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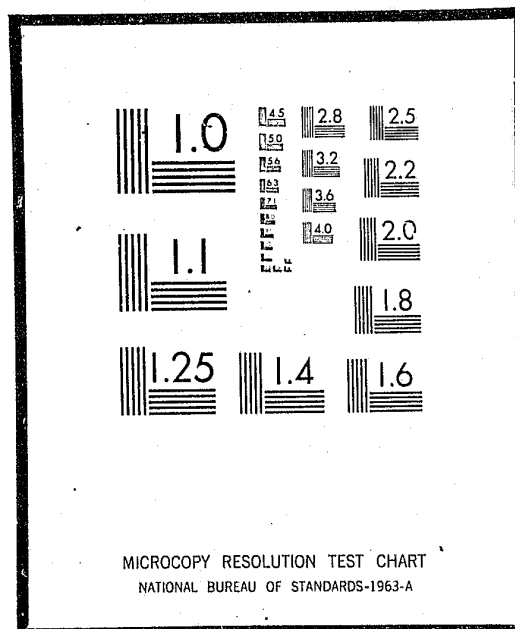


Table of Contents

Acknowledgements

Chapter 1: Problem Statement

Classic Weaponry Planning

Reactive Weaponry Planning

Proactive Weaponry Planning

Methodology

Footnotes

References Cited

Chapter 2: Preliminary Delineations

Agency Role Model

Confrontational Needs

Training and Education

Patrol Activities

Tactical Constraints

Personnel Considerations

References Cited

Chapter 3: Weaponry Criteria Delineations

Sidearms

Holsters and Leather

Long Arms

Impact Weapons

Chemical Agents

References Cited

Chapter 4: Points of Departure

References Cited

Figures and Tables

Chapter 1: Problem Statement

Figure 1 Classic Weaponry Planning

Figure 2 Reactive Weaponry Planning

Figure 3 Proactive Weaponry Planning

Chapter 2: Preliminary Delineations

Table 1 Distribution of Assault Incidents by Officer Assignment

Table 2 Law Enforcement Officers Killed by Type of Activity

Chapter 3: Weaponry Criteria Delineation

Table 1 Law Enforcement Officers Slain - Most Dangerous Hours

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Problem Statement

The first years of this decade served to accentuate the results of unthinking, untrained men reacting to situations of stress. Media coverage and commission studies have dramatically emphasized the need to establish theoretical criteria bases to be utilized when planning for and dealing with social confrontations¹.

The dilemma is especially acute in the area of law enforcement weaponry systems. Policy makers are not certain of the purpose of police armament. Is weaponry a last resort means of self protection, an alternative to assure the safety of citizens or a method of punishing criminals? The absence of such fundamental conceptual bases leads to haphazard and often impractical solutions to perceived, yet unverified problems.

Abstracts for the selection and evaluation of law enforcement weaponry systems based upon the specific types of behavioral confrontations in which enforcement agencies participate have failed to materialize. The absence of such essential typologies is attributable to the traditional methodologies employed by researchers.

Classic Weaponry Planning

A traditional research format with regard to weaponry selection has been to (1) establish what weaponry is currently in use by law enforcement agencies in the United States and (2) determine by case studies how effective this specific weaponry has been in

specified types of behavioral confrontations. From this data investigators hoped to establish criteria for the selection and evaluation of weaponry by individual departments (See Figure I). The procedure has proven totally unsuccessful.

At the present time, information regarding the characteristics of existing armament or the effectiveness of present weaponry systems is not available on a quantified national basis. The current dilemma was best summarized by Professor Allen P. Bristow (1975) in a personal letter to the author:

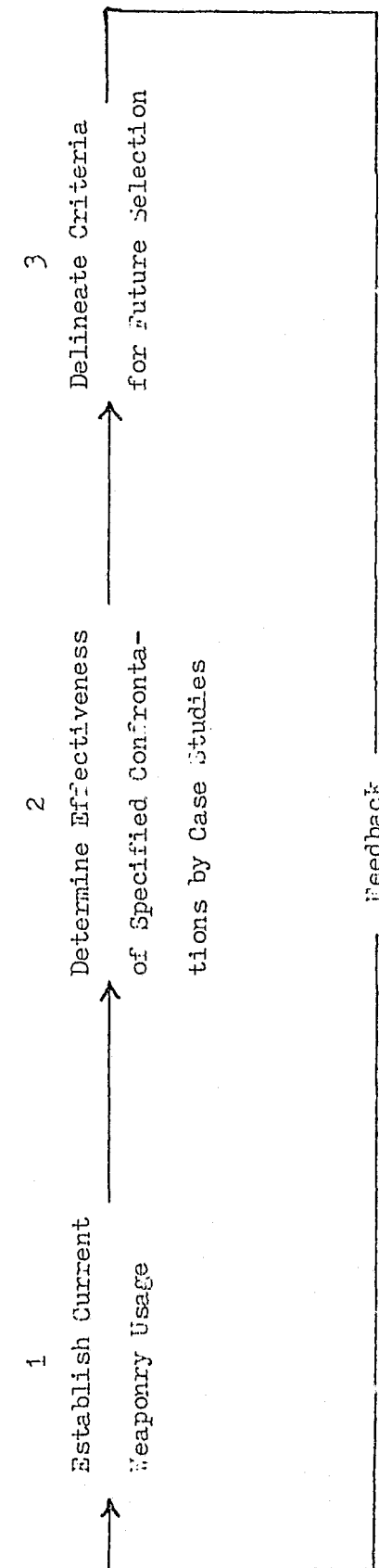
"Unfortunately, there are no studies which document in detail the conditions or armament of participants in police fire fights. I attempted to do this in my original research (1960), but was unable to obtain support."

In 1973, Bristow attempted to analyze one specific area of law enforcement armament. His text, The Search for an Effective Police Handgun, is the most complete analysis of its type to date. However, the work neglects a number of significant areas of police sidearm development. Because of its limited scope, the treatise fails to examine a variety of additional police weaponry categories.

This author's own efforts to secure quantifiable data regarding one specific category of armament (the type, caliber and features of handguns sold to law enforcement agencies during the past five, ten, fifteen and twenty years) also proved futile. The three principle American manufacturers, Colt, Ruger and Smith and Wesson, indicated that this type of information was "not available." The problem stems as much from marketing characteristics of the firms involved as from reluctance to release

Figure I

Classical Weaponry Planning



information of this type to the public. Mr. Bob Bolling (1975) of Colt's Patent Firearms outlined the situation:

"I could have a distributor somewhere selling some department and never know it. We don't bid direct from the factory. For example, the city of Compton, California bought 102 .45's last year from my distributor in Torrance, California. I only heard about it after the fact as they move thousands of automatics and a hundred or so is not remarkable."

It is unlikely that such quantifiable information regarding the types of weapons currently in use by American law enforcement agencies will become available in the near future. The nature of such statistical data is so vast and dynamic that a yearly, updated, computerized format with mandatory reply procedure would be required.

Phase two of the classic research procedure, case studies of the effectiveness of specific weapons in selected confrontations, has also proven unworkable. Allen Bristow (1963) pioneered research in this neglected area of analysis. Unfortunately, his California based study included only 110 incidents involving 150 officers who had been shot during a three year period between 1959 and 1961. A review of the officer fatality statistics of the Federal Bureau of Investigation for the same three years (Hoover, 1959; 1960; 1961) accentuates the limited scope of the Bristow thesis.

The Police Casualty Series of the International Association of Chiefs of Police, the FBI report, A Summary Analysis of Law Enforcement Officers Killed 1964-1973 and the Chapman, Swanson and Meyer report, A Descriptive Profile of the Assault Incident

(1974) represent additional attempts to quantify the effectiveness of present weaponry systems in a variety of behavioral confrontations. Though well executed, they lack the broad scope of incidence variables and detailed analysis of specific confrontations necessary for meaningful analysis upon which to base policy decisions.

As with weaponry usage figures, detailed national analysis regarding the effectiveness of armament categories in specified behavioral confrontations is unlikely. A computerized collection service similar to the Federal Bureau of Investigation's Uniform Crime Report could provide a great deal of vital data. However, a five to ten year period of analysis would be necessary to formulate meaningful national trends. The problems inherent in the UCR's self reporting system would be compounded when dealing with weaponry incidence analysis.

While the traditional format for the delineation of weaponry criteria has proven ineffective, the conceptual mandates they attempt to derive remain essential. Because of the lack of realistic criteria standards, hardware that fails to meet the confrontational needs of user agencies and the public they serve has proliferated.

Reactive Weaponry Planning

A wide variety of weaponry is purchased each year by law enforcement agencies. The preponderance of hardware acquisition that characterized the early years of LEAA grant requests provides a dramatic example. The trend is understandable if of questionable

virtue. Weaponry is a highly visible, popular (among departmental personnel) and readily quantifiable entity. Short term acquisition goals, "To modernize the patrol division by equipping each officer with a .357 magnum revolver by December 30," are readily obtainable given adequate funding. Performance standards, "To reduce the incidence of confrontational overreaction 2% by December 30," are more difficult to achieve or effectively measure. Media and general public attention are more readily focused upon spectacular hardware demonstrations than mundane statistical indices of incremental progress.

Departmental weaponry purchases have a profound effect upon the agency, its personnel, subjects with whom they deal and the public. Weaponry is an effective measure of agency professionalization. Those departments which have a sound cognition of their service - peace keeping role are unimpressed with the fads, gimmicks or artificial standards that sway their less astute counterparts.

The distinction between a service oriented peace officer and paramilitaristic law enforcer is critical. Officers trained and armed as an assault force will be perceived and react as aggressors rather than protectors. The effect of role distinction upon subjects is illustrated by the New York City Police Department's Crisis Intervention Unit. Perception of a police officer as threatening or supportive is a critical determinant of subject response.

The necessity of weaponry in twentieth century law enforcement is not questioned. For the purposes of this study, it is assumed that police weaponry is a tactical necessity in the modern American context. The discussion concerns the base line criteria upon which

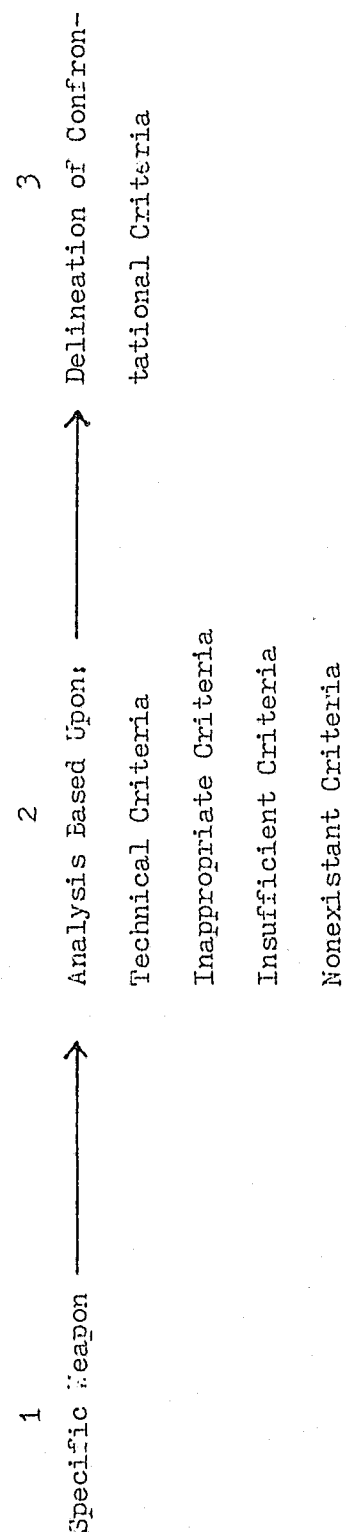
weaponry selection is contingent. In response to the classic school of weaponry planning, current trends are in the realm of reactive analysis.

Reactive weaponry planning concerns the application of artificial standards in an attempt to delineate confrontational criteria (See Figure II). Technical performance criteria are the most common and fallacious. For example: There is little question that the Smith & Wesson model 29 is an extremely well tuned, accurate and dependable handgun. However, there is a critical question regarding the need for .44 Magnum revolvers in a law enforcement context. What is technically acceptable is not necessarily prudent in a given operational framework.

A second type of artificial standard is inappropriate criteria. Departments which adopt a specific type of rapid revolver reloading device because it will "not break when dropped on cement" have committed such a logical fallacy. The significant question is whether or not there is a need for speedloading devices in a law enforcement setting. If such a need exists, criteria should be speed, ease of reloading and reliability of insertion, not an artificial standard of indestructibility.

A third type of fallacious standard is the insufficient criteria characteristic of manufacturers. Blatant examples come from light weight, high velocity projectile proponents. Jacketed Hollow Point (JHP) and Jacketed Soft Point (JSP) ammunition will theoretically increase stopping power, reduce ricochet potential and decrease the danger of penetration. However, a

Figure II
Reactive Weaponry Planning



wide variety of situational contexts and utilization factors decrease the potential for such performance. Additional analysis regarding lack of expansion, inadequate penetration and social reaction to employment must be conducted. Departments adopting such loadings upon the basis of manufacturer's recommendations and peer agency popularity are initiating policy with far reaching implications on the basis of insufficient criteria.

In extreme cases departments base weaponry policy upon nonexistent criteria. The popularity of ballistic armor among small and medium sized police departments is a case in point. Mega agency emulation in the purchase of equipment is sophomoric and short sighted. The commitment of valuable societal resources without proper evaluation or cognition of individual departmental needs, while lauded by manufacturers, is totally unacceptable in a public agency context.

The classic school of weaponry planning is impractical given current data bases which cannot delineate current weapon usage² or effectiveness in specified confrontations. A comprehensive case study approach to determine effectiveness would be cost prohibitive, given the diversification of significant variables. Selective studies of specific weaponry classifications would be at best arbitrary, at worst prejudicial. The diversification of relevant precipitative confrontational factors demands a more cosmopolitan perspective.

The classic school also suffers from lack of an adequate agency role conceptualization base, i.e.; general service, peace-keeping or enforcement. The model does employ a feedback loop.

Criteria for the selection of weaponry based upon past performance will affect future weaponry design.

The reactive model of weaponry planning incorporates no feedback loop. Armament is evaluated against technical, inappropriate, insufficient and often nonexistent criteria. Once "analyzed" a category of utility is constructed. The major weakness of reactive planning is that confrontational criteria are arranged to fit armament instead of evaluating weaponry in terms of the confrontational context. No attempt is made to analyze an agency's basic role.

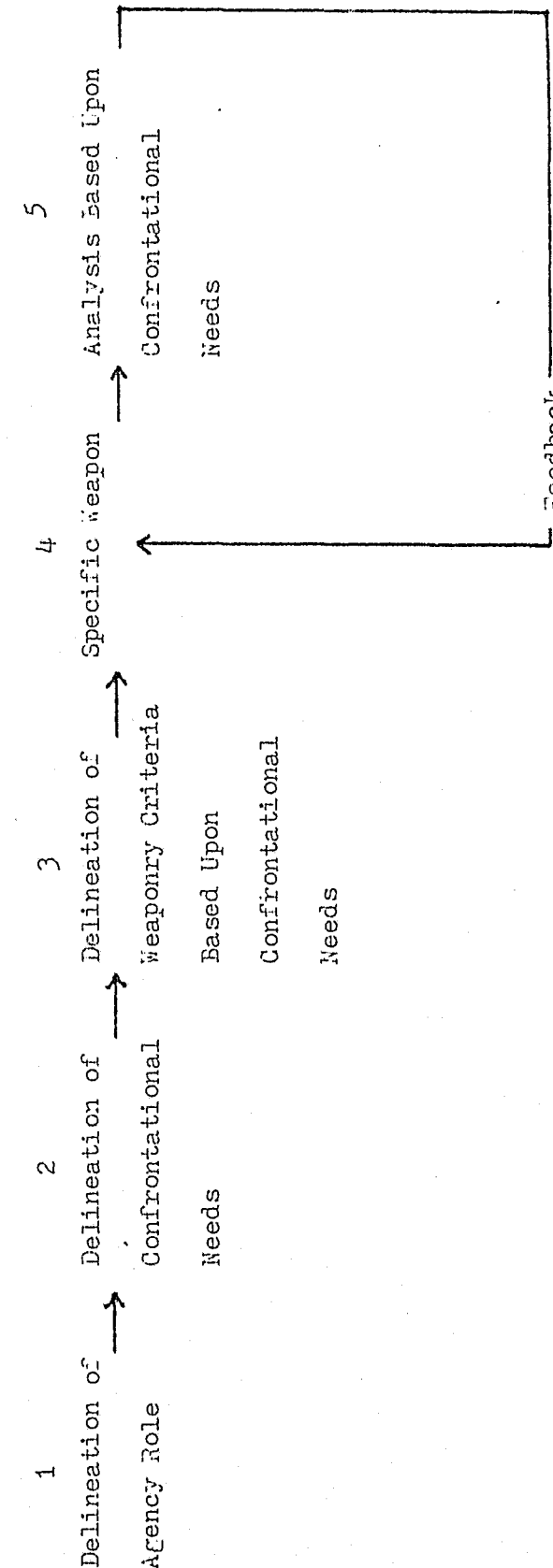
Proactive Weaponry Planning

A need exists to develop a taxonomy of weaponry criteria based upon dimensions of the behavioral confrontations in which law enforcement officers are engaged. The typology must be proactive with weaponry measured against specific behavioral criteria which are in turn based upon a specified agency role (See Figure III). The analysis must be based upon predefined confrontive needs as distinct from reactive planning in which confrontational criteria are defined as a result of weaponry analysis. Feedback and modification is not only possible, but vital to survival of the system.

Delineation of agency role which affects confrontational needs and thus weaponry criteria is based upon a multiplicity of extra-agency and intra-departmental forces, i.e.; city council, unions, fraternal organizations, employee groups, courts, prosecutors, professional organizations such as the International

Figure III

Proactive Weaponry Planning



Association of Chiefs of Police, pressure and interest groups, funding organizations, subunit organizational goals (both staff and line), the media, the mayor and or city manager, specialized client groups, Civil Service Commission, the agency funding body and outside consultants.

Proactive weaponry planning is an open systems model with a strong agency role conceptualization. It delineates weaponry criteria from a theoretical base of confrontational needs. The taxonomy of criteria precedes examination of specific weaponry. Analysis based upon confrontational needs thus feeds back and modifies the specific weaponry types, but not the criteria base which is altered through redefinition of the agency role.

As a model to illustrate this type of proactive weaponry planning, the most common area of law enforcement activity, uniform patrol, will be examined. The analysis will focus upon the types of questions that must be asked and the types of research that must be conducted if ill conceived priorities and shortsighted planning is to be avoided.

Methodology

A technical evaluation of existing law enforcement armament is beyond the scope and intent of this work. There is little debate in law enforcement circles concerning the need for effective, impartial, ongoing weaponry evaluation programs. There is less agreement upon the type of evaluation to be conducted or the criteria against which weaponry will be assessed.

Usage and function criteria for evaluation of specific weaponry

systems (classic model) is within the purview of an agency oriented test facility such as the Weapons Data Service of the International Association of Chiefs of Police.³ Studies of specialized armament areas conducted by individuals and departments⁴ also fall within purview of the traditional evaluative model and are unacceptable from a planning perspective.

Adherence to manufacturing specifications and the establishment of general technical criteria for a variety of equipment categories is presently being monitored by the Law Enforcement Standards Laboratory of the National Bureau of Standards.⁵ Additional technical evaluation is available from independent, impartial research facilities in the private sector such as the H.P. White Laboratory.⁶ Centralized technical specifications are obtainable from agencies such as the Sporting Arms and Ammunition Manufacturers Institute.⁷

Unfortunately, such technical evaluations from a reactive weaponry planning basis leave questions of a far more basic nature than design specification control and mechanical functionality unanswered. A weapons system may be technically acceptable and yet of limited utility in specified behavioral confrontations. Chemical agent DM is a case in point.⁸

The proactive planning model is an attempt to establish a taxonomy of criteria for the selection and evaluation of law enforcement weaponry systems that has proven impossible through the classic or reactive methodologies of weaponry researchers. Far from a technical treatise, its purpose is to delineate

situation based criteria that may be applied to weaponry regardless of mechanical, conceptual or functional design.

The initial project phase discusses the process of delineation of a generalized agency role model for the uniform patrol function. Because of the cosmopolitan perspective of this research, the significance of open system inputs that precipitate agency role formulation is reviewed.

Delineation of project model dimensions (the confrontational needs of uniform patrol) is discussed in Phase Two. Types of training received and activities in which officers may be engaged were derived from interview, participant observation and literature review. A survey of past research was conducted in an attempt to construct a national perspective of tactical considerations, i.e.; types and frequency of confrontation by time, geographic area, population group, and agency organizational structure. Personal characteristics, i.e.; race, sex, education, background, height and psychological makeup of officers and subjects involved in specific types of encounters were also examined. From this analysis a profile was constructed of the confrontational needs characteristic of uniform patrol.

Based upon the preceding data, Phase Three discusses the process of delineating weaponry criteria based upon confrontational needs. To impart a sense of order to the discussion, considerations are grouped under seven basic weaponry categories common to the uniform patrol function. The mechanistic process of analyzing individual products in terms of the proactive weaponry planning model (Phase

Four and Five) is left to individual agencies. It is the initial three phases of the model with which this study is concerned. The final dyadic segments are essentially cyclical phenomena. It is within the preliminary triad of the weaponry planning format that significant and far reaching policy decisions are made. It is in the delineation of these initial phases that the concept of proactive weaponry planning (PWP) significantly departs from classic and reactive methodologies. It is here that an open systems perspective based upon strong theoretical foundations may significantly impact upon planning and policy formulation.

The final chapter of this project presents points of departure and proposes two categories of weaponry research. Initial discussion concerns investigative priorities essential to precise definition of confrontational needs. The section explores the type of data that is essential to proper formulation of Phase Two PWP delineations. The second portion of the agenda presents additional confrontational typologies for examination in light of the proactive methodology. Civilian uniform patrol, agent and undercover investigation, civil disturbance control, executive protection and anti-sniper operations are discussed.

Footnotes

¹See for example, The President's "Commission on Law Enforcement and Administration of Justice The Challenge of Crime in a Free Society (1967), and the American Bar Association's Comparative Analysis of Standards and Goals of the National Advisory Commission on Criminal Justice Standards and Goals with Standards for Criminal Justice of the American Bar Association (1973).

²General information of this type became available as a result of the LEAA Police Equipment Survey (Bergsman, Bunten, & Klaus, 1973). The survey methodology was too general to serve as a basis for policy decisions.

³See for example, Evaluation of Selected Aerosol Irritant Projector Formulations (undated), Steele (undated) and Crockett (1969).

⁴See for example, Swearingen (1966), Applegate (1969), Jordan (1970), Truby (1972), Sagalyn (1972), Robinson (1973) and Shearer (1973).

⁵The scope and publications of the Law Enforcement Standards Laboratory since its inception have been limited. In 1975, the organization completed the most extensive analysis of handgun ammunition since Hatcher's work in 1935.

⁶H.P. White Laboratory was in charge of the handgun endurance tests for the 1968 Gun Control Act.

⁷The Sporting Arms and Ammunition Manufacturers Institute establishes pressure levels and tolerances for all American cartridges and arms. It was through their efforts that the +P high pressure cartridge designation was adopted.

⁸Chemical agent DM (color code green - Diphenylamine Chlorarsine) is commonly referred to as "Sick Gas." DM proved extremely effective in dispersing large crowds, but caused extreme (24 hour) nausea, loosening of the bowels and in some cases death. What is technically feasible may prove totally impractical (Jones, 1970).

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Preliminary Delineations

Egon Bittner in his articulate analysis of the functions of police in modern society typified the law enforcement role as, "nothing else than a mechanism for the distribution of situationally justified force in society." He went on to point out:

"It is possible, certainly not unthinkable, that at some time policemen may be able to compel the desired outcome of any problem without ever resorting to physical force. But it appears that in the existing structure of communal life in our society such force is not wholly avoidable. This being the case, not only its avoidance, but its employment must be methodically normalized" (Bittner, 1970).

Formulation of the normative policies that Bittner spoke of is beyond the intent and scope of this treatise. Further, the value of such normalization is debatable without prior delineation of the type suggested in this work. Two points are significant. Initially, the types of weapons employed will have a dramatic impact upon the normative pronouncements needed. If automatic weapons are not issued to personnel, normative constraint upon their contextual use may be avoided. Second, the pronouncement of regulative norms may have unexpected precipitative effects.

Harrison and Lepitone (1972) concluded that the frequency of punishment through weaponry is partially a function of the range of punitive power of the weapons being carried. In their study regarding the use of riot batons by officers carrying firearms, but forbidden to employ them and officers not carrying weapons, the researchers found that individuals forbidden weapon usage tend to compensate by applying sanctioned arms with increased lethality.

The issuance of prohibited weaponry in addition to approved armament functions as a scale anchor, causing the use agent to underestimate the punishment he is delivering while justifying to himself the use of increased punishment.

It would seem far more prudent to initially determine the confrontational needs of enforcement personnel, then issue appropriate armament. Issuance of a myriad of weaponry with contextual utilization contingent upon a variety of normative conditions which may be obscure to even the issuing agent is undesirable. The application of such norms requires a degree of analysis not often possible in the heat of a confrontational encounter.

The preliminary delineation phase of proactive weaponry planning involves conceptualization of a generalized agency role model from an open systems perspective. The approach invokes a cosmopolitan perspective (Gouldner, 1957). While Gouldner's analysis dealt with latent social roles in an educational context, his conclusions are here extrapolated to include law enforcement personnel.

Local and state police organizations are extremely divergent with regard to agency policy, degree of professionalization and organizational structure; i.e., goals, effectiveness, size, complexity, formalization, power, conflict, leadership, communication, decision making processes, environments and susceptibility to change (Hall, 1972). Construction of individual agency role models or even major category models (for small, medium and large

police departments, sheriff's departments and state police agencies) would be superficial and of marginal utility. Instead, "cosmopolitan license" has been taken in this work. The effort is directed at distillation of generalized role models to be employed as "ideal types" in much the same manner as Max Weber's (1947) concept of an idealized bureaucracy. If the "ideal" agency role model is nonexistent as a pure form in the real world, it must be remembered that the presentation is only of an ideal. The formulation is of utility merely as a means of conceptualizing proactive weaponry policy. Nonexistence of a pure form should not be construed as a negation of the central thrust of this work. The idealization is merely a delineated concept upon which to base future decisions.

Agency Role Model

James Q. Wilson in his perceptive work, Varieties of Police Behavior - The Management of Law and Order in Eight Communities, distinguished three principle law enforcement styles. When the operational code of a department, with regard to situations that do not involve serious crime, revolves around order maintenance (rather than law enforcement) as the principle function, Wilson terms the agency of a "watchman style."

"What is the defining characteristic of the patrolman's role thus becomes the style or strategy of the department as a whole because it is reinforced by the attitudes and policies of the police administrator" (Wilson, 1963, 140).

The "legalistic style" encompasses comparison of observed behavior with a legal standard and the invocation of arrest if the legal

standard has been violated. Law enforcement rather than order maintenance is emphasized in this style of agency behavior.

The third style in Wilson's agency orientation triad is termed "service:"

"The police take seriously all requests for either law enforcement or order maintenance (unlike police with a watchman style) but are less likely to respond by making an arrest or otherwise imposing formal sanctions (unlike police with a legalistic style). The police intervene frequently, but not formally" (Wilson, 1968, 200).

In his analysis of the history of urban police in the United States, James E. Richardson (1974) made a similar distinction between agency role models of law enforcement, service and peacekeeping. Richardson's contention that police-men "spend most of their active duty time in service and peacekeeping pursuits," is consistent with the analysis of Heiderhoffer (1967). Perhaps discrepancies between the traditional police role as an objective, impartial law enforcer (idealized in police academies) and the practical reality of field procedures (McNamara, 1967) precipitates the incidence of cynicism revealed by Heiderhoffer (1967).

Because proactive weaponry planning employs an open systems perspective, it is appropriate to examine the factors influencing formation of a generalized agency role model whether it be watchman (peacekeeping), legalistic (law enforcement) or service. While societal, geographic and ecological variables will certainly impact upon the generalized role model, they do not possess the significance of what may be termed multiple access channels of

communication (Polombiewski, 1972). These variables are defined as external sources of influence which do not follow the traditional bureaucratic chain of command. Major access channels impacting upon the proactive weaponry planning function are included to provide more adequate understanding of role model formation.

Local police agencies receive planning inputs from city councils while regional law enforcement agencies such as sheriff's departments may acquire this type of influence communication from supervisory boards. State agencies and federal authorities receive similar inputs from legislatures. The baseline point of commonality inherent in all communication is the presence of political overtones (partisan or not).

The growth and impact of unions upon public sector agency planning was well documented and effectively analyzed by Pursley (1973). Direct influence may be invoked; i.e., specific equipment demands such as the procurement of revolver speed reloading devices under the heading of safety equipment by California communities (Rifkin, 1975). In addition, budget increases brought about through union demands may significantly reduce allocations available for equipment purchases. The phenomenon is especially acute in the public sector where funding resources are relatively stable.

The strength of fraternal organizations and employee groups was well illustrated by the issue of a Civilian Review Board in New York City. The NYPD Patrolmen's Benevolent Association

documented its power base with rejection of the board concept during a public referendum (Niederhoffer, 1967, 181-190). The potential of such employee groups to effect change within the weaponry planning context is illustrated by agency compliance to issuance demands for lightweight ballistic armor presented by patrol personnel in numerous communities (Perkins, 1975).

The influence of court personnel is a major determinant of agency roles and thus of weaponry procurement policy. The legality of jacketed hollow point (JHP) and jacketed soft point (JSP) ammunition remains a major issue. Opinions by district attorneys concerning the utilization of equipment ranging from aluminum flashlights (Keller, 1975) to chemical agents (Welson, 1975) impact significantly upon procurement standards of individual agencies.

Influence of professional organizations such as the International Association of Chiefs of Police and the National Sheriff's Association, both direct (testing and evaluation, dissemination of data regarding weaponry typologies and recommendations concerning acceptable usage techniques) and indirect (establishment of professional standards) may inspire formulation of agency role models.

Pressure and interest groups such as the American Civil Liberties Union (ACLU), National Rifle Association (NRA) and National Association for the Advancement of Colored People (NAACP) affect both procurement and usage policies. Lobbies provide indirect influence, specific actions; i.e., protests and legal suits provide direct input, and programmatic measures such

as the Certified Firearms Instructor program and training classes of the National Rifle Association influence policy formulation and equipment standards.

Major funding impact upon law enforcement agencies in recent years has come from the Law Enforcement Assistance Administration (LEAA) through State Planning Agencies (SPAs). The proliferation of weaponry related requests during initial funding phases was as much a function of poor program conceptualization on the part of LEAA as inadequate realization of organizational deficiencies by participating agencies. Regional, state and local funding organizations continue to affect agency role model formation.

Specialized goals of organizational subunits while part of the agency context are often divergent from general institutional pronouncements (Etzioni, 1960). Preeminence of Special Weapons and Tactics Teams, a concept pioneered by the Los Angeles Police Department (1974) and since emulated by departments throughout the United States, offers an excellent case in point. The weaponry planning function, while ideally compatible with general organizational goals, may be significantly altered by specialized divisions.

Media coverage (or lack of coverage) has traditionally influenced the entire police planning function. A desire to improve the public image of departments (the police community

relations movement) and to draw upon favorable media coverage whenever possible, has produced a preoccupation with weaponry. Armament is an extremely sensational phase of law enforcement activity. Spectacular demonstrations of firepower attract more public interest and thus media coverage than statistical indices regarding program revision, personnel improvement or agency reorganization.

The input of auxiliary staff units (planning and research or testing and evaluation) should theoretically have significant impact upon role model definition and subsequent formation of weaponry policy. Organizational problems inherent in the bureaucratic line and staff dicotomy (Dalton, 1959) has often lead to jurisdictional disputes within law enforcement agencies. The rejection of staff recommendations by line personnel and general resentment of an invasion of territorial prerogatives has resulted in generally poor role conceptualizations. Weaponry planning, classic or reactive, has therefore lacked coherence.

Input of elected mayors and appointed city managers may involve organizational directives which precipitate policy formation. General administrative attitudes will affect the type and quality of policing demanded in a given community. Such

indirect influences will dramatically impact upon the formulation of a generalized agency role model (Hamilton, 1975).

In much the same manner, specialized client groups (down-town merchants) may indirectly influence the police posture of a given community. Preoccupation with order maintenance (watchman style) and strict law enforcement especially with regard to traffic and parking (legalistic style), as opposed to service may affect the shopping characteristics of citizens. Negative influence factors resulting from a particular policing style will normally feedback from such client groups through legislative bodies (city councils) and executive branches (mayor or city manager).

Despite the observation of Felix Higo (1972) that the impact of Civil Service Commissions has diminished in recent years, their input into the formulation of a generalized agency role model must be included in any comprehensive analysis. Traditional commission postures have favored the legalistic stylization (an objective, impartial enforcer of existing laws) as the agency ideal. Bureaupathology (Thompson, 1961) is facilitated, structured, and reinforced by the status quo preoccupation of Civil Service Commissions. Perhaps it is a major contributory factor

to the dicotomy between organizational ideal and agency practice discussed by McNamara (1967) and leads to a high degree of cynicism (Niederhoffer, 1967). Both factors are counterproductive to establishment of realistic agency role models.

A police commission or governing board offers direct role input through policy formulation. As a supervisory agency, their role is theoretically of critical significance. In reality, impact may be drastically reduced through competition with other governmental agencies, bargaining with suppliers, consumers and other organizations, co-optation of threats to stability or existence (Selznick, 1966) and coalition with other organizations; i.e., law enforcement, public service or nonassociative (Thomas & McEwen, 1958). Internal goal change may come about as a result of displacement (Etzioni, 1964) or what Bertram Gross (1968) labels "number magic;" i.e., moves to become more competitive and thus receive a larger share of the public budget due to quantitative or qualitative increases.

The finance department or bureau charged with budget formulation may exercise control ranging from general supervision of budget appropriations in a line item format, through performance budgeting, to input regarding the value of program objectives in

in a Planning, Programming and Budgeting System (PPBS) (Henry, 1975, 159-170).

Impact of outside consultants upon the policy formulation of a law enforcement agency is often dependent upon receptivity of administrative personnel (Cooper, 1975). Detailed data analysis such as the Kansas City Preventive Patrol Experiment (Kelling, Pate, Dieckman, & Brown, 1974) may tend to indicate a need for significant alteration of agency activities that would ultimately lead to redefinition of agency role models. Actual organizational impact is subject to additional constraints.

Manufacturers, especially within a weaponry context, significantly influence the role of particular agencies by the type of armament that is developed and marketed. There is a vast role distinction implicit in the purchase of police "clubs" (an offensive instrument of aggression) by one agency (Anderson, 1975) and the purchase of police "batons" (a defensive instrument of control) by another (Pederson, 1975).

Professional publications affect the type of role seen as appropriate in a modern social context through explicit editorial statements and implicit programatic activities; i.e., media outputs and acceptance or rejection of articles.

Educational institutions are the last major classification of multiple access communication channels. The attempt to significantly influence agency role model formation was a basic precept of August Vollmer. It continues through LEAA impetus in the development of college and university criminal justice programs (Chamelin, Fox, & Whisenand, 1975, 305).

The emphasis upon multiple access channels of communication in the formation of a generalized agency role model should not be construed as a negation of internal organizational impacts. The significance of inter-departmental inputs is taken as a given. The emphasis upon external input channels in the open systems perspective of proactive weaponry planning merely recognizes the area of greatest potential for formulative influence.

Confrontational Needs

Delineation of project model dimensions, in this case confrontational needs of the uniform patrol function, are dependent upon four major consideration categories. Each category (training and education received, activities in which engaged, tactical constraints and personnel considerations) is in turn contingent upon a generalized agency role model. The purpose is to develop

a scheme for weaponry evaluation based upon a knowledge of the context in which they will be employed. What types of training and education do enforcement personnel receive? In what capacities that mandate weaponry use are they likely to be engaged? What are the tactical constraints (geographic, population group, time of day, and deployment structure) within which they must function? Are there personnel factors (race, sex, age, background, height, and build) of patrol officers and persons with whom they will have contact that may affect the outcome of a given confrontation?

The preeminent shortcoming associated with any analysis of confrontational needs stems from the situation specificity of a confrontational context. For this reason, little meaningful data analysis has been conducted in this area. The general spectrum of confrontational research is fertile for methodologically sound statistical analysis. The implications of computerized confrontational simulations based upon a JUSSIM type format are intriguing in this respect.

Training and Education

It was Egon Bittner's astute perception that "it must be made clear as unambiguously as possible . . . education does not

count in police work" (1970, 83). To this end the American Bar Association's Institute of Judicial Administration delineated a basic dicotomy between training and education:

"Training programs should be designed, both in their content and in their format, so that the knowledge that is conveyed and the skills that are developed relate directly to the knowledge and skills that are required of a police officer on the job. Educational programs that are developed primarily for police officers should be designed to provide an officer with a broad knowledge of human behavior, social problems and the democratic process" (Institute of Judicial Administration, 1972).

A question exists regarding the effect of training and education upon performance of the police function, whatever the agency role model (McNamara, 1967). Perhaps there is a distinct police personality upon which education can have no effect. A cluster of factors (F Scale characteristics of conventionalism, authoritarian submission, authoritarian aggression, anti-intraception, stereotyping, power and "toughness", destructiveness, cynicism, projectivity and exaggerated concern with sexual "goings on") are popularly categorized as making up a "police personality" typified by suspicion, conventionality, cynicism, prejudice and distrust of the unusual" (Buckner, 1967; Skolnick, 1967).

Robert Balch's scholarly analysis of available data regarding the existence of a particular "police personality" type lead him to conclude:

"The devotion of social scientists to the personality model has obscured the important role that organizational factors play in shaping police behavior. Attracting better people to the same old job is not necessarily an improvement. In the case of police work, it may simply mean that college graduates will be "busting heads" instead of high school dropouts" (Balch, 1972).

Police training and education (even since implementation of mandated training acts) are extremely divergent in depth and scope of subject matter (Parker, 1949; Los Angeles Police Department, 1974; Fox, 1975; Land, 1975). Accepting Balch's contention that a specific personality type is not attracted to police work nor produced as a result of academy training, the ability of police education to influence behavior remains subject to question. Niederhoffer's observation (1967) that the New York Police Academy, rated second only to the FBI National Academy, had minimal influence upon the confrontational conduct of officers is enlightening in this regard. More significant than training and education are the organizational variables of a particular agency. This is not to say that education and training have no impact. It is merely a realization that when staff ideal conflicts with line principle, the organizational structure of police agencies is such that line principles prevail.

Two remedial alternatives seem plausible if training and educational ideals are truly desirable to administrative personnel: (1) increase organizational power of the staff function or (2) decrease the socializing power of the line function by restructuring the organization through techniques such as lateral entry and team policing (Sherman, Milton, & Kelly, 1973).

Patrol Activities

Statistical indices do not exist regarding the types of activities engaged in by patrol personnel. General data regarding the nature of patrol work is available from classic texts such as

Wilson and McLaren (1963) and Payton (1967).

An indication of the actual activities performed by officers and the amount of time spent in each was provided by data resulting from the Kansas City Preventive Patrol Experiment (Kelling, Pate, Dieckman, & Brown, 1974). Due to the study's thrust, information released thus far has been in the general category of the amount of time engaged in job related and non-job related activities.

In-depth review of 114 confrontations in thirty-seven south central municipalities lead Samuel Chapman and his associates at the University of Oklahoma to a descriptive profile of the assault incident (Chapman, Swanson, & Meyer, 1974). A distribution by officer assignment (see Table 1) revealed that 86.4 per cent of the occurrences were among officers assigned to some form of patrol. The high incidence of officers assigned to the patrol function may partially explain the distribution. The low incidence of assault (4.6%) among detective and vice work agents, two functions traditionally considered extremely dangerous within the police occupation, raises a significant question. Is there a factor or group of factors peculiar to the patrol function that are precipitants of assault incidents? Perhaps the answer rests in the type of activities performed, tactical considerations involving place of activity occurrence, or in personnel considerations affecting the selection and socialization process for detective and uniform patrol officers.

No attempt is made in this paper to analyze the multiplicity

Table 1

Distribution of Assault Incidents by Officer Assignment

<u>Assignment</u>	<u>Number</u>	<u>Percent</u>
Auto Patrol	895	78.4
Traffic Patrol	79	6.9
Foot Patrol	12	1.1
Vice, Detective	53	4.6
Jail	41	3.6
Juvenile	1	.1
Other	60	5.3
TOTAL	1141	100.0

Chapman, Swanson, & Meyer, 1974, 29.

of variables that may precipitate violent confrontations with enforcement personnel (Hale & Wilson, 1974; Kieselhorst, 1974; Meyer, Swanson, Hale, & Regens, 1974; Morrison & Hale, 1974; Swanson, & Hale, 1974). There is little question that detailed statistical analysis of police assault incidents should be conducted (Heller, Chapman, Kieselhorst, & Meyer, 1974; Morrison & Meyer, 1974; Regens, Meyer, Swanson, & Chapman, 1974). While methodologies exist (Chapman, Meyer, & Swanson, 1974), such exploration is beyond the scope of this work.

Summaries regarding the most dangerous segments of the police function are available on a yearly basis from the Federal Bureau of Investigation (Kelley, 1974). Annual summaries of law enforcement officers killed (Federal Bureau of Investigation, undated) and supplementary analyses of personnel fatalities over extended periods (Federal Bureau of Investigation, undated) are also available.

Table two reflects a numerical breakdown of the number of officers killed in the United States by type of activity from 1969 through 1973. Clearly the most hazardous activities for working officers are robberies in progress, arrests, disturbance calls and traffic pursuits. These situations are most often encountered by personnel engaged in para-militaristic uniform patrol. While more detailed indices would be desirable, the general realization that uniform patrol per se is statistically the most dangerous phase of police work is assistive. The data further substantiates the type of confrontations which

Table 2

Law Enforcement Officers Killed by Type of Activity

1969-1973	
<u>Confrontation</u>	<u>Officers Killed</u>
Robberies in progress or pursuing robbery suspects	118
Attempting other arrests (excluding robbery and burglary)	113
Responding to "disturbance" call (family quarrels, man with gun)	73
Traffic pursuits and stops	73
Burglaries in progress or pursuing burglary suspects	39
Investigating suspicious persons and circumstances	35
Ambush (entrapment and premeditation)	31
Ambush (unprovoked attack)	25
Handling, transporting, custody of prisoners	21
Mentally deranged	18
Civil disorders (mass disobedience, riot, etc.)	5
TOTAL	551

Federal Bureau of Investigation, undated, 11.

present the greatest lethal potential within the police operation. Generalized as it may be, the information is sufficient to place essential parameters upon a proactive weaponry planning function.

Any attempt to further generalize available findings must be conducted with an awareness that confrontations are situation specific and have a pronounced temporal perspective.

Tactical Constraints

Four tactical considerations are seen as significant with regard to their potential effects upon a proactive weaponry planning function. The first, geographic area of patrol, includes not only the region, state, city and specific district, but a breakdown by type of location in which confrontations may occur; i.e., street or highway, private residence, commercial premise, private club, open area, school or college, hotel, motel, recreation facility (Chapman, Swanson, & Meyer, 1974, 28).

A second tactical constraint exists in regard to population groups with which officers will have contact. Related in substance is the time and light conditions during which such contacts may occur. A preoccupation with weaponry designed for daylight usage would be contrary to the tenets of proactive weaponry planning if the armament might be employed during low light conditions.

The final tactical constraint category relates to agency deployment structure. Department decisions regarding one man or two man, foot, motor or automobile patrol are mandated.

Patrol density and backup potential must be considered. Proactive weaponry planning is contingent upon such alternatives; i.e., agents operating in crowded urban areas will have basic concerns regarding firearms security not present in a rural context.

Personnel Considerations

The final dimension of uniform patrol to be considered in a PWP format concerns the personal characteristics of officers and the subjects with whom they are likely to have contact. The race, sex, age, background, height and build of both agent and suspect must be examined. In addition, the officer's rank, tenure and training and the employment status, combat skill, weapon access and involvement with alcohol or drugs of potential assailants must be considered.

There is little question of the value to be gained through sophisticated data collection and cross correlation of types and qualities of training and education received by enforcement personnel, activities engaged in during the patrol function, tactical constraints involving geographic, population, time and deployment variables and personal considerations regarding both enforcement personnel and probable confrontational subjects. As discussed in chapter one, such methodology is more consistent with the classic weaponry planning methodology. There is serious question regarding the feasibility of such analysis on a scope broad enough to be of proactive value with detail sufficient enough to be of planning utility.

Because confrontations are often situation and temporal specific, the proactive weaponry planning methodology has been advanced. Delineated in this chapter have been the types of questions that must be analyzed by any agency engaged in such an armament planning format. The process of defining a generalized agency role model and specifying confrontational needs was outlined.

Chapter Three analyzes a procedure for determining weaponry criteria based upon the derived confrontational foundations.

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Weaponry Criteria Delineations

The Kansas City Preventive Patrol Experiment (Kelling, Pate, Dieckman, & Brown, 1974) and its subsequent discussion by Davis and Knowles (1975), McNamara (1975), Murphy (1975), Kelling and Pate (1975) and Brown (1975) has given cause to question the deterrence factor of traditional para-militaristic uniform patrol. Despite the study, proactive supervision of American cities utilizing a military based uniform and organization model is institutionalized in twentieth century law enforcement.

A debate regarding the deterrence potential of proactive uniformed patrol will be left to other authors. The attempt here is to establish weaponry criteria for what has been called the cornerstone of American law enforcement (Wilson, 1963). No advocacy position is attempted. It is due to the prevalence of para-militaristic uniform patrol that the traditional posture has been employed to illustrate the proactive weaponry planning methodology.

The initial phase of proactive weaponry planning, as outlined in Chapter Two, consisted of agency determination of a role model. Wilson's typologies (1968) of legalistic, order maintenance and service were presented as "ideal types." Agency identification was seen as a distillation of societal, geographic and ecological variables combined with interdepartmental inputs. However, pre-eminent influence potential was afforded multiple access channels

of communication such as legislative bodies, unions, fraternal organizations, court officials, professional organizations, pressure and interest groups, funding organizations, organizational subunits, media, staff personnel, mayors and city managers, special client groups, civil service commissions, police commissions, budget formulation agencies, outside consultants, manufacturers, professional journals and educational institutions. All are external sources of influence which affect the role formation, but do not follow the defined chain of command.

Phase two of the PWP process involved a delineation of confrontational needs dependent upon dimensions of the uniform patrol function. Training and education received, activities in which engaged, tactical constraints and personnel considerations of officers and the subjects with whom they deal were examined in an attempt to gain perspective regarding the possible confrontational contexts of uniform patrol.

The central thrust of phase three is a determination of weaponry criteria based upon defined confrontational needs. Approximately six hundred letters of inquiry were dispatched between January 1 and June 30, 1975. From the correspondence received, five critical areas of contention regarding weaponry were categorized. The subfields of armament study (sidearms, holsters and leather, longarms, impact weapon and chemical agents) are utilized to illustrate the process of defining weaponry criteria. Each is based upon confrontational needs which were

in turn derived from a generalized agency role model, influenced to a major extent by multiple access channels of communication.

Sidearms

The process of selecting handguns for uniform patrol officers (Bristow, 1973) centers around determination of situations in which the use of a firearm is justified. Such decisions are a function of the type of confrontation in which officers are expected to be engaged which will in turn be based upon a generalized agency role model.

Once decisions regarding confrontational context have been derived (phase two of the proactive weaponry planning model), more specific questions may be logically constructed. Within the established situational parameters is there a problem of stopping power (Hatcher, 1927, 1935, 1935; Cooper, 1961, 1973; Canon, 1974; DiMaio, Jones, & Petty, 1973; DiMaio, Jones, & Caruth, 1974; DiMaio, 1975; Grennell & Williams, 1972; Parsons, 1974; Applegate, 1975; Sestok, 1975), penetration (Canon, 1975; Kopsch, 1975; MBAssociates, 1975; Sestok, 1975; Turcus, 1968, 1969), ricochet (Jurras, 1975) or weapon controllability (Amber, 1973; Kelly, 1975)? If so, the caliber of individual weapons to be selected (Barnes, 1972; Sporting Arms and Ammunition Manufacturer's Institute, 1975) will become a factor.

Is firepower; i.e., the lapsed time discharge potential of an arm, a consideration in the defined confrontational context? If so, a decision concerning revolvers (Keith, 1961; Jordan, 1970; Applegate, 1975) versus semiautomatic pistols (1974) must

be resolved with regard to safety, handling characteristics and functional reliability.

Decisions regarding frame size (Green, 1973; Jinks, 1975; Vogel, 1975), barrel length (Davison & Severson, undated; Weston, 1968, 1970; Roberts & Bristow, 1969) and barrel weight (Abreus, Kirsch, & Smith, 1975) affect not only performance standards during combat, but more significant, will impact upon officer fatigue and departmental image.

As mentioned in Chapter Two, the sighting system of law enforcement firearms must be consistent with agent function if the tenets of proactive weaponry planning are to be preserved. Should defined confrontational needs include low light usage in a service context (see Table 1), high visibility night sights (Caswell Equipment CO, 1975; Cresap, 1975; Fox, undated) are imperative. This is the essence of a PWP model. A service typology would negate acceptability of a paramilitaristic law enforcement sighting policy; i.e., "instinct fire" in the "general direction" of a "perceived target."

A similar format (role model formulation, confrontational need, delineation of criteria) must be adhered to regarding standards for weaponry involved in daylight confrontations (McGivern, 1938).

Items as seemingly inconsequential as handgun grip (Fitz, 1975; Fox, 1975; Herrett, 1975; Jay Scott, 1975; Lomax, 1975; Tyler, 1975; Vogel, 1975), trigger, trigger guard (Theodore, 1975) and hammer design stylization profoundly affect specific

Table 1

Law Enforcement Officers Slain
Most Dangerous Hours
1964-1973

Time Span	Number of Officers Killed
*10-11 PM	74
* 1-2 AM	72
*11-Midnight	62
* 2-3 AM	56
*Midnight-1 AM	49
* 9-10 PM	48
+ 8-9 PM	45
+ 5-6 PM	43
+ 7-8 PM	37
4-5 PM	34
7-6 PM	32
10-11 AM	30
11-Noon	30
* 3-4 AM	29
3-4 PM	29

<u>Time Span</u>	<u>Number of Officers killed</u>
Noon-1 PM	27
1-2 PM	27
2-3 PM	26
8-9 AM	22
+ 4-5 AM	22
9-10 AM	20
+ 6-7 AM	14
+ 5-6 AM	13
7-8 AM	9
Total	850

* Dark hours of the day

+ Low light or dark hours of the day contingent upon time of year and region

66% killed in low light or dark

46% killed in dark

Note: While the Uniform Crime Report lists 853 officers killed between 1964 and 1973, only 850 deaths are recorded by hour of day.

(Kelly, 1973, 44)

modes of combat performance. In much the same manner, construction material (Carpenter Technology Corporation, 1973) and finish (Armoloy, 1975; Cooper, 1974; Gould Engineering, 1975; Maguire, 1975) alter sustained aim fire hit probability, an essential variable within the urban context. Ignorance of such precipitative factors may increase the danger of misplaced projectiles during patrol confrontations. Such items are insignificant so long as agency role remains unimportant. When model definition is attempted, a proactive weaponry planning format must be employed if agent performance and organizational objective are to remain compatible.

Holsters and Leather

A legalistic - order maintenance role model is facilitated by pronounced weapon conspicuity (Bianchi, 1975). The service paradigm favors a low visibility (Safariland, 1975) or concealed mode (Theodore, 1975). The purpose of patrol leather, a function of this role distinction, will suggest equipment norms; i.e., accessibility (Hume, 1975; Safety Speed, 1975; Sparks, 1975), security (Berns-Martin, 1971; Alpha Plastics, 1975; Bianchi, 1975; J.M. Bucheimer, 1975; Hoyt, 1975; Shearer, 1975; Smith & Wesson Leather Products, 1975; Triple K, 1975) and serviceability (Land, 1975). Features including weapon retention (positive, mechanical, spring or friction), position, drop, sight protection and lining impact upon departmental image and officer fatigue as well as performance potential. A similar condition exists with regard to material, design and construction of the equipment

belt, handcuff case and baton ring. A service role is incompatible with para-militaristic weaponry.

Revolver reloading systems (loop, dump, linear and circular) offer an excellent illustration of the proactive planning function. Rapid reloading of police handguns was facilitated by weapon design revisions (Nonte, 1970; Smith, 1969; Smith, 1973). A variety of "speed loading" devices (Friedman, 1975; Safariland, 1975; Dade Screw Machine Products, 1975; Matich, 1975; HKS Tool Product's CO, 1975; Second Six, 1975) have been marketed in recent years.

The assumption relating to each design centers upon the need to maximize firepower in uniform patrol encounter. But, is there a need for the rapid reloading of sidearms within a law enforcement context? Determination must relate to established confrontational needs (PWP phase 2) which are ultimately dependent upon a delineated agency role model (PWP phase 1).

Before debates regarding the advantages of mechanical versus nonmechanical systems may be conducted, it must be established that uniform patrol personnel will or should be engaged within situations that mandate maximized reloading potential. Should such conditions exist, evaluations of material, height, diameter, means of cartridge retention, amount of compulsory grip modification, release procedure, jam potential, cartridge retention when dropped and dependence upon gravity become germane. Rarely are such base line distinctions; i.e., role model, considered.

Long Arms

The astute perception by David Steele (undated) that law enforcement justification for use of submachine guns should be restricted to extreme high level security protection, illustrates an early example of proactive weaponry planning methodology. Steele contended that existing law enforcement role models did not incorporate confrontational needs that would justify weaponry criteria mandating automatic armament. The conceptualization is significant if meaningful strides in weaponry planning strategy are to be taken.

Selection of 12 guage pump action shotguns as preeminent uniform patrol long arms (Applegate, 1969; Robinson, 1973) has seldom been founded upon such deductive formulations. Initial determination regarding the purpose of long arms in a patrol context must be resolved contingent upon confrontational needs and a defined role model. Are long arms to fulfill a confrontational void with regard to deterrence, firepower, penetration and hit probability? If so, requirements of safety (disconnection), handling (length) and function (recoil, magazine capacity, sights and finish) must be considered.

It remains essential that confrontational need criteria be defined independent of and prior to individual weapon evaluation (PWP phase 5). Deviation from the linear planning format creates opportunities to manufacture criteria based upon existing product attributes.

Selection of long arm ammunition is a function of conflict

need defined from a role model and is therefore illustrated. Penetration (Applegate, 1970; Miller, 1973; Robinson, 1973; McMahon, 1975; Interarms, 1975) and stopping power are considered essential to the law enforcement role. An order maintenance orientation may seek less lethal alternatives (Day, 1973; McCawley, 1974; Penguin, 1975; MBAssociates, 1975; Federal, 1975; Aircraft Armament Incorporated, 1975). The service model may totally reject use of long arms such as the 12 guage shotgun within patrol encounters (Colt's Patent Firearms, 1975; Gwinn, 1975; Miller, 1975; Vogel, 1975). Each need criteria is ultimately derived from a distinct role typology.

Impact Weapons

The logistics of police confrontations often preclude use of deadly force, while presenting control situations beyond the scope of unarmed defensive tactics. The purpose of impact weapons within the uniform patrol function must be initially determined; i.e., two hand defensive instrument of control (Applegate, 1964; Koga & Nelson, 1968; Kubota & McCaul, 1972), one hand offensive implement of aggression or alternative to deadly force.

Oriental impact arms such as the yawara (Gluck, 1962; Moynahan, 1963; Matsuyama, 1969; St. Denise, 1964; Keller, undated; Monadnock, 1968), nunchaku (Demura, 1971; Kaneshiro, 1971; Wortley, 1972; Hiroshi, 1974; Phillips, 1972; Verycken & Hess, 1972; Sakagami, undated) and tanjo (Draeger & Smith, 1969; Hatsumi & Chambers, 1971; Saito, 1973) have traditionally been received with greatest favor by service agencies. Military derivations such as chemical batons

(Collett, 1972), electrified nightsticks (Bartel, 1972) and truncheon-firearm combinations (MBAssociates, 1975) have found greater acceptance with legalistic or order maintenance departments.

It is the purpose of proactive weaponry planning to make such compatibility a matter of determined choice from a variety of recognized alternatives. Too often selection has been the result of technical, inappropriate, insufficient or nonexistent considerations (classic weaponry planning).

Chemical Agents

Solid, micropulverized and liquid chemicals may be disseminated by means of liquid expulsion, fog and pyrotechnic devices (Crockett, undated). The burning of granulated chemicals to induce vaporization (pyrotechnic) is uncommon in delivery systems routinely carried by uniform officers. The use of hot gases to vaporize a chemical formulation is generally confined to civil disturbance control equipment.

Until the late 1960's, micropulverized chemical agents were often dispensed by means of expulsion (Swearengen, 1966). The 1968 Gun Control Act banned the importation, production or sale of any tear gas device capable of chambering and firing a shotshell or metallic ammunition (Department of the Treasury, 1969).

At approximately the same time aerosol chemical dispersion units were gaining wide acceptance among police departments. Liquid dissemination systems were silent, more precise and of larger capacity than expulsion devices. A major leader in the

field was General Ordnance Equipment Corporation.

GOEC Chemical Mace^R less-lethal products have had a significant impact upon law enforcement weaponry thought (Smith & Wesson Chemical CO, undated). Extensive testing has been conducted regarding the short range and long term effects of Mace^R type formulations (General Ordnance Equipment Corporation, undated; International Association of Chiefs of Police, undated).

Despite wide acceptance, the desirability of general chemical agent issuance is subject to question from a proactive weaponry planning perspective. The base line question remains: What are the criteria based upon confrontational needs, compatible with delineated role model, which must be developed for chemical weapons? To issue armament without pursuing such a methodology may contribute to the popularity of an unacceptable weaponry alternative.

The third chapter illustrates questions which must be proposed during the proactive weaponry planning process of delineating weaponry criteria based upon confrontational needs. Phase three in a five step linear format, the function encompasses the final unit of PWP conceptualization. It concludes the most significant portion of proactive methodology.

Phase four and phase five of PWP include technical scheme which incorporate their own feedback loop. The final phases constitute a self contained mechanical process. The feedback loop affects phases four and five, while excluding the initial triad. Examples of the function will therefore not be provided

as a portion of this study.

It is within the initial three phases of role definition, confrontational need delineation and weapon criteria determination that proactive planning holds the greatest change potential. The major thrust of this work has been directed toward such a conceptualization.

The possible impact of proactive weaponry planning will be discussed in chapter four. A research agenda of investigative priorities essential to precise definition of confrontational needs will be proposed. Additional law enforcement typologies suitable for weaponry definition in light of the proactive methodology conclude the analysis.

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Points of Departure

The proactive weaponry planning methodology precipitates weapon analysis based upon criteria derived from confrontational needs which are compatible with delineated agency role models. It fosters weaponry selection compatible with the theorized function of officers who will employ the arms.

Thorough PWP analysis would reduce the potential for armament to indiscriminately negate the model image an agency seeks to attain. The process does not assure role - weapon compatibility. Nor does it assume the naive stand that models exist in pure form. James Q. Wilson's triad (1968), tempered by Richardson's historical perspective (1974), is presented as an ideal type. It provides an abstracted base from which to work.

At its best, proactive weaponry planning offers a precise, articulate, reviewable methodology from which to construct responsible policy decisions. It obsoletes both classic and reactive planning typologies while incorporating an open systems academic perspective into a traditionally closed, technical environment.

The greatest deficiency with regard to weaponry study rests within the purview of phase two. While it is enlightening to possess a defined agency role model, additional data could be facilitative.

Research is necessary regarding the actual combat needs of law enforcement personnel. Little quantifiable information exists concerning the type, quantity and quality of training

and education received by enforcement officers. More significant, little is known of its effect. Is it education, the individual's personality or the organizational structure and environment in which he must function which is preeminent in the influence of his actions?

Few statistical indices exist with respect to activities engaged in during performance of the patrol function. Less is known regarding the multitude of circumstances that exist within a time span known popularly as the "assault incident." Rudimentary measures resulting from FBI Uniform Crime Reports are of marginal value in a planning context.

Detailed analysis concerning geographic areas of confrontation, assaultive subgroups, time and light conditions and agency deployment structures are conspicuously absent. Additional data regarding the personnel characteristics of assaulted officers and their assailants is needed on a national basis. Once assembled, data from the four basic areas of confrontational need should be subjected to sophisticated statistical analysis. Yet, a major question exists with respect to reliability of self reported assaultive incidents taken from enforcement agents. A number of organizational variables could affect accuracy as well as incidence of reporting. Participant observation introduces a Hawthorne (Mayo, 1933; Roethlisberger & Dickson, 1939) variable while client surveys in the vain of NORC (President's Commission, 1968) and the National Crime Panel (1975) are suspect by the very nature of police confrontational subject bias.

Awareness of the need for more precise phase two research should not be taken as an indication of classic model advocacy. The proactive methodology remains superior from a planning viewpoint. Rather, the search for more explicit second phase measures indicates a cognition regarding the need for improved phase three criteria delineation. The ultimate objective is to facilitate more effective weaponry analysis in phase five.

The para-militaristic uniform patrol function has been employed throughout explication of the proactive weapon planning model. As indicated in initial chapters, the position was one of expedience rather than advocacy. Traditional uniform patrol is simply the most typical law enforcement posture. However, the weaponry functions of at least six additional enforcement typologies lend themselves to proactive analysis:

- A. Civilian Uniform Patrol - The Lakewood Colorado model of traditional patrol utilizing a blazer style uniform.
- B. Agent Investigation - The detective or "plain clothes" division which performs investigative functions of an agency.
- C. Undercover Investigation - Infiltration activities, typically involving drug enforcement and organized crime control.
- D. Civil Disturbance Control - The humane regulation of large numbers of citizens in an anarchical context.
- E. Executive Protection - The proactive and reactive self defense of domestic and foreign dignitaries.

F. Anti-Sniper Operations - The isolation and control of barricaded suspects in a criminal justice (versus military) context.

A number of academics will in all probability cling to the classic weaponry planning methodology in much the same manner that practitioners will evidence continued allegiance to the reactive function. Maturation of research regarding second phase confrontational needs may be gradual. Application of the schema to additional confrontation typologies will necessitate agency education and introspection.

If acceptance is less than universal, the same may be said for rejection. As Egon Bittner (1970) so articulately observed, "in our society . . . force is not wholly avoidable. This being the case, not only its avoidance, but its employment must be methodically normalized." Consistent with an open systems perspective, dependent upon delineated criteria, derived from confrontational needs, based upon a defined agency role model. . . proactive weaponry planning is a viable methodology for such normalization.

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