifying and controlling potential perpetrators of adverse actions. Many different types of psychological, behavioral, attitudinal, and other profiles are in use or under development which may aid in security management. Different categories of profiles are illustrated as management tools for particular applications.

Copies of this paper may be made for personal use or for other purposes provided that credit is given to the author.

For further information, contact Ed Schmidt at (703) 256-4047
7013 Bradley Circle, Annandale, VA 22007

TABLE OF CONTENTS

Introduction	Page 1
Awareness of Human Similarities and Differences	2
Professional Development	2
Risk Management and Loss Prevention	3
Profile Development Methodologies	4
Intuitive Judgment vs. Formal Model Availability	6
Terror & Violent Crime	6
Behavioral Science	8
Background Investigation	9
Keeping the Secrets	12
Statistical Analysis	14
Personality Screening Techniques	15
Subjective Personality Inventories	15
Behavioral Characteristics	18
Non-Verbal Signals	18
Causes of Aberrations	20
Victims of Circumstance	23
Response in Traumatic Situations	24
Antisocial Personalities	25
Forensic Psychology and Psychiatry	25
Taxonomies & Menageries	27
Arson	28
Computer Abuse	28
Difficult People	30
Management Styles	30
Social Class and Status	32
Conclusion	33
References	
Bibliography	

INTRODUCTION

This paper illustrates the many types of profile systems that can be used to good effect by the security profession. Also covered are limitations and pitfalls associated with specific uses. Examples of the types of profiles which may be useful include: taxonomies of computer abusers, fire setters, shoplifters, and other perpetrators; characteristics of assassins, serial and mass murders, pathological rapists, terrorists, bombers, etc.; interaction with armed robbers, difficult and antisocial personalities, intoxicated persons, victims of trauma, those with physically and/or psychologically caused aberrations; spies; scofflaws; interviewees; and other categories.

The material that follows shows how particular types of profile information can be used in interpersonal relationships, development of protection strategies, criminal confrontations, emergency situations, investigations, pre-employment screening, and day-to-day security routine. This paper also points out the weaknesses in specific categories and pitfalls to avoid. Improved effectiveness of security practices along with a positive return on investment is stressed. Although the content of this paper is comprehensive, the subject is too extensive to be all inclusive.

The use of profiles for effecting safeguards may be as old as mankind. Before there were distinguishable cultures, groups of humans could differentiate among themselves for mutual protection of their clans. Similar characteristics are observed in other species throughout the animal kingdom. But none of the animal groups approach the complexity of human society.

We regularly see vestiges of ethnic stereotyping that reflect generalities and truisms as well as bigotry or at least misperceptions. However, cultures are dynamic with characteristics changing gradually or suddenly. Helmreich¹ shows this in his book on ethnic stereotypes. At best, cultural profiles allowed citizens to anticipate the thinking of people whom they may have encountered; at worst, they perpetuated widespread intolerance and jingoism which is antithetical to national security if not personal protection. Class is also pertinent for stereotyping.²

The Naval Officers Guide published in 1894 included an appraisal to the effect that enlisted men are stupid, but they are sly and cunning and bear considerable watching. Undoubtedly, the enlisted also perceived many officers to have the same characteristics. Our out-spoken First Lady Eleanor Roosevelt had stated that sailors had the cleanest bodies and the dirtiest minds of any group that she had encountered. The term "officers and men" seems to imply an exclusive relationship; moreover, invitations to formal functions specifying the "officers and their ladies" and the "enlisted men and their wives" infers that enlisteds' spouses are not quite ladies! These connotations offend if taken literally.

The foregoing expressions conveyed a perception of class distinction that is

often typical in any organization or society. It reflects our need to impose artificial distinctions if there are no bona fide differentiators. Things are easier to grasp and to deal with if we can compartmentalize them. Or are they? We often fail to recognize the difference between generalizations, likelihoods, and facts; we must deal with these perceptions in profiling.

AWARENESS OF HUMAN SIMILARITIES AND DIFFERENCES

There are indeed significant behavioral and attitudinal differences among various cultural groups. Achieving favorable human relations with "normal" people within each discrete group necessitates some measure of skill and experience. For example, overseas diplomacy should be an integral aspect of training for military personnel and business representatives, not just embassy staffs, who will come into contact with foreign nationals. It is not only language that differentiates persons of divergent cultures, but also their perceptions of proximity, mannerisms, time, propriety, and many other highly specific attributes.

Culture shock can be a rude but useful awakening. Differences are sharply accentuated when we transit into situations that are unfamiliar and for which we are unprepared. Such transitions as Americans into Asia (or Asians into America!) can result in as much embarrassment as bluecollar workers might experience at a white tie and tails function. Inappropriate actions can have deleterious consequences. Likewise, many apparently routine security situations can go sour because cultural awareness is deficient. Intelligent use of profiling can help.

The issue of national security is fraught with complexity. The United States is perceived by many nations as lacking an evenhanded approach to such problems as terrorism. Policy makers of both the USSR and the USA seem to be oblivious to each other's stated concerns. Moreover, both countries seem to expect that smaller nations should support the policies of the major nations wholeheartedly as being in their best interest. What the policy makers fail to demonstrate is that they realize other nations may have vastly different perceptions and priorities as to what, for them, constitutes national security.

Security managers of organizations should bear in mind that other entities do not hold the same set of beliefs, and therefore should adjust their strategies to accommodate alternative ideologies. It is crucial to keep the big picture in mind; but, it is necessary to focus on the details as well.

PROFESSIONAL DEVELOPMENT

Security practitioners have a special need to sharpen their interpersonal capabilities because of the wide range of people encompassed within their line of work. Unfortunate misunderstandings are notorious between individuals of dif-

ferent ethnic, religious, or age groups, gender and class categories, political persuasions, and professional disciplines. Faux pas need not occur with such frequency or intensity if empathy and cross-cultural knowledge were developed as a matter of course.

Decision making for security managers and practitioners can be enhanced through use of management tools. The array of behavioral, psychological, attitudinal, and other profiles that may be useful is increasing. Some are no better than common sense estimations, while others can save considerable investigative time or effort when used properly. Nevertheless, none of the profile mechanisms is a substitute for informed professional judgement.

Some profiles are of use in establishing prediction, prevention or deterrence strategies; others for detection, interception and mitigation; others still for documentation, evaluation, correction and recovery. Knowledge of the risks involved with some perpetrator categories can help through decisions of avoidance, acceptance, or transference of the inherent vulnerability.

When dealing with human factors, none of the strategies can be employed exclusively. The preceding strategies constitute integral parts of a comprehensive security management program. Each must be scrutinized to determine its relative effectiveness and cost to implement and maintain. Moreover, the strategies are not mutually independent; some are complementary or synergistic and necessitate implementation of others. Additionally, different components of these strategies may be managed separately by discrete entities within the organizational structure. Their integration is not a trivial problem.

RISK MANAGEMENT AND LOSS PREVENTION

Safeguarding valued resources against loss is a significant management responsibility. Specialists from various disciplines are typically called upon for advice or for direct support. Staff lawyers, accountants, investment and market analysts, design engineers, safety officers, and security managers each have a role in perpetuating the organization of which they are a part. Their respective, complementary roles necessarily color their own perception of risk as a reflection of their profession.

Protection strategies need to be based upon the nature and value of assets being safeguarded as well as the threats which might cause loss and the mechanisms available to reduce vulnerabilities. Moreover, human factors remain a significant, and often an enigmatic, concern for security practitioners. The wide range of human situations facing the security profession poses a variety of problems in identifying and controlling potential perpetrators of adverse actions.

PROFILE DEVELOPMENT METHODOLOGIES

The range of concerns for contemporary security practitioners continues to evolve and broaden. Each of the functional areas of security has seen improvement in methodology in addition to technology. However, much of the work has been piecemeal; technical advances seem to outstrip our development of the means for proper application. Demonstration of valid proofs of the utility of particular concepts lags far behind discovery of correlations.

Cause and effect constructs remain elusive for human relationships if not for physical or technical situations. Application of the scientific method of reasoning to research of protection mechanisms has advanced the status of many types of human profile strategies. Nevertheless, many of the strategies remain flawed for different reasons although they may still have some value as management tools for security practitioners.

Subsequent to the report on crime and the American system of justice by the President's Commission on Law Enforcement and Administration of Justice in 1967, much work has been initiated to assess and enhance the effectiveness of protection strategies. It should come as no surprise that academic community involvement is a significant factor in developing verifiable safeguard mechanisms. Also, the judiciary often demands proof that unwarranted intrusions on individual rights are not perpetuated. Rationale used in initiating apprehensions, searches, and/or seizures is held to strict legal standards; statistical probabilities may not be acceptable to sustain the inference of probable cause.

Good sources of information come from several directions. Government agencies have a vested interest in satisfying the public trust. Major corporations devise ways to protect their own interests and often those of their clientele. Private research and academic institutions generate considerable material of potential value. Vendors servicing the security industry often have worthwhile literature. And, the professional associations contribute much to the distribution of ideas. Notwithstanding the many contributions, readers should maintain objectivity regardless of the source of information.

Academic researchers must subject their work to often severe scrutiny of their peers as well as their supervisors. Faulty hypotheses, inadequate development, and lack of documentation are usually brought to light; likewise, each succeeding project built upon the success of others ensures the expansion of the knowledge base. Spelling out what observations are generalizations, facts, or statistically correlated conditions (i.e., probabilities) is standard practice in academic research. Objectivity is the hallmark needed to satisfy Constitutional or academic standards.

Because human behavior is so complex and variable, it is very difficult to build formal models that work with any degree of reliability. Nevertheless, research into the particular attributes of human behavior within each of the many interdisciplinary areas can provide interim improvements in our understand-

ing. Our recognition of what works and how it works can enhance natural perception even if we don't know why it works. Many profile concepts satisfy this condition and therefore offer selective utility.

INTUITIVE JUDGMENT VS. FORMAL MODEL AVAILABILITY

The collective experience of security and law enforcement practitioners provides a moderately effective basis for preemptive intervention in numerous situations. Yet, gut reactions are not as good a rationale for taking drastic action as documented confidence that a person is about to do something inappropriate. Probable cause is appropriate for legal considerations, but overreaction is the trade-off against inadequate response that practitioners face with lives or other security interests at stake.

The late Marvin C. Beasley, a paramount security engineer with the Defense Nuclear Agency, repeatedly chastised colleagues for failure to adopt true professionalism and to adopt scientific methods for demonstrating the efficacy of their security strategies. He was a firm advocate and early proponent of human behaviorism and phenomenological studies for security research and planning.

Characteristics of security practitioners can be many and varied, depending on the mission. The mind-set developed through extensive experience in the real world is essential; it cannot be taught in a classroom other than the school of hard knocks. Bodyguard candidates should be particularly scrutinized and tested to determine if they possess the necessary innate qualities to be effective; bushido, or warrior's soul, is crucial. Essential skills for security managers of automated information processing systems include roughly 35% comprehensive security knowledge, 30% data processing knowledge, 15% industry/organization knowledge, 10% ability to work with people, and 10% audit instinct.

TERROR & VIOLENT CRIME

Doctrine for use-of-deadly-force has changed in recent years to avoid situations where potential victims are unnecessarily hazarded. Unfortunately, the individuals charged with protection must still anticipate potentially lethal situations before conditions degenerate to the point where violence is inevitable. Each assassination attempt may have different precursors. What are the clues that warn of imminent violent action?

Clear-cut answers are not yet available. Prospective research is underway, but the incidence of violence amenable to close scrutiny is part of the problem. Domestic violence in the USA leads the list of concerns for many law enforcement researchers; conditions that precipitate violence in the home or neighborhood are all too well known. What triggers many individuals is somewhat predictable. Thresholds differ for individuals and circumstances thereby complicating the equation.

The Federal Bureau of Investigation's National Center for the Analysis of Violent Crime has four program elements: research and development; training; profiling & consultation; and the violent criminal apprehension program (VI-CAP) which is a nationwide data information center to collect, collate and ana-

lyze all aspects of all pertinent violent crimes (i.e., those that are bizarre vicious, or repetitive). The Behavioral Science Unit oversees the National Center and provides consulting services for analysis and criminal personality profiling, use of hypnosis, stress awareness and management, and other matters needing a behavioral science perspective.⁷

Unprovoked violence is immensely more difficult to discern and to deter. When conditions are known to be hazardous beforehand, the decision may be to avoid the risk, or to prevent entry of all potential perpetrators. Acceptance of the risk with anticipation of effective interception of perpetrators before they act may not be a reasonable alternative.

Research indicates that the environment coupled with universal genetic factors, rather than racial characteristics, is the precipitating element in many violent crime patterns.⁸ Each individual's perception of short and long term cost/benefit trade-off may be the key element in determining what type of action they employ. Moreover, men and women generally think and act differently because of significant variations in brain structure along with body chemistry factors;⁹ these aren't absolute differences since there is substantial overlap, and there are special cases of deviation from the general rule. Left-handed persons constitute about 8% of the population and exhibit specific variations; likewise, with pathogenic homosexuals, transsexuals and bisexuals.

Newsweek journalists ¹⁰ commenting on the assassination of humanitarian Swedish prime minister Olaf Palme opined that only the most warped terrorists could find a motive for murder in Palme's career. The point made half a decade ago by foreign correspondent Claire Sterling ¹¹ is that Red Terrorism is aimed at destabilizing all western democracies in the most outrageous, and therefore effective, way possible, pure and simple. The Reds do not pick their targets because the subjects are villainous; they pick them for maximum publicity to exacerbate widespread terror!

The only sense that assassination of Olaf Palme makes, or any other target of that form of terrorism, is that the general public and state institutions are thereby terrorized; presumably, this may lead to the destabilization which would allow the new order (i.e., Soviet socialism) to replace the bourgeoisie decadence. Black Terrorists apparently used to be differentiated from Red in that their ideology reflects an opposition to particular ethnic, religious, political, or other group(s) as a whole. Many Black have made a transition to Red and are indistinguishable in their mode of operation. Then there are the rest, whose ideology is either very specific, non-directed, or completely lacking.

Marshall Hodgson published his thoughts on assassin profiles in 1955.¹² An excellent work on the subject of terrorism is Dr. Frederick Hacker's standard: *Crusaders, Criminals, Crazies - Terror and Terrorism in Our Time*.¹³ *Psychology Today* magazine has frequent articles of note that provide insight. Managing the theater aspect of political terrorism could be the key factor in reducing casualties.¹⁴

Until validated profiles have been established which provide virtual assurance of detection based on incipient behavior, protection of important persons will continue to rely upon the quality of reactive interception provided. Prior intelligence will be required in any case, but it need not be the sole means of prediction. Aberrant behavior takes many forms; educating oneself in the field of behavioral science is the best supplement pending breakthroughs in profile development for violent behavior. Those breakthroughs do not seem to be imminent.

BEHAVIORAL SCIENCE

The FBI's Behavioral Science Unit has done extensive work on psychological profiles and has developed training packages to enable investigators to narrow their focus in Unknown Subject Cases where ample psychopathology is discovered. These are effective in serial crime intervention but they do little toward preventing the initial crimes.

The Intelligence group at Secret Service is working toward development of formal models of potential assassins to better distinguish the dangerous from the non-dangerous who come to their agents' attention. So few actual attempts on the lives of people being protected by the Secret Service make statistically valid data bases infeasible. As the National Academy of Sciences committee of human-behavior specialists pointed out, agent intervention would be more effective if protection agents were better trained generally in human behavior characteristics.¹⁵

Southland Corporation, which runs the 7-Eleven chain of convenience stores, has been using profiles successfully for over a decade; behavioral scientists including former robbers have made substantial progress in interdicting the grab-and-run syndrome of armed robbers. They enhance their protection program through cash control, employee education, and physical arrangement as well as publicity to alert would-be felons that 7-Elevens should be less attractive targets.

Hostage situations are a special case of violent behavior where the subsequent injuries may be affected by either the hostages themselves, the counterforce(s), or both. By recognizing the gradual or precipitous behavior changes in the terrorist, keeping in mind the type of hostage situation, decisions can be made to attempt strategies to test the reaction. Alternate strategies depend on the relative success of the prior attempts. Each type of hostage taker has a different mentality and goal system. Persons threatening suicide could be considered to be acting in a similar mode.

More insidious and inexplicable is the condition of state terrorism and that of family/school practices. Many individuals have attempted to gain understanding of conditions like the Third Reich and domestic violence. Virtually all have come up short on explanations. But not all; psychoanalyst Alice Miller ¹⁶

has a complete representation that is not only plausible but also awesomely simple. Is it coincidence that 60% of modern German terrorists are the children of Protestant Ministers? The manner of inculcating "goodness", obedience, and all of the other so-called desirable traits in children may yield adults incapable of acting in a humane way; alternate outlets for the children must be available to facilitate suitable development.

Indeed, the cycle is perpetual and widespread. What is worse is that practices are condoned by civic and religious luminaries and espoused by highly acclaimed spokesmen on child-rearing, and with best intentions. Shades of Dr. Benjamin Spock are brought to mind; at least he recognized that many of his pronouncements were quite wrong. Such explanations reveal both why and how these emotional cripples think and even how they may be rehabilitated. While not necessarily antisocial, many such persons are at least asocial. Their behavior cannot be excused but it can be predicted.

Transactional Analysis and various similar concepts provide models of interpersonal action and reaction. One of the earliest and simplest to comprehend is Harris' OK - not-OK theory.¹⁷ By breaking interactions down into three levels corresponding to the parent, adult, and child mode of feeling, individuals can readily grasp the significance of their behavior. The corresponding mode of thinking as authoritarian, rational, and infantile clearly demonstrates that the patterns can be understood and dealt with.

A participant in the 1978 landmark conference on crime correlation pointed out that there was a paucity of published material relating to the determinants of criminal behavior.¹⁸ Within the available literature, researchers either weren't documenting citations or, worse, they weren't reading any works that had been published, to avail themselves of the previously developed ideas.

The noted turn-of-the-century Harvard philosopher George Santayana observed that those who fail to heed the lessons of history are doomed to repeat them. We keep reinventing the wheel; surprisingly, "new" versions are often as good as or even better than older models. Needless wasting of effort can be eliminated through review of the successes and failures of our precursors.

BACKGROUND INVESTIGATION

Criminal justice and mental health researchers have often concluded that the best indicator of future criminality or violence is past actions. Rather than being an aid to prevention, this observation is fraught with difficulty. In actuality, many convicted individuals fail to commit further acts. Yet, recidivists and many perpetrators of major crimes are shown to have long histories of prior abuse. To presume guilt before the fact is inconsistent with Constitutional principles. Likewise, guilt by association is fallacious although any persons' attitudes can frequently be discerned through the company they keep. Guilt by non-association is also used to determine an idea of the thinking of individuals.

Noted journalist Penn Kimball ¹⁹ eloquently points out the danger of assumption by investigators and adjudicators concerning their presumed unimpeachable, reliable informants. Unbeknownst to him or his most honorable associates, his career was dogged by an investigative process that took on a life of its own. The proven "anti-communist" informants who so damned him in the reports that he subsequently obtained through the Freedom of Information Act later denied or evaded recognition of their earlier castigations. Kimball's dossiers scattered through numerous government agencies illustrate the dangers inherent in the lack of professionalism in searching for and evaluating indicia of unsatisfactory capacity.

The difficulties Kimball and others have encountered while attempting to clear their reputations portray much more than an entrenched old-boy network looking out for itself. Otto Otepka's case ²⁰ is the shoe-on-the-other-foot; he was driven from the State Department because he refused to cooperate in subverting legitimate standards of the personnel security clearance process. Presumably, he never divulged any of the contents of "dirt files" so ruinous to many public servants. It is not without justification that prohibitions on the transfer of uncorroborated allegations or suppositions have been invoked.

Foreign Service Officers and investigative journalists are supposed to acquaint themselves with the philosophies of friendly and adversarial factions. That does not impute an acceptance of the rationale as their own. Unfortunately, the "Old China Hands" suffered the wrath of McCarthyism for their objectivity. John K. Emmerson's career ²¹ suffered much like Kimball's career did although Kimball didn't get to become a member of the Foreign Service.

Guilty until proven innocent is a far cry from reserving judgment until categorical demonstration of unsuitability can be verified and documented. Moreover, past improprieties need not be a rationale for denying selective approval for conditions unrelated to the prior situations. In my review of many thousands of Japanese employee background investigations, patterns became evident. It seems to be the case that activists, i.e., minions and executives alike who vigorously pursue worthwhile pastimes, accrue a disproportionate share of traffic and other minor citations. All Japanese painters, on the other hand, invariably have criminal histories of disruptive behavior.

The case histories of Otepka, Kimball, Emmerson, and others should be mandatory reading for personnel security specialists and security managers alike. Policy, criteria, and attitudes have changed in some measure since their tribulations, but the potential remains. A study of the thought police practices in other situations reveals how fragile the balance is between caution in a free society and paranoia in a repressive society. Japan eliminated their Kempai Tai; the Tsar's secret agents are now the KGB and the Chinese Public Security Bureau is little different from the eunuchs of the Emperor's court.²² Learning how not to lie has been a signal accomplishment for refugees from such regimes.

The tendency to condemn individuals because of presumed ideological values

can cause colossal harm as portrayed in *the Ugly American*; black and white distinctions of what is good and what is bad mask the significance of the bigger picture. Labels that are applied indiscriminately are seldom ever eradicated despite their inappropriateness. This is particularly evident for mental illness, whatever that is, and for other scapegoat categories. As personnel security investigators probe subjects' backgrounds, the obligation to protect privacy extends both to the subjects and to the informants. Verification of contexts and veracity of sources is essential in developing realistic profiles of individuals.

The Karen Silkwood case ²³ is another classic deserving attention. She was employed by Kerr-McGee at a nuclear processing plant. Her background history could not be fully developed since privacy restrictions precluded the employer from asking certain questions which in retrospect would have shown her to have been a very poor risk. Her subsequent death under questionable circumstances catapulted her posthumously into the role of heroine.

The award given annually in Silkwood's name, recognizing the legitimate accomplishments of deserving whistleblowers, is ironic; the means she apparently used and her personal attributes make her a decidedly inferior role model. Yet, her case clearly illustrates the necessity for establishing both an effective personnel security program and an efficacious management program; proper management practices, and responsible policies, are crucial for promoting the harmonious atmosphere that is needed for enduring success.

Another significant factor for investigators to keep in mind is the dichotomy of behavior that frequent exposures reveal. A form of Jeckel and Hyde syndrome affects individuals in all walks of life. It is particularly shocking when a highly regarded executive or care giver is revealed to be a wife-beater or child-molester. Also, personnel charged with protection responsibilities must meet high standards of maturity, equilibrium and decorum in order to perpetuate the most desirable image. A cop who thinks and acts like a "cowboy" or maverick is a detriment to the force.

The code of silence is as pervasive in law enforcement as in any profession. Identifying those who are infamous can be a difficult task for investigators since those who might be inclined to communicate relevant information must contend with peer pressure. Particularly in law enforcement and the fire service, the incumbents demonstrate a commonality in their attitudes. Whether this is because of natural selection or modification of newcomers to adhere to mores of the established group is problematic.

The performance of individuals in less than ideal situations often reflects the organization of which they are a part more so than the persons under scrutiny. Statements by informants can be colored more by personal perspective than by any desire for objectivity. The periodic personnel evaluation process demonstrates that the supervisor frequently views the subject in a vastly different light than peers, subordinates, or impartial outsiders. The definitive Litmus

Test for determining wholesomeness has yet to be developed. This aspect of background investigation clearly warrants caution and insight.

KEEPING THE SECRETS

Perhaps the most difficult aspect of security to anticipate with any certainty is that of espionage and treachery whether political or industrial. Whistle-blowing and actions of disgruntled persons are likewise of concern to security professionals. Spying is an ancient craft; its practitioners have been hampered by a wide spectrum of strategies, although higher caliber spies apparently were seldom deterred or discovered.

There is hardly any reason to believe that modern spies are more easily detectable than ancient ones. However, espionage networks typically depend upon enlisting the aid of inside personnel. Laws applicable to trade secrets require the owners to exercise reasonable precautions. The ideas for safeguarding national security or proprietary information are indeed similar. Limiting access to the information must be combined with motivating those who require access. Both positive and negative deterrence as well as detection, interception, mitigation of loss, evaluation, correction, and recovery should be brought to bear.

A major difficulty in planning for the safeguarding of information is the determination of what needs to be protected and from whom. The scientific community flourishes in an environment where there is a free flow of information, particularly that pertaining to the breakthroughs and significant developments. This dichotomy becomes an enigma when the opposition could gain significant advantage by knowing either the concept or the details.

Many situations in recent history have demonstrated that the mentality surrounding the protection of what is perceived to be vital information. In retrospect, many of the debacles could have been eliminated or substantially diminished if the friendlies had received sufficient information that was being kept from the eyes and ears of the adversaries. Often, the principals appear not to know who the adversaries were. Many post mortems of the Pearl Harbor surprise bombing by the Japanese Imperial Navy, and other similar events, have shown a characteristic pattern.

Irving Janis illustrates the concept of "Group Think" that played a major role the fiascos of Pearl Harbor, VietNam, Watergate, and other situations.²⁴ Paul Ryan provides a similar view by focusing on the Iranian Rescue Mission with comparisons to other episodes.²⁵ Leo Rangell explores the compromise of integrity surrounding Watergate.²⁶ Jane Mansbridge is more general in an approach that goes beyond adversarial democracy.²⁷ These and many others have recognized that there is a fundamental problem with controlling the myopia typical in positions of power.

Failure to provide access to needed information can have even more disaster-

ous consequences for an organization than disclosure to the presumed enemy. Moreover, when subordinates perceive that the hierarchy violates the precepts of proper information control in subtle or flagrant ways, their inducement to adhere to stipulated requirements is necessarily diminished.

Motivations for becoming an informant include money, ideology, coercion, and ego. That simplification may not be realistic; recent cases have highlighted this situation. Larry Wu-Tai Chin might have been given accolades had he performed the same service with the blessings of the U.S. Government in helping to rid China of their aversion to western society; his altruism and dual sensibility cost him dearly. John Anthony Walker, Jr., provides an object case of more complex motivation beyond mere greed. Control and power in addition to money provide the entre to a James Bond type of romantic, thrilling intrigue. Noted psychiatrists and psychologists are challenged by these cases to develop motivation that may help investigators to recognize profiles before damage occurs.²⁸

Revenge is another significant rationale, as the Christopher Boyce case demonstrates. *The Falcon and the Snowman* ²⁹ is a comprehensive review of his case that should be mandatory reading for all security professionals. Whistleblowers manifest similar combinations of attitudes, but typically for different reasons. Bringing significant information to light through normal channels may trigger antithetical responses from the hierarchy; conscientious individuals may feel compelled to take alternative measures to ensure that appropriate actions are initiated.³⁰

Maintenance of personnel security and surety programs requires active participation of supervisory management.³¹ Determination of reliability is subjective; yet, objective qualifying and disqualifying factors aid in selection.³² The maintenance phase may be the most difficult since many supervisors lack the confidence, motivation, or skills necessary to discern aberrations or impropriety from "normal" behavioral variations. Besides, ratting on others is un-American! Isn't it?

That mind-set must be changed with visible participation by progressive top managers if an organization's information security program is to succeed. Keeping the secrets safe is only one aspect of personnel management; an integrated program provides intervention before the individual's situation deteriorates irrevocably.

STATISTICAL ANALYSIS

Market analysts for consumer products have conducted extensive research in efforts to discover ways to package products to enhance salability to specific segments of the public. The question remains as to whether the perceptions of individual preference and performance are accurate. The answer is: yes, and no. There are changes over time for the specific people involved, and only a portion of the population conforms to each perception. Cause and effect aren't necessarily relevant, and scientific validity may not be at issue. Nevertheless, the technique of consumer preference profiling works.³³

A significant problem with statistical modeling from the security standpoint is that of transferring from the general to the specific. The anthropomorphic man concept used in industrial design and occupational safety is a composite made up of the characteristics of all subjects within a target population. The most appropriate average (i.e., mean, median, or mode) value is used to represent the typical subject; variations are accommodated by selecting some deviation values from the average. Extreme subject values are either ignored or made special cases.

If only the average composite representation is presented, no meaningful judgments can be made by the practitioners. Assassins of U.S. Presidents, whether successful or not, were exclusively male prior to the time of Sarah Jane Moore and Lynette "Squeaky" Fromme. The statistical model didn't predict women! Care must be taken not to overlook the obvious. Average characteristics must be stated as just that with caveats and criteria for variables.

Using "scientifically" generated mechanisms for identifying particular human attributes has an appreciable albeit controversial history. Intelligence quotient and aptitude tests are examples of devices for measuring large numbers of individuals with relative objectivity. High levels of validity and reliability are essential in the design of such instruments. Their utility depends upon an understanding of what is presumed to be measured as well as the cooperation of test takers. While IQ tests measure only one aspect of mental potential, they are nonetheless a valuable tool for limited functions. Corroboration with independent evidence is necessary to demonstrate positive correlations. This should be demonstrated for each culturally distinct group.

During the late 1960's, a program was inaugurated to allow men of substandard intelligence to participate in the armed services. From the Navy's standpoint, the project was hardly a benefit. Virtually all of the inductees had difficulty with one or more of the job requirements; failure to adhere to time schedules and inability to understand the intricacies of complex mechanical systems hampered their utility severely. Yet, many individuals with diminished academic ability may have alternate utility with talent to become skilled as artisans, musicians, or other specialists.

PERSONALITY SCREENING TECHNIQUES

There are a number of paper-and-pencil honesty tests marketed by companies, some of which also provide polygraph and/or PSE (psychological stress evaluator) services.³⁴ The bulk of these products work on the basis of statistical validity; honest subjects typically prevaricate in their answers while individuals with felonious attitudes distinctively respond correctly. Ironical as this may seem, the tests do suffice as a reasonable screening device for some applications such as retail, wholesale and other high turnover, low skill situations.

Few of these tests are sufficiently subtle to eliminate even moderately sophisticated candidates. Even the heralded MMPI (Minnesota Multiphasic Inventory) with over 500 true/false/cannot say questions, including control checks, requires the cooperation of subjects.

SUBJECTIVE PERSONALITY INVENTORIES

There is a new wrinkle in personality profiling in the form of an automated tool adapted for microcomputer use based on the MMPI; with the *Mind Prober*,³⁵ screeners can be their own judges of the personality characteristics of others by answering 66 agree/disagree queries for adjectives descriptive of the subject. (e.g., adventuresome, apologetic, charitable, neighborly, unconventional) Presumably, an astute interviewer should be able to estimate the characteristics following a single session.

Over 4000 concise profiles produced by the *Mind Prober* are astonishingly incisive provided the screener perceives the subject accurately for the situation in question. Moreover, results correlate very closely with the personality characteristics shown in the Asian animal zodiac. Much like western horoscope predictions, personalities and future opportunities are presumed to be tied to the time of birth. Theodora Lau's³⁶ presentation of Eastern horoscopes provides personality interrelationships which can be quite useful in personnel security management. Unfortunately, much of the other material published on astrological signs appears to adhere too rigidly to the presumed source dates and immutable characteristics of the signs; like weather predictions, they seem to be wrong more often than not. Several thousand years of observation have added some validity to the Eastern concept.

True multiple personalities are rare as are true imposters, but all persons have multiple aspects of their personalities. We are complicated beings and can baffle others with our behavior; we even confuse ourselves with haunting ambivalence. Anyone who does not display a multifaceted personality is likely to be over-controlled or in a state of anomie. Profiles that do not provide for variable behavior offer limited utility.

The Luscher Color Test³⁷ is another personality screening tool that can provide considerable insight. Candidates normally pick a set of eight or 73 stan-

dard colors in a sequence that they favor. However, it is not unreasonable to expect that the same individuals should demonstrate their preferences for classes of color through their attire, office & residence appointments, automobile, etc. Traffic police have long used color to focus on potential violators. But not all owners of red cars are aggressive drivers. As with all statistically based tools, situational and individual variables inevitably confound the predictions.

Another significant differentiator is the system of character and temperament types promulgated by Keirsey and Bates.³⁸ Four pairs of preferences are compared to yield sixteen portraits. The type indicators are extraversion vs. introversion, sensation vs. intuition, thinking vs. feeling, and perceiving vs. judging. How one verbalizes can indicate the preferences. The Keirsey Temperament Sorter consists of 60 questions requiring selection of one of two answers. Although there are sixteen principal types that result from this combining method, an additional 32 mixed types can be accommodated for cases wherein any pair of attributes is indecisive. More than one pair of attributes being inconsistent seems to be inconceivable, however, and the situation is not addressed. The characteristics are innate rather than learned.

Hippocrates described four temperaments: sanguine, choleric, phlegmatic, and melancholic. These have been expanded and expounded upon by many behaviorists to evolve the following: Dionysian, Epimethean, Promethean, and Apollonian temperaments which correspond to sensation-perceiving (SP), sensation-judging (SJ), intuitive-thinking (NT), and intuitive-feeling (NF) respectively. An expansion generated by Keirsey and Bates yields these types by mutual attraction pairs:

INTP (Architect).....	ESFJ (Seller)
ENTP (Inventor).....	ISFJ (Conservator)
INTJ (Scientist).....	ESFP (Entertainer)
ENTJ (Fieldmarshal).....	ISFP (Artist)
INFP (Questor).....	ESTJ (Administrator)
ENFP (Journalist).....	ISTJ (Trustee)
INFJ (Author).....	ESTP (Promoter)
ENFJ (Pedagogue).....	ISTP (Artisan)

Interestingly, schoolteachers predominate in one of the minority categories; they tend to perpetuate their own style of instruction despite the conclusion that a majority of students do not respond as well to such methods.

The breakdown of traits for typical American teachers and pupils is as follows:

TEMPERAMENT	TEACHERS	PUPILS	DIFFERENCE
SJ	56%	38%	+ 16%
NF	36%	12%	+ 24%
NT	6%	12%	- 6%
SP	2%	38%	- 36%

By knowing idiosyncrasies of individuals we can anticipate their probable response to particular situations and can aid the outcome by controlling the interaction positively in advance. Humans are quite complex individuals, though, and only likelihood can be expected. Cognition is fathomable; scientific verification of thought models seems far in the future. Reasonable facsimiles may suffice as tools until better mechanisms are developed.

Accuracy and reliability of all screening techniques is less than perfect. Most are better than 90% for both false negative and false positive errors. As with the polygraph or PSE, a self-test or automated evaluation must be weighed against corroborative information to warrant a definitive judgement. Otherwise, subjects should be given the benefit of the doubt; they may be that one-out-of-ten (or so) who are the false positive! Moreover, the attributes being evaluated are situational; how anyone feels about work doesn't imply like feelings toward the community or family or recreation. Personalities can change over time, but the core characteristics should remain relatively constant.

Also, those who are inconclusive or who pass the screening satisfactorily can be potential malefactors; their clean bill of health may be a license for uninhibited action. Continued scrutiny of all subjects is an appropriate security management concern to be exercised with human dignity. These tools are not panaceas and organizations may be subject to litigation for abuse.

BEHAVIORAL CHARACTERISTICS

People watching is a popular pastime. Coupled with observation of animal behavior, recognizing common patterns can be intriguing. A spectrum of specialized disciplines has evolved to perform formalized observation both as pure science and as goal oriented research.

Even casual observers cannot help but notice that drivers of certain models of automobiles typically operate their vehicles in rather characteristic styles. Automobiles are said to be an extension of the owner's personality. Late model Volvos tend to be driven by Yuppies (Young Urban Professionals) in the mid-Atlantic corridor; despite the car's frisky performance capabilities, they are driven in a staid manner by most owners. This seems to reflect their owner's general attitude and behavior to a degree.

A means for occupational and avocational groups to reinforce their bonds of membership is the use of jargon; the more exclusive that a group tends to be, the more insidious the use of peculiar terminology. The language, accouterments and mannerisms easily distinguish those of each persuasion. These traits are mostly acquired and may represent a facade; yet behavior highlights profound systems of beliefs which guide actions.

Patterns of behavior identified by different professions are useful in explaining or anticipating particular actions and responses. Some proposals for capitalizing on behavioral characteristics are aimed at purely personal/occupational gain. Some need to be taken with a grain of salt because they fail to account for cultural differences. While exploitation to establish absolute control may be an unrealistic (and inappropriate) expectation, security professionals can benefit from an understanding of the mechanisms at work.

NON-VERBAL SIGNALS

Dr. Paul Ekman ³⁹ of the Human Interaction Laboratory at the University of California in San Francisco, and groups like his, are looking at facial expressions to determine, among other things, the prospect for detection of deception. The range of human expression is extensive. Although some ethnic groups have fewer facial muscles than others, thousands of discrete, discernible portraits can be documented for any given individual. Some persons are more facile, as mimes often demonstrate.

Even infants within hours of birth can exhibit meaningful & universal facial expressions. The documentary *Life's First Feelings* ⁴⁰ shows how babies progress in their repertoire. Many expressions are innate and correlate highly with particular emotions and autonomic nervous system (ANS) activity; others can be used to simulate false feelings or to mask true feelings.

Ekman has shown that there are six principal human emotions that are reflected

ted in universally recognizable facial expressions: surprise, anger, happiness, fear, sadness, and disgust.⁴¹ While deliberate intent can be controlled by virtually all individuals, the involuntary actions which are controlled by a separate set of nerves preclude total masking of expression. Moreover, simulation of the negative emotions triggers a corresponding neuro-chemical response that reflects the actual emotion. Security practitioners should be especially attuned to this point since feigning emotion can exacerbate developing problems, thus control should be initiated before the consequences become unwarranted.

Whether differences between the voluntary and spontaneous facial patterns can be detected by human observers is conjectural. Stop action filming of subjects has shown that very rapid, involuntary faces do actually appear.⁴² Witnesses can be taught to respond more accurately to line-ups and other recognition situations when they're first asked to recall the course of events and the setting of the incident in question. Eyewitness recognition has been notoriously poor in a large percentage of cases. It should be well worth the efforts of many researchers when more effective means of discerning recognition patterns can be established.

We can learn to recognize many thousands of discrete individuals. However, significant persons are the ones we learn; those outside our special group(s) are less easy to differentiate because we are unaccustomed to their appearance. It is not an ethnic or cultural value but rather one of circumstances within our own peculiar environment. Humans around the world exhibit similar propensities. What allows us to distinguish among various faces has yet to be determined although an unstructured, holistic approach appears to be the method used by most persons.

Asians may be inscrutable to Westerners because of lessened facial expressiveness and corresponding indirectness of speech; however, Westerners appear to be just as unfathomable to Asians because of emotionality and apparent inconsistency. Arabs have a particular capacity for smelling emotions.⁴³ To say that we "smell fear" is more than a figure of speech. Chemical messages can be many kinds. There are not merely five (5) senses; those basic senses of which we are all aware are extended by a range of others that are only now being discovered, not the least of which is extrasensory perception (ESP). Sensory deprivation as well as overload causes strange effects.⁴⁴

Deception can be detected with statistically significant confidence.⁴⁵ It remains to be demonstrated whether instruments or humans can unquestionably discern deception, contrasted with anger, fear, or anguish. Some persons in particular circumstances are perhaps able to mask all indications of deception.

Research is hampered by an inability to create the full spectrum of situations necessary. The stress of high stakes confrontations with the worst candidates for prevarication cannot be simulated in the laboratory. Perhaps a truer picture of the measurability of deception would be revealed if courtroom lawyers were tested instead of psychology students.

In a free society, people cannot be forced to reveal their true feelings when they may be perpetuating falsehoods. Likewise, it is not feasible to select murders, muggers, or rapists before the fact to observe their behavior in minute detail. Anecdotal characteristics can be extended as possible patterns which may support predictions of violent behavior. The satanic, penetrating stare such as Charles Manson's captured on the cover of Life magazine is apparently a commonly observed precursor in some pathological assault cases.

CAUSES OF ABERRATIONS

Psychosomatic illnesses are a frequent problem emanating from occupational or personal difficulties. Stress manifests itself in a wide variety of ailments. The executive ulcer is a classic example. Early recognition of symptoms can reduce the damage which might otherwise occur. This applies equally to the physical trauma and to the diminished capacity of the individual to perform effectively. This can be especially crucial for those in sensitive positions. There is a tendency for deterioration of behavior and attitude as maladies progress. An organization may become susceptible to loss in several ways.

Somatopsychic ailments are less well recognized, particularly by the mental health community in the past and still today. Mind altering conditions caused by physical ailments are becoming more prominent as the complex electrochemical processes of thought are delineated. Suffice it to say that our attitudes, thought patterns, behavior, and occasionally appearance may be affected by internal processes. A phenomenal array of conditions from weather to insect bites to food allergies to environmental contamination to spatial factors can result in bizarre human reaction. It does not require a medical expert to be able to anticipate the possibility of such causes. All too often, the physicians fail to get to the root cause of such incidents because of their narrower perspective. Increased awareness is called for.

Reaction to psychoactive drugs is a special case where deliberate alteration is expected. Intoxication also presents risks for security practitioners. Alcohol is the most frequent cause; licit and illicit drugs have characteristic symptomatology and are typically used within different categories of the population. Ego may not be recognized by some medical professionals as an intoxicant, but the body chemistry changes result in an equivalent syndrome; likewise, sleep deprivation produces an effect equivalent to alcohol intoxication. The Dry-Drunk Syndrome is poignant or repulsive; behavior is markedly unrealistic, and can range from ridiculous to cruel.

Coffee jags and nicotine fits are common occurrences; while mostly humorous or pathetic, the reactions may be manifested in more vigorous, even dangerous, action. Particular syndromes require both caution and empathy on the part of security managers to ensure that the conditions do not adversely affect the organization's security posture.

Anorexia Nervosa, alcoholism, dietary insufficiency, hypoglycemia, premenstrual syndrome (PMS), and allergic rhinitis are examples of conditions which can cause victims to have puzzling behavior. Very often, the victims and those nearest to them fail to recognize the problem for what it is. It is important to detect the symptoms of not only physical but also mental disorders early in their development, since certain conditions having similar symptomatology can degenerate with serious consequences. Melancholia, paranoia, and aggression are symptoms of note.

Clothing and other trappings produce particular images which may be deliberate or inadvertent; the costume an individual displays imprints a mental image for the wearer that may be stronger than that seen by observers. Confidence can be enhanced when appearance corresponds with what the individual feels is appropriate for the circumstances; correspondingly, embarrassment or irritation is engendered when the presumed appearance is wrong.

Many facilities using the soft look for their security personnel have accomplished improved relationships with customers as well as employees; this is in contrast to the authoritarian or hard look of a police or military style uniform. Japanese police performing festival duty do not carry any weapons when mingling with the crowds; their cohorts who are fully rigged for potential disruptions stay discretely out of sight. The availability of cuffs, truncheon, or other devices for the spotters within the densely packed areas would be counterproductive and is offset by the resultant freedom of action and goodwill.

Team operations are their hallmark rather than lots of lone officers equipped to the teeth for any and all eventualities. The autonomous cop mentality is an American syndrome that frequently influences the unfortunate outcome of many incidents; perhaps use of the term officer for the lowest patrol agent imputes independence that is unwarranted. While constables around the world have the authority to uphold the law, they are not the sole arbiters of justice.

Allied with the power/independence quandry of lone patrolmen may be the aura that accompanies automotive control. Observation of behavior change for drivers of motorized vehicles yields intriguing insights into the multifaceted personas we have. Driving an automobile seems to bring out the Walter Mitty in people. The added power and control coupled with the facade of anonymity allows drivers to attempt things that they might not otherwise. The frustrations of daily living seem to be compensated for by drivers; their actions are often amplified as stage actors use projection to convey points more vividly to their audience.

Repeated frustrating, ambiguous, and traffic congestion situations generate unaccustomed behavior; not only the belligerents but also the normally mild mannered seem to come unglued. Community planners, traffic engineers, and especially law enforcement/security personnel need to concern themselves with effects of poor design and implementation. Human nature is maleable to a point; beyond that point, people will take things into their own hands. Witness the institutional concourse designed with esthetics in mind: people in a hurry will take

the shortest distance between two points despite the beautiful curvy pathways. The municipal traffic problem can not be resolved by citing violators; redesign of the congestion spots and other impedence conditions is the solution, not admonition of potential violators to preclude their taking any expedient means.

Vandalism is also ammenable to curtailment if not elimination through environmental design. Simply by moving a U.S. Mail drop box back several feet from the sidewalk, a recurring problem of trashing the box was resolved. There are numerous examples where an attractive nuisance condition has been cleared up by relatively minor steps such as relocation, renovation, observation or other innovative approaches. There is virtually no graffiti or litter at Williamsburg. Keeping ahead of the abusers conveys a subtle message. Perpetuation of a well conceived atmosphere has been shown by behavioral scientists to be advantageous.

Some laws are truly unenforceable, not the least of which was the prohibition of alcohol consumption or the use of substances such as marijuana. While there may be moral, medical, or other justification for espousing controls, enforcement beyond what is perceived by the general public to be reasonable is likely to be fraught with contention. Designing enforceable security into environments is far superior to patchwork attempts to correct social ills.

Security professionals should recognize the situations where controls cannot be imposed arbitrarily. People subject to unrealistic, dehumanizing controls will find ways to subvert the program no matter how repressive an authoritarian regime attempts to root out the will to resist. Surely, persons not subject to awesome restrictions would be more inclined to conform their behavior to reasonable strictures. Most airline passengers willingly submit to inconveniences that in other circumstances would seem intolerable. Yet, the rationale for those measures is apparent to the passengers because of adequate publicity.

Controls established merely for the sake of expedience on the part of management are not likely to be adhered to by a fair segment of the American populace who are intelligent enough to resolve conflicts to their benefit without coming to the attention of law enforcement agents. It is likely that there is no one in this country who has not violated at least a broad spectrum of laws. There are innumerable statutes, regulations, and other rules that are patently ridiculous, yet they exist and few people are even aware of them. In a society where people are literally forced to break the law on a regular basis, respect for the legislative and enforcement process is bound to deteriorate.

The message is simple: laws must be reasonable and enforceable or deterrence cannot be established. There are a substantial number of apparent scofflaws who are quite selective in the areas that they deviate from the expected behavior. In many cases, the rule rather than the violator may be the underlying cause of infractions; situations should be examined with an eye toward human engineering in order to achieve the optimal results of any policy.

VICTIMS OF CIRCUMSTANCE

Several syndromes are pertinent, not because the subjects necessarily exhibit stereotypical behavior, but because the others involved show classic reactions. Scapegoats, cultists, whistleblowers, workaholics, burnouts, dissidents, kinsmen, prisoners, and others may not be able to exercise independent control over their situations. The actions and mentality of the antagonists plus bystanders are classically more stereotypical than those of the victim(s).

Throughout history, cultures have selected out types of individuals to carry the perceived inadequacies of society;⁴⁶ persecution is legend, but scapegoating will remain so long as human nature exists. Many people missing something in their own make-up migrate into quasi-religious or pseudo-righteous groups with a charismatic leader to control their lives; cults flourish during times of social stress. More capable members either become managers of the cults or become disenchanted, whereas the weaker members develop closer affinity and support their cult with great passion.

Because of the characteristic animosity and social isolation engendered by whistleblowing, an inspector general system can provide the necessary anonymity to safeguard conscientious personnel. Workaholics may create unwholesome, counterproductive relationships with co-workers; burnouts present an even worse dilemma to security management. The loss of objectivity in either case is inimical to harmonious operations. Idealists are more susceptible than pragmatists to burnout, and may expect little sympathy from their more realistic co-workers who may respond with derision rather than constructive criticism.

A former prime minister queried about his new adversarial position contrary to that he formerly held responded that the duty of the loyal opposition was to oppose, as in formal debating, so as to present each side of an issue. Dissidents are frequently treated as pariah; the majority perceive them as a threat to the status quo irrespective of the justice of their position. Choice of associates is not a reasonable option for kith and kin; blood is thicker than water, and family ties cut both ways.

Close relatives are effectively prisoners of their heritage; good and bad attributes are applied by outsiders indiscriminately to those whom they don't know. Neighbors are likewise contaminated in many instances. Experiments with "normal" volunteers show that there is an insidious change in both prisoner and custodian that can occur with great rapidity as they assume the roles. This type of human reaction is reflected in many situations outside of the penitentiary environment; the ease with which it occurs shows that human interaction has profound complexity. Alice Miller has focused on the roots of violence in child-rearing;⁴⁷ an eloquent study is exceptionally well documented in the case of three generations of the Bradshaw family in *Nutcracker*⁴⁸ and *At Mother's Request*.⁴⁹

RESPONSE IN TRAUMATIC SITUATIONS

Psychological reaction to conflict takes many forms. We use defense mechanisms when presented with mutually exclusive goals having undesirable alternatives. Behavior may be aggressive, passive, or inadequate. The range of defensive mechanisms includes: aggression, scapegoating, apathy, escape, repression, fixation, paralysis, rationalization, projection, introjection, regression, denial, displacement, intellectualization, fantasy, sublimation, overcompensation, identification, and reaction formation. It is incumbent upon security practitioners to be aware of the symptoms of these reactions. Countermeasures may be necessitated for a wide variety of situations on a day-to-day basis.

Reaction of individuals during emergency conditions can be improved through specific types of intensive training; nevertheless, characteristic behavior can be expected which may impede or enhance operations. Behavior upon witnessing a shocking scene can include the following categories: frenetical, hysterical, heroic, methodical, disputatious, immoderate, emotive, errant, erratic, indecisive, and sundry others.

Disaster researchers like J.P. Keating, Enrico Quarentelli, John Byron, and others⁵⁰ have spent several decades reconstructing what happened during various disasters. In fire emergencies with heightened anxiety, the focus of attention is narrowed to process only the most obvious environmental elements. People mime the behavior of significant others during ambiguous situations; they revert to familiar, everyday behavior in high stress situations. In emergencies, cognitive processing ability is limited thereby making repetition and brief representation of proper actions essential; the ability to make proper judgments is distorted by conditions such as small amounts of carbon monoxide. Panic is typically the exception rather than the rule.

Medical triage was conceived as a management strategy for overwhelming casualty situations. Because people often react differently under extreme pressure, planning strategists thus need to consider how to cope with inappropriate responses that might be expected to occur during crisis conditions.

The Stockholm Effect has been witnessed on numerous occasions since it was first described in 1973. Hostage negotiation teams may be able to capitalize on the effect to protect hostages until their ultimate release. The adversarial relationship could also apply in employee relations when repeated efforts of complaint(s) are rebuffed. This resolution can be seen in the expression: if you can't lick them, join them. Gresham's Law holds that the evil in an organization will drive out the good. People with few options may acquiesce to the power holder. Psychological terrorism doesn't need guns as weapons to achieve its ends.

ANTISOCIAL PERSONALITIES

Narcissism is not an uncommon feature in American life. Our culture perpetuates the "me first" attitude. Individuals succumb to particular family and community influences to varying degrees and seem to progress along a continuum. A choice example is the Reverend Jim Jones, who established Jamestown in Guyana along with its subsequent mania. He had progressed apparently as a normal youth through highly acknowledged public service to a charismatic evangelist and ultimately a tyrannical demigod.⁵¹

Penologists recognize that a significant percentage of inmate populations is made up of individuals variously called psychopath or sociopath or antisocial personality. Most of the information about this syndrome reflects the very characteristic behavior for which psychopaths have become notorious; the term incorrigible is not inappropriate for the most advanced cases, nor for even the least developed. There are few documented success stories of rehabilitation.⁵²

Few psychoanalysts have any experience with psychopathy since the candidates neither volunteer nor cooperate. Although the condition is an acknowledged malady in the DSM-III (Diagnostic and Statistical Manual of Mental Disorders), prognosis is poor.⁵³ Even judges, who see both truth and falsehood on a regular basis, typically have difficulty discerning true psychopaths. It is perplexing for ordinary people having to deal with individuals whose mode of thinking is so radically different. However, there are approaches for detecting and dealing with psychopaths.

FORENSIC PSYCHOLOGY AND PSYCHIATRY

The immense chasm separating lawyers from psychiatrists is closing, if ever so slowly. Virtually all psychiatric literature is devoid of the concept of responsibility. While the contribution of both disciplines may be useful to society as a whole, it is essentially secondary for the security community. The criminal justice system in the United States does not accommodate victimization. Victims are necessarily inconvenienced in the process of exacting retribution through the trial process. Moreover, victims must initiate their own proceedings, usually at great personal expense, to recover any loss. The deterrent effect of judicial proceedings is questionable, and very likely counterproductive in obtaining subsequent cooperation of victims or witnesses.

Psychiatrists in the medical community have systematically excluded psychologists from this arena in a variety of ways. Incongruously, the scientists may offer more suitable information and methodologies than the medical specialists, yet they are denigrated by the medics. Police do much the same to private security practitioners. Instead of working in harmony to solve mutual problems, the former groups contend that only their credentials are worth consideration. Polygraphists have reacted in the same manner toward PSE (Psychological Stress Analyzer) proponents by using superficial justification. Hypnosis, dream states

and parapsychology are becoming acknowledged areas which have significant applicability to the investigative process; they, too, have detractors who insist that there cannot be validity.

Psychiatric testimony in an adversarial setting further exacerbates the problem of the medical community's credibility in providing meaningful guidance to protection professionals. Future dangerousness predictions by psychiatrists have the greatest disparity in their testimony. As the law enforcement community grows closer to the private security sector, mutual understanding might occur. Likewise, the medics (psychiatrists) and the scientists (psychologists) can contribute to each other's understanding. For many reasons, the impact of forensic psych for the protection of assets will be, at best, subtle in the short term. Comparison of the discrepancies and discontinuities that exist in that context can be applied to the police-security dichotomy.

Knowledge of what the mental health and legal communities have to offer might not solve pressing problems for the security profession, but it is essential to building the ensemble of strategies for a comprehensive protection program. The ability to view other disciplines dispassionately can yield ideas for analagous situations within the context under consideration. Too often practitioners in one field fail to recognize that similar concepts have been tried and rejected or developed by others. There may not be anything new under the sun, but there are other ways of looking at the things that do exist.

TAXONOMIES & MENAGERIES

An area suitable for devising many appropriate management, interpersonal and security strategies is that which includes generalizations of various categories of common operatives. Occupational specialties generally inculcate common attitudes and perpetuate similar behavioral styles into the members of their communities. Notorious examples might include the paparazzi, Madison Avenue executives, J. Edgar Hoover's FBI Special Agents, New York taxicab drivers, gung-ho marines, prep school products, and revivalist preachers. Their characteristic behavior gives the impression of having been pressed out with the same cookie cutters. Exclusivity and rites-of-passage foster superiority attitudes.

From the standpoint of Security Management, several special groups may be significant in their own right. Fundamentalists are characterized by adherence to relatively clear cut distinctions of what, to them, is acceptable and what is unacceptable. Whether the issue is religion, politics, or some other topic, the zealots among them approach the resolution of their presumed grievances with single minded dedication. Witness the damage to political candidates from the single-issue political action committee (PAC) proceedings. More bombings in the United States in the immediate past have resulted from enthusiasm generated by the so-called pro life, anti-abortionists than from all other causes combined.

The attitudes of Moral Majority advocates and other fundamentalists necessarily carry over into the work environment and public arena; privately held beliefs of this type of mentality can be contrasted with those of pragmatists, idealists, realists, and other conceptual thinkers. An apparent universality exists in the diminution of the quality of life where fundamentalism has dominated a culture; Maoism in China and Khomeinism in Iran are extreme examples of the damage to freedom of thought and expression that occurs. Perry Young has amplified the concern for this problem as it applies to America today.⁵⁴

Another grouping of candidates that may be of concern to the security profession in discrete cases, and certainly in general, is that of organized crime. Activities of Yakuza, Tong, Triad and other Asian secret societies have sharply increased within the United States in recent years. They have much in common with the Mafia and other Western societies; their life-style focusing on criminal activity is perhaps secondary to the ritualistic clan orientation.

To the astute observer, members of such groups can be recognized by their behavior, much as that of other experts in particular fields. Detectives may exhibit a characteristic aura that can be perceived by even untrained observers; Japanese women police officers are particularly evident because of their air of confidence and capacity both mentally and physically when they are compared to ordinary women (or men for that matter). Martial arts practitioners frequently exude such an ethereal quality.

This facade may be advantageous or detrimental in varying circumstances. All

security practitioners should be aware that they may telegraph a set of signals to observers unintentionally. Likewise, they must recognize that subtle appearances can assist in uncovering particular types of individuals. Classes of subjects for interviews and interrogation are amenable to particular treatment.

The categories of mental disorders delineated in the DSM-III constitute the most definitive listing of any taxonomy. The symptoms may not reveal much about etiology, prevention, or correction but the DSM-III is an improvement over earlier methodologies. The security profession could improve its control and development of protection strategies by adopting a similar methodology for the entire industry.

Jonathon Swift's satire of lawyers and judges in *Gulliver's Travels* ⁵⁵ rings as true today as it did several centuries ago. While a citation of typical mannerisms may not reflect the style of all members of each group, it may suffice for preliminary screening purposes and for increasing awareness. By identifying the mind-set and methods employed by typical members of operative categories, cost-effective and flexible countermeasures can be conceived. Regardless, each case of adverse activity must be handled on its own merits since generalities are just that.

ARSON

There are close parallels between arson and computer crime/abuse with regard to range of perpetrators, motivation, control strategies, variety of hazard and loss, as well as characteristic lack of implementation of demonstrated safeguards by responsible parties.⁵⁶ Many psychologists believe that it is useless to develop taxonomies of the reasons for causing losses or seeking to make unauthorized gains (applied to specific motives arising from poor marital relations, financial indebtedness, antisocial goals and the like). However, general motives can be useful for establishing deterrents. Shoplifters are catalogued in a similar manner in other security literature.

Eleven arson motive types with corresponding perpetrators, typical targets, response strategies for prevention and enforcement, and key implementing agencies are spelled out in the Arson Prevention and Control Program Model.⁵⁷ These types can be combined into more general categories such as Pyromania, Vandalism, Revenge, Arson-for-Profit, and Crime Concealment. These are similar to computer abuse motives; the more finely divided these types are, the better the strategies for combatting them can be. Likewise, the level of difficulty of integrating and managing the discrete program elements increases with the larger size of each taxonomy. Simpler is easier, but not necessarily better.

COMPUTER ABUSE

The problems associated with computer use have grown out of a special envi-

ronment which has evolved to the point where every householder may be involved. Historically, computers were utilized within a narrow field of business accounting because of the expense of running them and the expertise required. As the computers became more capable and less expensive to operate their application expanded; so also did the potential for abuse.

Widespread publicity about the "problem of hackers" forced management to look more closely at the overall problem of automated information processing. Identifying and prosecuting individual perpetrators is a cart-before-the-horse approach to security. Because the characteristics of various perpetrator types lend themselves to development of particular strategies for protection, members of the computer security and internal audit disciplines have evolved several versions of safeguard schemes for computer and information protection.

More than a decade ago, James Martin proposed strategies for countering abuse by authorized and unauthorized groups. His monumental book on Security, Accuracy, and Privacy in Computer Systems⁵⁸ remains relevant today despite radical changes in computer use brought about by developments in technology. Following extensive documentation of controls for authorized system personnel, Martin expresses a psychology of various system breakers, along with the methodology for controlling their activity.

Since monetary transactions were a major application of computer processing, the Federal Deposit Insurance Corporation commissioned a study⁵⁹ to develop a guide to electronic data processing & electronic funds transfer security based on occupations. Nature of access for each function poses particular kinds of vulnerability; the type of safeguards needed is thus related to the range of responsibilities and capabilities of each occupational group. Not surprisingly, the system security officer and auditor head the list of groups needing control in view of their vast scope of capabilities and opportunities.

Noted researcher and author on computer abuse Donn Parker⁶⁰ subsequently delineated seven groups of perpetrators: amateurs, deranged persons, system hackers, career criminals, organizations, extreme advocates, and governments. Jay BloomBecker⁶¹ categorized computer abuse in seven groups: The Playpen (mischievous trespassers), The Land of Opportunity (extortionists), The Toolbox (organized crime & collusion), The Cookie Jar (embezzlers), The War Zone (saboteurs - disgruntled employees), Fantasyland (unwitting employee complicity to hi-tech crime), and The Soapbox (extremist advocates).

Many other practitioners have restricted their observations to attack techniques, without elaborating on the possible personalities of those who might employ them. A landmark publication written for practitioners of various disciplines was the Computer Crime: Criminal Justice Resource Manual and companion manuals.⁶² These were developed in plain language; the basic manual delineates attack techniques along with potential perpetrators, methods of detection, and evidence for each technique.

White-collar crime lawyer Gus Bequai 63 published his list of computer crime perpetrators which includes lone felons and organized crime groups of various specialization. Author Steven Levy 64 cites gradations of true hackers, hardware hackers, and game hackers with their historical progression in his book on heroes of the computer revolution. Convicted teenage computer wizard and abuser Bill Landreth, aka "The Cracker," 65 revealed his relation to the "Inner Circle" of top caliber hackers; his delineation of five grades of hackers includes: novice, student, tourist, crasher, and thief. After the FBI apprehended him, Bill obligingly revealed many penetration techniques and proposed fixes.

DIFFICULT PEOPLE

Dr. Robert Bramson 66 has illustrated the characteristic behavior of various categories of individuals that we are likely to encounter on a daily basis. He also provides insight into the way to deal with such individuals. His difficult people include: Hostile-aggressive trio of Sherman Tanks, Snipers, & Exploders; The Complete Complainer; The Silent & Unresponsive Person; Super-Agreeables & Other Wonderfully Nice People; The Negativist - Wet Blanket type; Know-It-All Experts who are Bulldozers or Balloons; and Indecisive Stallers. These profiles of difficult personalities are as useful for security practitioners as for anyone else.

MANAGEMENT STYLES

The "Jackass Management Traits" 67 portrayed by Charles Sennewald apply to supervisors in all endeavors. The traits may be more readily recognized within the security community since they lead to diminished performance or worse: disgruntled workers or customers who can become a significant security hazard. Immediate supervisors who are supposed to be sensitive to the failings of their subordinates are the very ones who often precipitate the disgruntlement. Therein lies the dilemma. Both supervisor and subordinates need to be scrutinized in such cases.

A panoply of manager and employee profiles expounded upon by dozens of authors includes Theory X / Theory Y & Theory Z with prototypes like Harrold Geneen, Mary Kay, Lee Iacocca, Dale Carnegie, and George Patton. Because executives put great stock in leadership style, security practitioners need to be conversant with the concepts and terminology used. To paraphrase P.T. Barnum, these styles work for some of the people some of the time.

The litany of management tactics is overwhelming. Many who have made it, and some who haven't, have published their concept of how it should be done. The most eloquent voice could well be Scott Myers 68 who proposed participative management before it began to be prevalent. Other individuals seem to miss the basic point by propounding elaborate organizational theories. Michael Maccoby first conceived of the styles of Craftsman, Jungle Fighter, Company Man, and

Gamesman before he hit on a perception that there may be more progressive managers in the form of Foreman, Union Leader, Plant Manager, Chief Executive Officer, Assistant Secretary, and Congressman.⁶⁹ There are indeed bosses who act like each of the foregoing.

The surfeit of management styles is further scrutinized with reference to the contemporary guides published by one and all; an article in *The Washingtonian* sums up the myriad styles using 12 Federal executives as role models⁷⁰: Survivor (George Schultz), Godfather (William Ruckelshaus), Leader (Donald Regan), Missionary (Donald Kennedy), Showman (William Bennett), Virtuoso (Drew Lewis), Expert (Wilber Cohen), Implementer (Frank Carlucci), Pathfinder (Casper Weinberger), Wonder Boy (Donald Rumsfeld), First Friend (Charles Wick), and Decision-Maker (William Simon). Then there is the One-Minute-Manager (for which a 59-Second-Employee strategy was conceived as a good antidote).⁷¹

The special issue of knowledge workers has created another category of employee being singled out for progressive treatment. Despite the fact that Allan H. Mogensen, initiator of the work simplification concept in the 1940s, & Scott Myers, among others, have long recognized that all employees need to be treated like people, recent advocates of humanistic, participative approaches to management have not cited their concepts in the listings of significant references.

Professor William Waddell ⁷² and consultant Robert Kelley ⁷³ both expound on knowledge worker awareness with meaningful recommendations to managers, yet neither seems to have been aware of the simple and profound concepts espoused by "Mogy" or Scott Myers. Irrespective of the flurry of books and articles hailing the success of Japanese managements styles, foundations for those styles were laid here in America in earlier decades; the fact that few American firms adopted such progressive styles of management is an indictment of our corporate boardrooms and the executive staffs of government agencies.

Despite the best or worst efforts of management analysts to create an optimal caricaturization of management styles and employee relationships, business will go on. Women & minorities denied the opportunity to ascend to their level of incompetence under the Peter Principle will continue to get the job done, regardless of the machinations of middle management.⁷⁴ Haga's Law, Augustine's Law and Parkinson's Law provide insight into the real workings of bureaucracy. Murphy's grab-bag of precepts illustrates the principle of the self-fulfilling prophesy; we can prove to ourselves that some condition is so by focusing on presumed outcomes to the exclusion of others perhaps much more frequent and realistic.

Perhaps the most onerous delineation of attributes is personnel evaluation by supervisory management. Despite valiant efforts by some agencies to incorporate objectivity into the process of grading subordinates, the end result inevitably reflects personal and group discrimination. Adding self-appraisal and/or peer and subordinate review to the process has been suggested and tried; while it

may introduce some objectivity, orchestrating equitable systems becomes overly complex. Traditional Authoritarian, Laissez-Faire, and Progressive leadership styles abound; bosses will remain human and grades will continue to be subject to their idiosyncrasies.

SOCIAL CLASS AND STATUS

There are probably more class layers within Russia and China under communism now than prior to their conversion to ostensibly classless societies. All social organizations tend to establish some form of hierarchy. Bureaucracies are especially prone to the formulation of layering. Paul Fussell⁷⁸ has produced a tongue-in-cheek, yet provocative, and painfully accurate guide through the American status system.

In his book, Fussell describes the characteristics of members within each of the classes. They include: Top out-of-sight, Upper, and Upper middle, Middle, High proletarian, Mid-proletarian, and Low proletarian, plus Destitute, as well as Bottom out-of-sight. He also describes a separate category "X" for those who possess sufficient curiosity and originality to transcend the more rigid class characterizations; essentially, they are "self-cultivated" and tend to be self-employed in autonomous work as a sort of un-monied aristocracy.

Because peoples' beliefs and perceptions are tied so closely to their class, status, and occupation, security practitioners need to learn the art of dealing with all types of individuals. Trying to act in a manner that is unaccustomed can lead to embarrassment for all concerned. Consideration for the expectations of those within and outside the security organization can enhance professionalism, which is an essential attribute for optimal mission accomplishment.

CONCLUSION

There is a substantial amount of material available that can help security practitioners in assessing characteristics of human subjects. Because of the complexity of the mind and its workings, it is not yet feasible to provide absolute determination of what any particular individual will do under all circumstances.

Behavioral Science has pointed the way toward design of more effective man-machine interfaces which are pertinent to security and safety as well as industrial processing efficiency. Vital considerations such as "vigilance" or "sustained attention" and selection of the proper mix of human and technological characteristics help to achieve optimal system configurations. The human-human interfaces are more subtle, yet they are discernable.

Filters in the communication process often cloud the way we perceive the intentions of others; distortion and confusion of original messages are common. But these problems can be recognized, and corrections or compensations applied.

If you believe that elaborate and expensive physical/technological safeguards are adequate protection for your enterprise, you probably have succumbed to the Maginot Line Syndrome. Especially when the barriers are awesome, adversaries will defeat them with an end-run. The Great Wall of China served only to keep the citizens in; it failed time and again to deter invaders.

As Bob Courtney, former Vice President of IBM and security consultant, is fond of pointing out, it is the internal errors and omissions that far outweigh the deliberate perpetrations of computer system loss. Moreover, the means for correction are readily available and much less costly than those for interdicting sophisticated malfactors. The same holds true for virtually all other areas of security.

People are the key to the problems and a proper understanding of human factors is the key to solutions. Innumerable sources of information (with varying credibility) can aid security professionals to increase their competency. The American Society for Industrial Security now has a library at its headquarters in Northern Virginia.

Facilities like the National Criminal Justice Reference Service which distributes material for the Justice Department and makes available a wide array of readings on various security subjects provide an opportunity to research what has already been determined by others. Keeping one's self abreast of the state-of-the-art is essential for security practitioners in all specialty areas. It is even more so for those dealing in personal protection.

The study of behavioral science can yield significant insight that should certainly make the job of protection easier and perhaps save lives of clients and bystanders as well as protector and perpetrator.

As Gordon Vickery, Administrator of the U.S. Fire Administration, emphasized several years ago: "Arson has been studied to death. Our responsibility now is to act -- coordinated actions which will reduce arson's devastation of our cities and our people ... Let's get on with it!" 76 The same applies to many other areas of protection; coordinated efforts by all protection practitioners is called for. Sharing of information, including that relating to behavioral science, is vital to the success of this effort.

REFERENCES

1. Helmreich, William B. *The Things They Say Behind Your Back - Stereotypes and the Myths Behind Them*. Garden City: Doubleday & Company, Inc.; 1982.
2. Eisler, Benita. *Class Act - America's Last Dirty Secret*. New York: Franklin Watts; 1983.
3. *Guidelines for United States Navy Overseas Diplomacy*.
4. Ward, Ted. *Living Overseas - A Book of Preparations*. New York: The Free Press; 1984.
5. Roberts, Cecily C. *Call to Valor*. Security Management. 28(9): 34-41; 1984 September.
6. Johnson, R.E.(Bob). *Just Around The Corner - Essential Skills for a DP Security Manager*. Infosystems: 74; 1983 September.
7. The Federal Bureau of Investigation's National Center for the Analysis of Violent Crime: *A New Approach for Violent Crime Prevention*. Presented to: Interpol's 3rd Symposium on Crime Prevention: Saint Cloud, France; 1985 September 21-24.
8. Wilson, James Q. and Richard J. Herrnstein. *Crime & Human Nature*. New York: Simon and Schuster; 1985.
9. Durden-Smith, Jo and Diane Desimone. *Sex and the Brain*. New York: Arbor House; 1983.
10. Cullen, Robert B. with Tony Clifton and David Brown. *Murder in Stockholm*. Newsweek: 48-49; 1986 September 10.
11. Sterling, Claire. *The Terror Network - The Secret War of International Terrorism*. New York: Holt, Rinehart and Winston; 1981.
12. Hodgson, Marshall. *The Order of Assassins*. New York: AMS Press; 1955.
13. Hacker, Frederick L., M.D. *Crusaders, Criminals, Crazies -- Terror and Terrorism in Our Time*. New York: W.W. Norton & Company, Inc.; 1976.
14. Rubin, Jeffrey Z. and Nehemia Friedland. *Theater of Terror*. Psychology Today. 20(3): 18-28; 1986 March.
15. Aplin-Brownlee, Vivian. *Psychological Training Urged for Secret Service*. The Washington Post. 1984 March 4.
16. Miller, Alice. *For Your Own Good - Hidden Cruelty in Child-Rearing and the Roots of Violence*. New York: Farrar Straus Giroux; 1983.
17. Harris, Amy Bjork and Thomas A. Harris M.D. *Staying OK*. New York: Harper & Row, Publishers; 1985.
18. Otten, Laura. ed. *Colloquium on the Correlates of Crime and Determinates of Criminal Behavior*. McLean: MITRE Corp.; 1978.

19. Kimball, Penn. *The File*. New York: Harcourt Brace Jovanovich, Pub; 1983.
20. Gill, William F. *The Ordeal Of Otto Otepka*. New Rochelle: Arlington House; 1969.
21. Emmerson, John K. *The Japanese Thread - A Life in the U.S. Foreign Service*. New York: Holt, Rinehart and Winston; 1978.
22. Fraser, John. *The Chinese - Portrait of a People*. New York: Summit Books; 1980.
- also: Bernstein, Richard. *From the Center of the Earth - the Search for the Truth About China*. Boston: Little, Brown and Company; 1982.
23. Thimmesch, N. Karen Silkwood Without Tears. The Saturday Evening Post. 251: 14+; 1979 November & 252: 26-9+; December.
24. Janis, Irving L. *Group Think - Psychological Studies of Policy Decisions and Fiascoes*. 2nd ed rev. Boston: Houghton Mifflin Company; 1983.
25. Ryan, Paul B. *The Iranian Rescue Mission - Why It Failed*. Annapolis: Naval Institute Press; 1985.
26. Rangell, Leo M.D. *The Mind of Watergate - An Exploration of the Compromise of Integrity*. New York: W.W. Norton & Company; 1980.
27. Mansbridge, Jane J. *Beyond Adversarial Democracy*. New York: Basic Books, Inc., Publishers; 1980.
28. Sinclair, Molly and Chris Spolar. *The Psychology of a Modern Spy*. The Washington Post. 1985 June 15; Sec. A6.
29. Lindsey, Robert. *The Falcon and the Snowman*. New York: Simon&Schuster; 1979.
30. Westin, Alan F. ed, with Henry I. Kurtz and Albert Robbins. *Whistle-Blowing! Loyalty and Dissent in the Corporation*. New York: McGraw-Hill; 1981.
31. Chapters 731, 732, & 736. Federal Personnel Manual.
32. *Automation Security*. Army Regulation 380-380.
33. *Inside the Consumer's Mind*. Newsweek: 7; 1985 December 30.
34. Schmidt, Edwin A. *Employee Screening Through Honesty Tests*. unpublished paper for Northern Virginia Community College; 1982.
35. Johnson, James H., Kathy N. Johnson and Richard Gallagher. *Reading Others plus Mind Prober* Computerized Assessment Program. Palo Alto: Human Edge Software Company; 1984.
36. Lau, Theodora. *The Handbook of Chinese Horoscopes*. New York: Harper & Row, Publishers; 1979.
37. Luscher, Dr. Max, Ian Scott tr & ed. *The Luscher Color Test*. New York: Washington Square Press; 1969.

38. Keirse, David and Marilyn Bates. *Please Understand Me - Character & Temperament Types*. Del Mar: Prometheus Nemesis Book Company; 1984.
39. Means, Howard. *Secrets of the Face*. The Washingtonian. 82-91; 1982 March.
40. *Life's First Feelings* documentary by WGBH Education Foundation. Boston: NOVA Transcript #1304; broadcast 1986 February 11.
41. Brownlee, Shannon. *What's In A Face*. DISCOVER. 39-51; 1985 February.
42. McDermott, Jeanne. *Face to face, it's the expression that bears the message*. Smithsonian. 16(12): 112-123; 1986 March.
43. Harris, Marvin. *Cannibals and Kings -- The Origins of Cultures*. New York: Vintage Books; 1977.
44. Rivlin, Robert and Karen Gravelle. *Diciphering the Senses - The Expanding World of Human Perception*. New York: Simon and Schuster; 1984.
45. O'Sullivan, Maureen et al. *What You Say and How You Say It: The Contribution of Speech Content and Voice Quality to Judgments of Others*. Journal of Personality and Social Psychology. 48(1): 54-63; 1985.
46. Szasz, Thomas S. M.D. *The Manufacture of Madness*. New York: Harper Colophon Books; 1970.
47. Miller, Alice. *Prisoners of Childhood*. New York: Farrar Straus Giroux; 1981.
48. Alexander, Shana. *Nut-Cracker - Money, Madness, Murder: A Family Album*. New York: Dell Publishing Co.; 1983.
49. Coleman, Jonathan. *At Mother's Request - A True Story of Money, Murder and Betrayal*. New York: Pocket Books; 1985.
50. Keating, J.P. *Human Response During Fire Situations: A Role for Social Engineering* presented at the American Institute of Architects: Research and Design 85: Architectural Applications of Design and Technology Research. Los Angeles: 1985 March 14-18.
51. Restak, Richard M. M.D. *The Self-Seekers - Understanding Manipulators, the Predominant Personalities of Our Age*. Garden City: Doubleday & Company; 1982.
52. Peck, M. Scott M.D. *People of the Lie - The Hope for Healing Human Evil*. New York: Simon and Schuster; 1983.
53. *Quick Reference to the Diagnostic Criteria from DSM-III*. Washington: The American Psychiatric Association; 1980.
54. Asimov, Isaac ed. *The Annotated Culliver's Travels*. New York: Clarkson N. Potter, Inc./Publishers; 1980.
55. Schmidt, Edwin A. *Arson Prevention and Computer Crime: A Comparison*. unpublished paper for Northern Virginia Community College; 1982.

56. *Arson Prevention and Control - Program Models*. National Institute of Law Enforcement and Criminal Justice; 1980.
57. Martin, James. *Security, Accuracy, and Privacy in Computer Systems*. Englewood Cliffs: Prentice-Hall, Inc.; 1973.
58. *EFTS - A Guide to EDP and EFT Security Based on Occupations* Washington: Federal Deposit Insurance Corporation; 1977.
59. Parker, Donn B. *Computer Security Management*. Reston: Reston Publishing Company; 1981.
60. BloomBecker, Jay. How to Recognize the Computer Criminal. Information Age. 4(4): 194-199; 1982.
61. *Computer Crime: Criminal Justice Resource Manual*. Bureau of Justice Statistics; 1979.
62. Bequai, August. *How to Prevent Computer Crime - A Guide for Managers*. New York: John Wiley & Sons; 1983.
63. Levy, Steven. *Hackers - Heroes of the Computer Revolution*. Garden City: Anchor Press/Doubleday; 1984.
64. Landreth, Bill with Howard Rheingold. *Out of the Inner Circle - A Hacker's Guide to Computer Security*. Bellevue: Microsoft Press; 1985.
65. DeVille, Dr. Jard. *The Psychology of Leadership - Managing Resources and Relationships*. New York: New American Library; 1984.
66. Bramson, Robert M. Ph.D. *Coping With Difficult People ... In Business and in Life*. New York: Ballantine Books; 1981.
67. Sennewald, Charles A. *Effective Security Management*. 2nd ed. Boston: Butterworth; 1985.
68. Myers, M. Scott. *Every Employee A Manager* 2nd ed. New York: McGraw-Hill Book Company; 1981.
69. Maccoby, Michael. *The Leader - A New Face for American Management*. New York: Simon and Schuster; 1981.
70. Glassman, James K. *Is Anyone Here A Real Manager?* The Washingtonian. 21(7): 132-135+; 1986 April.
71. Andre, Rae Ph.D. and Peter D. Ward J.D. *The 59-Second Employee*. Boston: Houghton Mifflin; 1984.
72. Waddell, William C. *Overcoming Murphy's Law*. New York: AMACOM; 1981.
73. Kelley, Robert E. *The Gold Collar Worker - Harnessing the Brainpower of the New Workforce*. Reading: Addison-Wesley Publishing Company; 1985.
74. *The Women Say/The Men Say - Issues in Politics, Work, Family, Sexuality, and Power*. New York: Dell; 1979.

75. Fussell, Paul. *CLASS - A Painfully Accurate Guide Through The American Status System*. New York: Ballantine Books; 1983
76. *Arson Task Force Assistance Program*. FA-1. Washington: Federal Emergency Management Agency; April 1980.

BIBLIOGRAPHY

BEHAVIORAL PROFILES

- Eysenck, Hans and Michael. *Mindwatching*. London: Michael Joseph Ltd.; 1981.
- Steinberg, Rafael. *Human Behavior - Man and the Organization*. New York: Time-Life Books; 1975.
- Hall, Edward T. *The Silent Language*. Garden City: Anchor Books; 1973.
- . *The Hidden Dimension*. Garden City: Doubleday & Company, Inc.; 1966.
- Beier, Dr. Ernst G. and Evans G. Valens. *People Reading - How We Control Others, How They Control Us*. New York: Warner Books; 1975.
- Pease, Allan. *Signals - How to Use Body Language for Power, Success and Love*. New York: Bantam Books; 1984.
- Nierenberg, Gerald I. and Henry H. Calero. *How to Read a Person Like a Book - A Key to the 'Silent Language' of Body Talk*. New York: Pocket Books; 1971.
- Rivlin, Robert and Karen Gravelle. *Diciphering the Senses - The Expanding World of Human Perception*. New York: Simon and Schuster; 1984.
- Delmar, Ken. *Winning Moves - The Body Language of Selling*. New York: Warner Books; 1984.
- Human Behavior and Leadership*. Washington: Naval Training Publications Detachment; 1973.
- Ward, Ted. *Living Overseas - A Book of Preparations*. New York: The Free Press; 1984.
- Guidelines for United States Navy Overseas Diplomacy*
- Asimov, Isaac ed. *The Annotated Gulliver's Travels*. New York: Clarkson N. Potter, Inc.; 1980.
- Bellak, Leopold M.D. & Samm Sinclair Baker. *Reading Faces*. New York: Holt, Rinehart and Winston; 1981.
- Means, Howard. *Secrets of the Face*. The Washingtonian. 82-91; 1982 March.
- McDermott, Jeanne. *Face to face, it's the expression that bears the message*. Smithsonian. 16(12): 112-123; 1986 March.
- Brownlee, Shannon. *What's In A Face*. DISCOVER. 39-51; 1985 February.
- Life's First Feelings*. NOVA transcript #1304, broadcast on PBS on February 11, 1986. Boston: WGBH Education Foundation.
- Ekman and Friesen. *Unmasking the Face*. Englewood Cliffs: Prentice-Hall/Spectrum Books; 1975.
- . *Facial Action Coding System*. Palo Alto: Consulting Psychologists Press; 1978.

Ekman, Paul. *The Face of Man*. New York: Garland STPM Press; 1980.

----, Ellsworth, Friesen, Hager, Oster, O'Sullivan, Redican, and Tomkins. *Emotions in the Human Face* 2nd ed. New York: Cambridge University Press; 1982.

----, Exline, Fehr, van Hooff, Kendon, Rosenfeld, Rosenthal, Sherer, Wallbott, West, and Zimmerman. *Handbook of Methods in Nonverbal Behavior Research*. New York: Cambridge University Press; 1982.

----, Robert W. Levenson, Wallace V. Friesen. *Autonomic Nervous System Activity Distinguishes Among Emotions*, SCIENCE. 221(4616): 1208-1210; 16 September 1983.

----. *Telling Lies*. New York: W.W.Norton & Company, Inc.; 1985.

----, Charlesworth, Chevalier-Skolnikoff, Kreutzer, and Petrinovich. *Darwin and Facial Expression*. New York: Academic Press; 1973.

----, Maureen O'Sullivan, Wallace Friesen, Klaus Scherer. *What You Say and How You Say It: The Contribution of Speech Content and Voice Quality to Judgments of Others*. Journal of Personality and Social Psychology, 48(1): 54-63; 1985.

Fussell, Paul. *CLASS - A Painfully Accurate Guide Through the American Status System*. New York: Ballantine Books; 1983.

Eisler, Benita. *Class Act - America's Last Dirty Secret*. New York: Franklin Watts; 1983.

Helmreich, William B. *The Things They Say Behind Your Back - Stereotypes and the Myths Behind Them*. Garden City: Doubleday & Company, Inc.; 1982.

Harris, Marvin. *Cultural Materialism - The Struggle for a Science of Culture*. New York: Vintage Books; 1979.

----. *Cannibals and Kings - The Origins of Cultures*. New York: Vintage Books; 1977.

----. *Cows, Pigs, Wars and Witches - The Riddles of Culture*. New York: Vintage Books; 1974.

Henry, Jules. *Culture Against Man*. New York: Vintage Books; 1965

Suzuki, Takao translated by Akira Miura. *Japan and the Japanese - Words in Culture*. Tokyo: Kodansha International Ltd.; 1978.

Christopher, Robert C. *The Japanese Mind*. New York: Fawcett; 1983.

VICTIMS OF CIRCUMSTANCE

Westin, Alan F. ed. with Henry I. Kurtz and Albert Robbins. *Whistle-Blowing! Loyalty and Dissent in the Corporation*. New York: McGraw-Hill Book Company; 1981.

Laqueur, Walter. *A World of Secrets - The Uses and Limits of Intelligence*. New York: Basic Books, Inc., Publishers; 1985.

Gill, William J. *The Ordeal of Otto Otepka*. (U.S. State Department Security Manager) New Rochelle: Arlington House; 1969.

Emmerson, John K. *The Japanese Thread - A Life in the U.S. Foreign Service*. New York: Holt, Rinehart and Winston; 1978.

Morris, Ivan. *The Nobility of Failure - Tragic Heroes in the History of Japan*. New York: Holt, Rinehart and Winston; 1975.

Duus, Masayo. *Tokyo Rose - Orphan of the Pacific* (re: Iva Toguri d'Aquino). New York: Kodansha International, Ltd.; 1979.

Kimball, Penn. *The File*. New York: Harcourt Brace Jovanovich, Publishers; 1983.

Tateishi, John. *And Justice For All*. New York: Random House; 1984.

Harrington, Joseph D. *Yankee Samurai*. Detroit: Petigrew Enterprises; 1979.

Halas, Celia Ph.D. *Why Can't a Woman Be More Like a Man?* New York: MacMillan Publishing Co., Inc.; 1981.

Neely, James C. M.D. *Gender - The Myth Of Equality*. New York: Simon and Schuster; 1981.

Kennedy, Marilyn Moats. *Career Knockdowns - How to Battle Back*. New York: Warner Books; 1980.

Elliott, Laura. *Shattered Dreams* (re: John & Charlotte Fedders)
The Washingtonian. 21(7): 100-105+; 1986 April.

BUSINESS MANAGEMENT

Fulmer, Robert. *Management and Organization*. New York: Barnes & Noble Books; 1979.

Berkman, Harold W. *The Human Relations of Management*. Encino: Dickenson Publishing Company, Inc.; 1974.

Myers, M. Scott. *Every Employee A Manager* 2nd ed. New York: McGraw-Hill Book Company; 1981.

Kelley, Robert E. *The Gold Collar Worker - Harnessing the Brainpower of the New Workforce*. Reading: Addison-Wesley Publishing Company; 1985.

Waddell, William C. *Overcoming Murphy's Law*. New York: AMACOM; 1981.

Townsend, Robert. *Further Up The Organization*. New York: Alfred A. Knopf; 1984.

Staff of Rohrer, Hibler & Replogle, Inc. *The Managerial Challenge: A Psychological Approach to the Changing World of Management*. New York: New American Library; 1981.

Uris, Auren. *The Blue Book of Broadminded Business Behavior*. New York: Thomas Y. Crowell, Publishers; 1977.

Starling, Grover. *Managing the Public Sector*. Homewood: The Dorsey Press; 1977.

LeBoeuf, Michael. *Working Smart*. New York: Warner Books, Inc.; 1979.

Working Smarter by the Editors of FORTUNE. New York: Penguin Books; 1979-1982.

Kossen, Stan. *The Human Side of Organizations* 2nd ed. New York: Harper & Row, Publishers; 1975, 1978.

Haga, Dr. William James and Nicholas Acocella. *Haga's Law*. New York: William Morrow and Company, Inc.; 1980.

Peter, Dr. Laurence J. *Why Things Go Wrong or The Peter Principle Revisited*. New York: Bantam Books; 1984.

Parkinson, C. Northcote. *Parkinson's Law and Other Studies in Administration*. New York: Ballentine Books; 1957.

Augustine, Norman R. *Augustine's Laws*. New York: Viking; 1983, 1986.

Medley, H. Anthony. *Sweaty Palms - The Neglected Art of Being Interviewed*. Belmont: Lifetime Learning Publications; 1978.

Eisenberg, Dr. Abne M. *Job Talk - Communicating Effectively on the Job*. New York: Macmillan Publishing Co., Inc.; 1979.

Magnusen, Karl O. *Organizational Design, Development, and Behavior - A Situational View*. Glenview: Scott, Foresman and Company; 1977.

Geneen, Harold with Alvin Moscow. *Managing*. Garden City: Doubleday & Co.; 1984.

Ash, Mary Kay. *On People Management*. New York: Warner Books; 1984.

Iacocca, Lee with William Novak. *IACOCCA - an Autobiography*. New York: Bantam Books; 1984.

Williamson, Porter B. *Patton's Principles - A Handbook for Managers Who Mean It!* New York: Simon and Schuster; 1979.

Delaney, William A. *Tricks of the Manager's Trade - How to Solve 30 Common Management Problems*. New York: AMACOM; 1982.

Iuppa, Nicholas V. *Management By Guilt - And Other Uncensored Tactics*. New York: Fawcett Crest; 1985.

Andre, Rae Ph.D., Peter D. Ward, J.D. *The 59-Second Employee*. Boston: Houghton Mifflin; 1984.

Toffler, Alvin. *Reviews & Premises*. New York: William Morrow & Co.; 1983.

Peters, Thomas J. and Robert H. Watterman Jr. *In Search of Excellence - Lessons from America's Best-Run Companies*. New York: Harper & Row, Publishers; 1982.

Bradshaw, Thornton and David Vogel editors. *Corporations and their Critics - Issues and answers on the problems of corporate social responsibilities*. New York: McGraw-Hill Book Co.; 1981.

Gibney, Frank. *Miracle by Design - The Real Reason Behind Japan's Economic Success*. New York: Times Books; 1982.

Pascale, Richard Tanner and Anthony G. Athos. *The Art of Japanese Management - Applications for American Executives*. New York: Simon and Schuster; 1981.

Vogel, Ezra F. *Japan as Number 1 - Lessons for America*. New York: Harper Colophon Books; 1979.

Ohmae, Kenichi. *The Mind of the Strategist - The Art of Japanese Business*. New York: McGraw-Hill Book Company; 1982.

Ouchi, William G. *The M-Form Society - How American Teamwork Can Recapture the Competitive Edge*. Reading: Addison-Wesley Publishing Company; 1984.

Jay, Anthony. *Management and Machiavelli - An Inquiry into the Politics of Corporate Life*. New York: Bantam Books; 1967.

Kennedy, Marilyn M. *Office Politics*. New York: Warner Books; 1980.

Durbin, Andrew J. *Winning at Office Politics*. NY: Ballantine; 1979.

PERSONALITY & ATTITUDE PROFILES

Bramson, Robert M. Ph.D. *Coping With Difficult People ...In Business and in Life*. New York: Ballantine Books; 1981.

Bach, Dr. George R. & Ronald M. Deutsch. *STOP! You're Driving Me Crazy*. New York: Berkley Books; 1979.

Harris, Amy Bjork and Thomas A. Harris, M.D. *Staying OK*. New York: Avon Books; 1985.

Harris, Thomas A. M.D. *I'm OK - You're OK*. New York: Harper & Row Publishers, Inc.; 196

Freudenberger, Herbert J. Ph.D. with Beraldine Richelson. *Burn Out - The High Cost of High Achievement*. Garden City: Anchor Press; 1980.

DeVille, Dr. Jard. *The Psychology of Leadership - Managing Resources and Relationships*. New York: Mentor Books; 1984.

Dailey, Charles A. *Using the Track Record Approach - The Key to Successful Personnel Selection*. New York: AMACOM; 1982.

Johnson, James H. Ph.D., Kathy N. Johnson, Ph.D., and Richard Gallagher, M.D. *Reading Others plus Mind Prober* Computerized Assessment Program. Palo Alto: Human Edge Software Corporation; 1984.

Bunker, M. N. *Handwriting Analysis: The Science of Determining Personality by Graphoanalysis*. Chicago: Nelson-Hall Publishers; 1979.

Marne, Patricia. *Crime & Sex in Handwriting*. London: Constable and Company; 1981.

Luscher, Dr. Max; Ian Scott tr. & ed. *The Luscher Color Test*. New York: Washington Square Press; 1969.

Schmidt, Edwin A. CPP. *Employee Screening Through Honesty Tests*. Unpublished paper for Northern Virginia Community College, 1982.

Keirsey, David and Marilyn Bates. *Please Understand Me - Character & Temperament Types*. Del Mar: Prometheus Nemesis Book Company; 1984.

Lau, Theodora. *The Handbook of Chinese Horoscopes*. New York: Harper & Row; 1979.

White, Suzanne. *The New Astrology - A Unique Synthesis of the World's Two Great Astrological Systems: The Chinese and Western with 144 Complete, Personalized Character Readings*. New York: St. Martin's Press; 1986.

COMPUTER ABUSERS, ARSON PERPETRATORS, AND OTHERS

Bequai, August. *How to Prevent Computer Crime - A Guide for Managers*. New York: John Wiley & Sons; 1983.

Parker, Donn B. *Computer Security Management*. Reston: Reston Publishing Company, Inc.; 1981.

Computer Crime: Criminal Justice Resource Manual. Washington: Bureau of Justice Statistics; 1979.

Landreth, Bill with Howard Rheingold. *Out of the Inner Circle - A Hacker's Guide to Computer Security*. Bellevue: Microsoft Press; 1985.

Levy, Steven. *Hackers - Heroes of the Computer Revolution*. Garden City: Anchor Press/Doubleday; 1984.

Automation Security - Army Regulation 380-380 dated 8 March 1985

Kusserow, Richard P. (Inspector General HHS) *Computer-Related Fraud and Abuse in Government Agencies: Perpetrator Interviews*. Washington: Department of Health and Human Services; 1985.

Martin, James. *Security, Accuracy, and Privacy in Computer Systems*. Englewood Cliffs: Prentice-Hall, Inc.; 1973.

EFTS - A Guide to EDP and EFT Security Based on Occupations. Washington: Federal Deposit Insurance Corporation; 1977.

Arson Prevention and Control - Program Models. Washington: National Institute of Law Enforcement and Criminal Justice; 1980.

Enforcement Manual: Approaches for Combatting Arson-for-Profit Schemes. Volume I: Strategic Approaches; Volume II: Tactical Guides. Washington: Law Enforcement Assistance Administration; 1981.

Royal, Robert F. and Steven R. Schutt. *The Gentle Art of Interviewing and Interrogation*. Englewood Cliffs: Prentice-Hall, Inc.; 1976.

Sennewald, Charles A. *Effective Security Management*. 2nd ed. Boston: Butterworth Publishers; 1985.

Rosberg, Robert R. *Game of Thieves*. New York: Everest House; 1980, 1981.

Young, Perry Deane. *God's Bullies - Power Politics and Religious Tyranny*. New York: Holt, Rinehart and Winston; 1982.

KEEPING THE SECRETS

Laqueur, Walter. *A World of Secrets - The Uses and Limits of Intelligence*. New York: Basic Books, Inc., Publishers; 1985.

Multidiscipline Hostile Intelligence Services Threat Briefing. Fort George G. Meade: U.S. Army Intelligence and Threat Analysis Center

Lindsey, Robert. *The Falcon and the Snowman*. New York: Simon & Schuster; 1979.

Pincher, Chapman. *Their Trade Is Treachery*. London: Sidgwick & Jackson; 1981.

Halanka, John D. *Espionage in the Silicon Valley*. Berkley: Sybex; 1984.

Melvern, Linda, David Hebditch, Nick Anning, & Mark Hosenball. *Techno-Bandits - How the Soviets Are Stealing America's High-Tech Future*. Boston: Houghton Mifflin Company; 1984.

Sutherland, Douglas. *The Great Betrayal - The Definitive Story of Blunt, Philby, Burgess, and MacLean*. New York: Times Books; 1980.

Dulles, Allen ed. *Great True Spy Stories*. Secaucus: Castle; 1968.

Wise, David. *The Politics of Lying - Government Deception, Secrecy and Power*. New York: Random House; 1973.

Turner, Stansfield. *Secrecy and Democracy - The CIA in Transition*. Boston: Houghton Mifflin Company; 1985.

Donner, Frank J. *The Age of Surveillance - The Aims and Methods of America's Political Intelligence System*. New York: Vintage Books; 1981.

Hougan, Jim. *SPOOKS - The Haunting of America - The Private Use of Secret Agents*. New York: William Morrow and Company; 1978.

O'Toole, George. *The Private Sector - Rent-a-cops, private spies and the police-industrial complex*. New York: W.W.Norton & Company, Inc.; 1978.

Plate, Thomas and Andrea Darvi. *Secret Police - The Inside Story of a Network of Terror*. New York: Doubleday & Co.; 1981.

Sterling, Claire. *The Time of the Assassins - Anatomy of an Investigation*. New York: Holt, Rinehart and Winston; 1983.

Keeping The Nation's Secrets. Report of the Stilwell Commission to the Secretary of Defense; 1985.

FORENSIC SCIENCE

Wright, Fred and Charles Bahn, Robert W. Rieber editors. *Forensic Psychology and Psychiatry*. New York: The New York Academy of Sciences; 1980.

Yochelson, Samuel M.D., Ph.D., and Stanton E. Samenow, Ph.D. *The Criminal Personality*. New York: Jason Aronson; 1976.

Samenow, Stanton E. Ph.D. *Inside the Criminal Mind*. New York: Times Books; 1984.

Bartol, Curt R. *Criminal Behavior - A Psychosocial Approach*. Englewood Cliffs: Prentice-Hall, Inc.; 1980.

Abrahamsen, David M.D. *The Mind of the Accused - A Psychiatrist in the Courtroom*. New York: Simon and Schuster; 1983.

Wilson, James Q. and Richard J. Herrnstein. *Crime & Human Nature*. New York: Simon and Schuster; 1985.

Otten, Laura ed. *Colloquium on the Correlates of Crime and Determinates of Criminal Behavior*. McLean: The MITRE Corporation; 1978.

Molof, Martin J. Ph.D. *The Development of an Agenda for Basic Research into Crime Correlates and Criminal Behavior*. McLean: The MITRE Corporation; 1979.

Forer, Lois G. *Criminals and Victims - A Trial Judge Reflects on Crime and Punishment*. New York: W. W. Norton & Co.; 1980.

Russell, Harold E. and Allen Beigel. *Understanding Human Behavior for Effective Police Work*. New York: Basic Books, Inc.; 1976,1982.

Matthews, Robert A. M.D., and Loyd W. Rowland, Ph.D. *How to Recognize and Handle Abnormal People*. Arlington: Mental Health Association; 1954,1979.

Schwitzgebel, Robert L. and R. Kirkland Schwitzgebel. *Law and Psychological Practice*. New York: John Wiley & Sons; 1980.

Brooks, Alexander D. *Law, Psychiatry, and the Mental Health System*. Boston: Little, Brown and Company; 1974.

Szasz, Thomas S. M.D. *The Myth of Mental Illness - Foundations of a Theory of Personal Conduct* Revised Edition. New York: Harper & Row, Publishers; 1974.

----. *The Manufacture of Madness*. New York: Harper Colophon Books; 1970.

Quick Reference to the Diagnostic Criteria from DSM-III. Washington: The American Psychiatric Association; 1980.

Kunen, James S. "How Can You Defend Those People?" - *The Making of a Criminal Lawyer*. New York: McGraw-Hill Book Co.; 1983.

ANTISOCIAL PERSONALITY

Lowen, Alexander M.D. *Narcissism - Denial of the True Self*. New York: MacMillan Publishing Company; 1983.

Lasch, Christopher. *The Culture of Narcissism - American Life in an Age of Diminishing Expectations*. New York: Warner Books; 1979.

Restak, Richard M. M.D. *The Self Seekers - Understanding Manipulators, the Predominant Personalities of Our Age*. Garden City: Doubleday & Company; 1982.

Stern, Aaron M.D., Ph.D. *Me - the Narcissistic American*. New York: Ballantine; 1979.

Peck, M. Scott M.D. *People of the Lie - the Hope for Healing Human Evil*. New York: Simon and Schuster; 1983.

Kiley, Dr. Dan. *The Peter Pan Syndrome - Men Who Have Never Grown Up*. New York: Dodd, Mead & Company; 1983.

STATISTICAL ANALYSIS

Gay, L.R. *Educational Evaluation & Measurement - Competencies for Analysis and Application*. Columbus: Charles E. Merrill Publishing Company; 1980.

Aero, Rita and Elliot Weiner, Ph.D. *The Mind Test*. New York: William Morrow and Company, Inc.; 1981.

Thompson, Joseph B. & William Bushanan. *Analyzing Psychological Data*. New York: Charles Schribner's Sons; 1979.

SIGNIFICANT PSYCHOPATHOLOGY

Hacker, Frederick L. M.D. *Crusaders, Criminals, Crazies - Terror and Terrorism in Our Time*. New York: W. W. Norton & Company, Inc.; 1976.

Sterling, Claire. *The Terror Network - The Secret War of International Terrorism*. New York: Holt, Rinehart and Winston; 1981.

Hodgson, Marshall. *The Order of Assassins*. New York: AMS Press; 1955.

Asencio, Diego and Nancy with Ron Tobias. *Our Man Is Inside - Outmaneuvering the Terrorists*. Boston: Little, Brown and Company; 1982,1983.

Storaska, Frederic. *How to Say No to a Rapist - and Survive*. New York: Random House; 1975.

Brownmiller, Susan. *Against Our Will - Men, Women and Rape*. New York: Bantam Books; 1975.

Delin, Bart. *The Sex Offender*. Boston: Beacon Press; 1978.

Miller, Alice. *Thou Shalt Not Be Alone: Society's Betrayal of the Child*. New York: Farrar Straus Giroux; 1984.

----- *For Your Own Good - Hidden Cruelty in Child-Rearing and the Roots of Violence*. New York: Farrar Straus Giroux; 1983.

----- *Prisoners of Childhood*. New York: Farrar Straus Giroux; 1981.

Olsen, Jack. *'SON' - A Psychopath and His Victims*. New York: Atheneum; 1983.

Klausner, Lawrence D. *Son of Sam*. (re: David Berkowitz) New York: McGraw-Hill Book Company; 1981.

Wideman, John Edgar. *Brothers and Keepers*. New York: Penguin Books; 1984.

Rule, Ann. *The Stranger Beside Me*. New York: New American Library; 1980.

Bugliosi, Vincent with Curt Gentry. *Helter Skelter*. (re: Charles Manson family). New York: Bantam Books; 1975.

Alexander, Shana. *Nut-Cracker - Money, Madness, Murder: A Family Album*. New York: Dell Publishing Co., Inc.; 1983.

Coleman, Jonathan. *At Mother's Request - A True Story of Money, Murder and Betrayal*. New York: Pocket Books; 1985.

McGinniss, Joe. *Fatal Vision* (with new afterward by author). New York: New American Library; 1983,1985.

Baldwin, James. *The Evidence of Things Not Seen*. (re: Wayne Williams case) New York: Holt, Rinehart and Winston; 1985.

Sample, Albert Race. *Racehoss - Big Emma's Boy*. New York: Ballantine; 1984.

Michaud, Stephen G. and Hugh Aynesworth. *The Only Living Witness - A True Story of Homicidal Insanity*. (re: Ted Bundy). New York: Linden Press/Simon & Schuster; 1983.

Willwerth, James. *Badge of Madness - The True Story of a Psychotic Cop.* New York: M. Evans and Company, Inc.; 1977.

Schwartz, Ted. *The Hillside Strangler - A Murderer's Mind.* New York: New American Library; 1981, 1982.

TRAUMATIC INCIDENTS

Frazier, Kendrick. *The Violent Face of Nature - Severe Phenomena and Natural Disasters.* New York: William Morrow and Company, Inc.; 1979.

Thygerson, Alton L. *Accidents & Disasters - Causes and Countermeasures.* Englewood Cliffs: Prentice-Hall, Inc.; 1977.

Editors of Encyclopaedia Britannica. *Disaster! When Nature Strikes Back.* New York: Bantam/Britannica Books; 1978.

Fuchs, Sir Vivian ed. *Forces of Nature.* New York: Holt, Rinehart and Winston; 1977.

Emergency Management U.S.A. Washington: Federal Emergency Mgmt Agency; 1981.

Disaster Operations - A Handbook for Local Governments. Washington: Federal Emergency Management Agency; 1981.

Momboisse, Raymond M. *Industrial Security for Strikes, Riots and Disasters.* Springfield: Charles C. Thomas Publisher; 1968.

PSYCHO-NEUROLOGICAL FACTORS

Miller, Jonathan. *States of Mind.* New York: Pantheon Books; 1983

Durden-Smith, Jo and Diane Desimone. *Sex and the Brain.* New York: Arbor House; 1983.

Holroyd, Stuart. *PSI and the Consciousness Explosion.* New York: Toplinger Publishing Company; 1977.

Mitchell, Edgar D., edited by John White. *Psychic Exploration - A Challenge for Science.* New York: Paragon Books; 1974.

Walker, Edwin L. *Psychological Complexity and Preference.* Monterey: Brooks/Cole Publishing Company; 1980.

Smith, Anthony. *The Mind.* New York: Viking Press; 1984.

Roberts, Jane. *The Nature of the Psyche - Its Human Expression.* Englewood Cliffs: Prentice-Hall, Inc.; 1979.

Janov, Arthur Ph.D. *Imprints - The Lifelong Effects of the Birth Experience.* New York: Coward-McCann, Inc.; 1983.

Kelley, Sean F. Ph.D., and Reid J. Kelley, A.C.S.W. *Hypnosis - Understanding How It Can Work for You.* Reading: Addison-Wesley Publishing Company, Inc.; 1985.

Ullman, Montague M.D. and Nan Zimmerman. *Working With Dreams.* Los Angeles: Jeremy P. Tarcher, Inc.; 1979.

INTERNAL AND EXTERNAL INFLUENCES ON BEHAVIOR

- Sutphen, Dick. *Unseen Influences*. New York: Pocket Books; 1982.
- Fuqua, Paul. *Drug Abuse: Investigation and Control*. New York: Gregg Division/McGraw-Hill Book Company; 1978.
- Schrag, Peter. *Mind Control*. New York: Pantheon Books; 1978.
- Coville, Walter J., Timothy W. Costello, and Fabian L. Rourke. *Abnormal Psychology - Mental Illness Types, Causes, and Treatment*. New York: Barnes & Nobel, Inc.; 1960.
- Duke, Marshall and Stephen Nowicki, Jr. *Abnormal Psychology - Perspectives on Being Different*. Monterey: Brooks/Cole Publishing Company; 1979.
- Gottesfeld, Harry Ph.D. *Abnormal Psychology - A Community Mental Health Perspective*. Chicago: Science Research Associates, Inc.; 1979.
- Galton, Lawrence. *You May Not Need a Psychiatrist - How Your Body May Control Your Mind*. New York: Simon and Schuster; 1979.
- Yogendra, Shri Vijayadev ed. (The Helen Vale Foundation). *Is Your Sickness Real? Mind-Made Disease*. New York: MacMillan Publishing Co., Inc.; 1977, 1978.
- Weston, Lee. *Body Rhythm - The Circadian Rhythms Within You*. New York: Harcourt Brace Jovanovich; 1979.
- Arehart-Treichel, Joan. *Biotypes - The Critical Link Between Your Personality & Your Health*. New York: Times Books; 1980.
- Palmer, Bruce. *Body Weather*. New York: Jove Publications; 1976.
- Fast, Julius. *Weather Language - How Climate Affects Your Body and Mind..and What to Do About It!* New York: Wyden Books; 1979.
- Goodwin, Donald W. M.D., and Samuel B. Guze, M.D. *Psychiatric Diagnosis* 3rd edition. New York: Oxford University Press; 1984.
- Freundenberger, Herbert J. Ph.D. with Geraldine Richelson. *Burn-Out - The High Cost of High Achievement - What It Is - And How to Survive It*. Garden City: Anchor Press; 1980.
- Palmer, Stuart. *Role Stress - How to Handle Everyday Tension*. Englewood Cliffs: Prentice-Hall, Inc.; 1981.
- Page, Robert Collier M.D., F.A.C.P. *How to Lick Executive Stress - And Stay in Top Emotional and Physical Trim*. New York: Cornerstone Library/Simon & Schuster; 1981.
- Henig, Robin Marantz. *The Myth of Senility - Misconceptions About the Brain and Aging*. Garden City: Anchor Press; 1981.
- Bok, Sissela. *LYING - Moral Choice in Public and Private Life*. New York: Vintage Books; 1978.
- Turner, John F. C. *Housing By People - Toward Autonomy in Building Environments*. New York: Pantheon; 1976, 1977.

SURVIVABILITY RESOURCE GROUP, INC.

DESIGNERS OF NON-STANDARD SECURITY SYSTEMS

$$\mathbf{KE = \frac{1}{2}MV^2}$$

- **DESIGN**
- **TESTING**
- **MANUFACTURING**
- **INSTALLATION**

If your security cannot be assured with standard, off-the-shelf products, the **Survivability Resource Group** will design your security system to meet your specifications.

SURVIVABILITY RESOURCE GROUP, INC.

**1960 Gallows Road
Vienna, Virginia 22180
(703) 893-6120**