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CONSIDERATIONS IN EDUCATING THE POLICE

by

Richard Graham Muir

B.A. Carleton University 1975

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS (CRIMINOLOGY)

in the Department

of

Criminology

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SIMON FRASER UNIVERSITY

April, 1982

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Considerations in Educating the Police

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ABSTRACT

The purpose of this thesis is to address a set of standard assertions, readily found within the police-education literature, which support the notion that 'better education makes better policemen.' In part, these assertions allege that the university educated police officer is: 1) better able to tolerate ambiguity; 2) less authoritarian; and, 3) better able to take initiative and exercise leadership. A review of the literature deals with such issues as police role conflicts and misconceptions, the purpose of higher education and its intended effects on police task requisites, the relationship between education and training, the role of education in professionalizing the police service, and the relationship between education and the police organization (change strategies).

The research design employed in this thesis operationalizes the previously noted assertions concerning (level of) education and a series of occupational and socio-biographical factors as independent variables. These assertions are operationalized through a set of attitudinal scales, including ambiguity tolerance, authoritarianism and internal-external locus of control. Working hypotheses are stated to support the assertions that police officers with higher levels of education are better able to tolerate ambiguity, are less authoritarian and are better able to take initiative. A purposive non-random sample of 202 policemen was selected from those participating in a series

of in-service training courses. This sample reflects a diverse profile of rank, years of service, and level of education. Analysis of variance is utilized as the statistical technique to test the hypotheses. Although a small number of statistically significant but weak relationships were found, the research findings reject the working hypotheses. It was found that education, in itself, is not a significant predictor of attitudes such as ambiguity tolerance, authoritarianism and internal-external locus of control. These findings would suggest that further empirical assessment of the stated relationships is necessary. Moreover, a method of program evaluation should be incorporated to monitor the effectiveness of educational programs which are premised on such assertions.

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DEDICATION

To My Wife

Cork

- a very fine lady indeed -

TABLE OF CONTENTS

Approval	ii
Abstract	iii
Acknowledgements	v
Dedication	vi
Tables	x
I. Introduction	1
II. A Review of the Literature	5
A General Overview of the Police Role	5
Educating the Police	14
Professionalization of the Police	24
Organizational Considerations	29
Discussion	46
III. Methodology	52
Introduction	52
Variables	53
Research Design	62
IV. Findings	80
Description of the Respondent Sample (Independent Variables)	80
The Dependent Variable; Score Distribution Characateristics	93
Significant Relationships Through the Analysis of Variance	96
Police Attitudes Towards Higher Education: An Overview	114
V. Conclusions	123
An Overview:	123

Discussion of Findings	125
Implications	132
Appendix A	135
Operationalization of Variables:	135
Appendix B	140
Scale Reliability and Validity	140
Appendix C	147
Appendix D	162
Alterations of Selected Independent Variables	162
Appendix E	164
Police Training Courses Surveyed	164
Appendix F	166
Discussion of ANOVA Program	166
Appendix G	167
Multiple Classification Analysis Tables	167
Appendix H	187
Police Attitudes Towards Higher Education (Scale Development)	187
Bibliography	205

TABLES

Number	Page
1. Age (in years) of Police Respondents.....	81
2. Sex of Police Respondents.....	82
3. Marital Status of Police Respondents.....	83
4. Socio-Economic Status of Police Respondents.....	85
5. Previous Work Experience of Police Respondents.....	87
6. Present Rank Held by Police Respondents.....	88
7. Years of Service of Police Respondents.....	89
8. Size of Department Served At by Police Respondents.	90
9. Level of Education Acquired by Police Respondents..	91
10. Training Course Attended by Police Respondents.....	92
11. Significant Relationships Between Dependent Variables and (paired combinations) of Independent Variables.....	98

I. Introduction

More so than ever before, police agencies throughout North America have been called upon to augment and improve their standard of service delivery. The demand for increased police efficiency may well be attributed to such factors as rapid societal change and/or increased financial accountability. Suffice it to say that the police have responded with numerous strategies to meet the challenge. Some strategies are practical and technical by design while others address such theoretical issues as human resource and organizational development. One such strategy has been identified as using higher education to improve the overall quality of police performance. Recently the Canadian police community under the auspices of the Canadian Police College introduced 'A continuing Education Program for the Police Profession' (RCM Police Liaison Branch, 1978). This program being representative of such educational strategies, endorses the necessity of post-secondary higher education for the police and is based upon the following set of assertions:

...the university trained police officer is:

1. better able to understand the complexity and range of human behaviour;
2. better able to tolerate differences and ambiguities;
3. better able to understand the causes of crime and the nature of deviance;
4. better prepared to evaluate a difficult and sensitive situation and to arrive at a balanced judgment;
5. more flexible, less hostile, less prejudiced, less

- authoritarian and less cynical when compared with non-college colleagues;
6. possessed of advanced knowledge, in special areas of police work that can only be derived from university training; and
 7. more willing to take initiative, experiment, exercise leadership and use a step by step method to process information and arrive at decisions. (RCMP 1978:1)

Incumbents at all levels of the Canadian police community are encouraged to recognize and participate in this program. An achievement strategy is articulated which provides serving police officers with a structured method of acquiring university level education. Various 'phases' of achievement are subject to certification by the Canadian Police College. It is presumed that police officers will undertake courses of study at accredited post-secondary facilities across the country and have their progress and levels of achievement ratified by the Canadian Police College. It is implied that this program, once recognised, will encourage professionalization by establishing parameters of acceptability and standardization for higher education. Education is seen as the 'yardstick' by which the integrity of the profession is measured. The broad notion that 'better education makes better policemen' seems to be the prevalent theme of this program. It is a theme which has been representative of policing trends throughout North America for more than a decade.

Although the above stated assertions have a certain intuitive appeal, they should not be accepted at face value. A major question is how the broad notion that 'better education makes better policemen' is to be interpreted. Richard

Bennett(1977:1) states the proposition and its underlying rationale as follows:

For the past decade, there has been overt, articulate support for upgrading police service through the employment of college educated personnel. The major justification for this position has traditionally been the hypothesized relationship between higher education and the ability to successfully accomplish the police task. This position maintains that the complexity of the police role requires personnel who, (1) are able to comprehend the intricacies and enormity of the task they face, and (2) have the necessary understanding and skills to successfully perform such a task. Higher education is envisaged as affording the police these necessary prerequisites.

Bennett (1977:3) goes on to note that although the need (for better police performance) has been recognized and a tentative solution has been proposed (more education), little is actually known about the relationship between the two.

There are indeed many grey areas to contend with. From a review of the literature several issues emerge which must be addressed. One such issue is the relationship between education and the police task. To understand this relationship one must first understand what the 'task' or the role of the police should entail. Once the problem is resolved it is then necessary to define education and explain how it is expected to help the police officer accomplish these tasks. To this end it is important to examine the working relationship between the processes of education and training. Education must also be examined in light of recent trends towards professionalization. Education is seen as an upgrading process; consideration must therefore be given to the organizational and working environment

which it is intended to improve.

This thesis will analyze these issues and in doing so gather together the common threads of current research and literature. This approach will offer the reader an overview of education, seen as a process to upgrade the police. In that the Canadian Police College (1978) position is representative of traditional trends within the police education literature the author has made an empirical inquiry into some of the previously noted assertions. A questionnaire was designed to elicit information regarding the relationship between educational level and attitudes of authoritarianism, ambiguity tolerance and willingness to take initiative.

II. A Review of the Literature

If we wish to speak in terms of upgrading the police service through education, we must delineate what tasks the police perform, the context within which they perform these tasks, and the factors which will invariably effect how the tasks are carried out. A review of the literature indicates that there are major areas of conflict and ambiguity surrounding the police role in society: The authoritarian nature of the police role is seen as creating conflicts in a democratic society. The ambiguous and increasingly complex nature of police tasks has been emphasized and misconceptions about the police role have been identified.

A General Overview of the Police Role

1. The Democratic Ideal

George Berkley (1969) places policing on a macro-scale within the context of the 'democratic ideal'. The police exist in a society which stresses consensus rule. The police mandate of crime control is, however, antagonistic in both concept and practice to the basic precepts of democratic society. The police role begins where consensus fails. Thus as consensus diminishes,

police power increases and a paradox of consensus rule through coercive force is created. Berkley (1969) asserts that this disparity between a democratic ideal and the police role is the genesis of many problems facing the police. Freedom and equality, two mainstays of democracy, are at odds with the police mandate. Individual liberty is constrained by police power and the concept of equality is negated by the sanctioned authority of the police. The democratic state brings with it an inherent respect for individual rights and liberties. It has been argued that the 'police-public' partnership will become sorely strained if the image of the police becomes too authoritarian. Heywood (1977:8) portrays this authoritarian image stating that:

Today a policeman arriving at work usually dons his role and enters the community encased in a police car properly equipped with emergency equipment and fire power. From such a mode, surrounded in authority trappings, he proceeds to travel about his jurisdiction. His interactions with the public will be almost exclusively in a legalistic perspective. He may choose to intervene in any observed incident where he feels an offence has or is about to be committed. In such a situation, he enters from a power-coercive point of view representing authority, and has legal powers at his disposal to affect the situation in question.... In our increasingly enlightened and rights conscious society, these approaches are more and more being met with resistance, if not hostility.

Germann (1977:41) concludes his analysis of this conflict by stating that in a viable democracy, concepts such as 'power to the people' and 'to protect and serve' must be more than mere rhetoric. This public/police conflict is not, however, absolute. As Berkley (1976:51) points out:

The police do not create a political culture; they reflect it. They behave in a way that society expects them to behave.

Cooley (1976:30), quoting Sir Robert Peel, tells us that in a democratic state such as Canada, the principle is simple: "The police are the public and the public are the police." But like Berkley (1976) he recognizes the awkward position often assumed by the police:

...if laws are respected and viewed as representing the core values and norms of the community, the police will likewise be respected; if the laws are ambiguous, outdated, and generally not respected, the police will be placed in a similar category. (Cooley, 1976:32)

Here we are presented with the idea that the police will be evaluated by the credibility of the law and not necessarily by their performance.

2. Police Role Conflicts

Nonetheless, it would appear that the presence of the democratic ideal, coupled with the increasing complexity of police tasks is a paramount source of role conflict. This conflict is emphasized throughout the literature.

Saunders (1970) cites the authoritarian image of the policeman as being one reason for the existence of role conflict. It is a public misconception, he states, that portrays the policeman as the 'dumb cop' or the enforcer, being a non-discretionary agent within the community. Saunders (1970:28) goes on to state that:

The policeman's lot is indeed a difficult one. He is charged with applying or enforcing a multitude of laws

and ordinances in a degree or proportion and and in a manner that maintains a delicate balance between the liberty of the individual and a high degree of social protection. (1970.:28)

Norman Weiner (1976:16) presents an extensive review of conflicts inherent in the police task. At the outset, there is conflict between the peace-keeping, community service, and crime fighting facets of the role:

Enforcing the law and providing services for the same group of people requires the policeman to utilize totally different, often contradictory, sets of interpersonal and technical skills; many of which they lack, to present different faces at the same time and to treat the same public in contrasting ways at various times. (1976:16)

Weiner (1976) parallels Heywood's (1977) reasoning when he describes the policeman's ability to enter into a 'partnership' with the community as being undermined by his constant encasement in technical hardware and gadgetry. Further conflict arises from the authoritarian and bureaucratic organization within which the policeman works and the high priority placed on administrative accountability. Conflict also arises over the extensive discretion afforded the police officer on the street and its notable lack of accountability. Finally, Weiner (1976) claims that conflict arises through police perceptions of the public they serve as being, for the most part, negative, ungrateful, unfeeling, ambivalent, etc. The costs of this conflict, he states, are general anger towards the public, entrenchment of the 'us vs. them' attitude, secrecy, excessive use of force and cynicism.

The general trend of the literature is to depict the police role as becoming increasingly complex in response to general societal complexity. When the facets of the job are expanded from investigative to order maintenance to service, ingrained role conflict arises. Role conflict is seen as a natural outgrowth of increasing complexity (Jagiello, 1971 and Kelly & Kennedy, 1978).

The role conflict issue is further defined by Skolnick (1966) and Wexler (1974) who point out the inconsistencies of the 'law and order' model of policing. Skolnick sees it as a dilemma to policing in a democracy in that the police are required to maintain order, yet pay heed to the 'rule of law'. However, if there's a decision to be made, order maintenance will prevail over the rule of law and this is seen by Skolnick (1966) as providing built-in arbitrariness in police decision-making. Wexler (1974) echoes this reasoning, noting that 'law and order' naturally requires that criminals be caught while at the same time rights are protected, i.e., crime control vs. due process. Wexler (1974) foresees that the ambiguity and conflict inherent in the order maintenance task and in the exercise of discretion will lead to the development of a specific 'police culture' and resulting cultural responses to the conflict, i.e., cynicism, suspicion, solidarity and low self-esteem.

Shearing and Leon (1978:342) explain that the police agency is not on an equal basis in entering police-citizen encounters.

The police bring with them the powers of 'Capability and Licence': capability being defined as the special access to physical force and law enforcement as a resource in dealing with problems, and licence being their authority to use these resources.

Everything a policeman does takes place with in the context of police licence and capability. This context, while not an objective feature of the situation in which the policeman is acting, is an ever-present symbolic backdrop to all his activities that is recognized and taken into account by the participants involved in the situation with the policeman. This symbolic backdrop is of critical importance in understanding the policeman's role and the interactions he is involved in, and has an enormous influence on the character of the interaction that takes place between the police and the public.

Contrary to what most of the literature indicates, Shearing and Leon (1978) argue that because of these powers policemen will never be 'social workers'. The police are not called upon under the auspices of a social service. Their capability and licence is fully known to all and it is for this reason they are called, i.e., to arbitrate and to resolve problems as an objective and if necessary, coercive third party.

This analysis of the literature clearly indicates that there are several areas where role conflict can arise. It can arise in a clash between the authoritarian nature of the police role and the democratic ideal. It can arise over the law enforcement and due process requirements of policing. It can arise over the complexities inherent in trying to provide services and enforce the laws, or it can arise over the police officer's ability to use discretion. Conflict and ambiguity is

clearly inherent in many aspects of the police role. In addition, misconceptions prevail as to what that role should be.

3. Misconceptions about the Police Role

The police role should be defined by what it is policemen actually do, yet problems can be readily anticipated if what the task is and what it is perceived to be (by the police) differ to any great extent. Elliot (1973) refers to the 'investigative myth' in police work and the popular misconception of the police, by police and public alike, as being crime fighters. Such is not the case, he contends, although the police have become quite adept as 'crime event recorders'. The role, in his view, is the supplying of non-criminal services to the community, despite the administration's denial of this as a priority issue. The result is that the vast majority of police work could well be handled by a 'hairy armed boyscout'.

Kelling and Kliesmet (1971) also see this as one of the police mythologies used to provide a sense of in-group solidarity to the agency, as well as fostering a sense of glamour and adventure around the misnomer of the crime fighter. Other myths, they claim, are the effectiveness of the command structure, and the unwieldy powers afforded the police in the 'battle against crime'.

Having identified the crime fighter image as a gross misconception, a number of authors have argued that the police

task is ostensibly one of a service nature (e.g., Dalley, 1975; Grant, 1976; Badlamente, et al. 1973; Ashburn, 1977; and Hoover, 1975). The Syracuse study referenced in Wilson's (1968) "Varieties of Police Behaviour", which cites sixty-eight percent of the police task as being service oriented, is often referred to as empirical evidence of this fact. Suffice it to say, that it is one aspect of the police role which demands further attention. And if police work does not supply a surrogate social service role in itself, then at least it can be seen as operating in conjunction with other community 'helping professions'.

In the social aspect of police functioning, situations occur whose best solution cannot be provided by the police, but by other social agencies. Knowing what agencies are available and the function of each can relieve some of the pressure on the police system and also contribute to more efficient functioning of the community service system. (Badalamente, et al. 1973:444).

4. Crime Prevention and the Community

It would appear, at least in academic circles, that there has been a call back to the grass roots notion of preventive policing and the police-community partnership. If crime prevention is a priority then the police role should be one of leadership in organizing community efforts against crime. Allen (1976) reminds us that as society changes, so must the role of the police. McKee (1977), however, has assumed a different perspective, arguing and that understanding and preventing crime

must be foremost on the priorities of the police. Carte (1976) cites the early works of August Vollmer and argues that policing must be redefined to deal with the 'intangibles of crime prevention'. There has been a realization, as explained by Campbell and Formby (1977) that the police alone cannot solve crime, but must look to the community as being the 'eyes and ears' of the police and thus co-ordinating community responses to crime. McKee (1977), however, has assumed a different perspective arguing that in large municipal police jurisdictions, there has ceased to exist a sense of community as we have come to envisage it. Communities now are segmented, differentiated, unintegrated and there exists a great deal of collective ambivalence. In light of this, McKee (1977) claims that a police-community partnership is non-functional. What is required, on the other hand, is effective, high-profile police leaders.

5. Comments

In considering the police role, the literature has presented numerous inconsistencies. There is yet to be a reconciliation between the democratic ideal and the authoritarian mandate of the police, between public and police perceptions of the police role, between societal complexity and police complacency, between law enforcement and order maintenance, between crime fighting and social service, and

finally, between community partnership and implied leadership.

Bennett(1977:1) has drawn our attention to the hypothesized relationship between education and the police task. He speaks in terms of the complexity of the police role and the 'intricacies and enormity' of the task. It is education, he observes, which is expected to provide the necessary understanding and skills to perform the task.

Educating the Police

Education has been touted as the primary mechanism for upgrading the police service. However, as the discussion below will reveal, the evidence is far from conclusive. Education is also seen to have a key role in the process of professional--ization. In order to better understand how education is to achieve these ends, some of the more fundamental issues of education and the purpose for which it is intended will be analyzed.

1. The Rationale for Educating the Police

Those who espouse the benefits of educating the police generally have some utilitarian justification for doing so. Education is seen as being a means to an end, and not an end in itself. There are those, however, who would have us believe that 'an education' is, in and of itself, desirable. Lynch (1976:290) contends that education vests the individual with a superior

sense of what is ethical and honest and,

...the decision to be ethical or honest is a conscious decision to pursue a higher goal than immediate or long-term personal gratification. The ideological commitment must control and specify action. Higher education can help the individual look at the choices, examine the solutions of others, and discuss the possible courses of action outside the pressured situation of day-to-day law enforcement.

This is an untested rationale for higher education, as is the contention of Girard (1977) who states that education must be good by virtue of reflecting an air of self-discipline and foresight, as well as enhancing the individual's ability to read, write, articulate, and thus to communicate better.

A more pragmatic approach is reflected in Berkley's (1969:75) requirement that policemen have a more 'wholistic' impression of what goes on around them.

The policeman who sees all should understand all...only a policeman who is thoroughly educated in the processes and institutions of democracy can perform his task correctly. Knowledge is the first step to understanding and understanding is a necessary step to appreciation.

Weiner (1974) builds on this notion by claiming that although education may not overtly affect attitudes outright, it may broaden the individual's horizons, expose him to new ideas and values, and in doing so help establish a more 'cosmopolitan' individual.

We find further affirmation of this wholistic rationale in Saunders (1970) who states that, again, the purpose of education should be to create thinking and critical beings, sensitive to the democratic ideal. Essential to the proper understanding of Saunders (1970:81) argument, however, is an awareness that:

The reasons advanced for college education for police are essentially the same as those used to justify education as preparation for any other career. They rest more on faith than on fact.

Other proponents of this line of reasoning are Langhoff (1972) who states that there is a dire need for individuals with 'comprehensiveness of thought', and O'Rourke (1971) who emphatically requires that in order to market the 'police product' to the community, a thorough knowledge of those who will be recipients of the product is required. In general, what is being sought is a conceptual and analytical thinker; flexible, tolerant, and capable of 'getting the big picture'.

In keeping with this basic line of reasoning, but perhaps more task oriented, are those who see a need for more 'systemic' education. The rationale here is once more to provide the individual with a wholistic perceptual framework by specifically addressing the manner in which the police operate in conjunction with other elements of the criminal justice system. Stretcher (1977) views this approach to education as 'consciousness raising' and as augmenting one's ability to respond to the broader issues of crime and delinquency. Both Hoover (1975) and Brandstatter and Hoover (1976) see this approach as a means of escaping the pitfalls of overly specialized and technically oriented educational modes. Marsh and Stickler (1972) see this type of 'eclectic' education as entailing topics such as the legal aspects of law enforcement, human relations skills, philosophy and history of law enforcement, principles of management and administration, psychology, sociology, and the

study of juvenile delinquency.

Regardless of the actual content, this systemic approach, in the eyes of Gross (1973), must be structured in light of three crucial questions: i.e., what is the police attitude towards such education (especially senior management and administration); what does the educational field perceive as important; and what are the internal and external motivations of the police student?

A common thread throughout the literature is the argument that education as an upgrading process must necessarily be proffered to all personnel with a vested interest in policing and its future development and progress. As Saunders (1970:86) states:

Education would then become not the measure of a good policeman but a means to make good ones better.

This sentiment is echoed by a number of other authors (Buracker, 1977; O'Rourke, 1971; and Wierman, 1978).

2. The Benefits of Education

The literature pertaining to police and higher education, reveals an unsettling trend of inconsistent findings. The relative benefits derived from educating the police are unclear. Dalley (1975) speculates that in light of the police social service orientation, a liberal education will instruct the individual in the many different ramifications of human

behaviour and necessarily cause the individual to count less on stereo-typed beliefs. He goes on, however, to imply that education may not be of any great value until later on (eight to ten years) in a policeman's service.

In the police education literature emphasis is placed on the policeman's role as a decision maker through the course of his work, and the prevalent conviction that these decisions are very much an individual and personal process. Finkenauer (1975) contends that a college education mitigates the decision-making process by causing the policeman to be less legalistic and less likely to invoke the criminal process. Finkenauer expresses a belief, as do many authors in the education literature, that there is a need to condition the police into being less authoritarian and officious, and perhaps more empathetic towards their clientele. Swanson (1977:312) agrees that such a prospect is indeed inviting particularly from the organization's point of view:

To police administrators who spend a considerable proportion of their time on personnel problems, the prospect of less authoritarianism in college educated officers has a similar magnetic appeal, since lower authoritarianism is presumably correlated with fewer complaints from citizens.... May, however, the nature of the police task, require some minimum level of authoritarianism? Does not giving life to the criminal law often come down to one person imposing his or her will, although cloaked by the mantle of law, on another?

Swanson (1977) states this as a direct challenge to Finkenauer (1975) and authors such as Locke and Smith (1976), who claim that completion of a B.A. degree decreases the authoritarian attitude and that this naturally, is a desired effect.

In contrast to the position of the above authors, Weiner (1976), Bennett (1977) and Knowles and Peterson (1973) conclude after an attitudinal inquiry that education has ostensibly no or negligible affect on police attitudes. Parker, et al. (1976), using a similar study, argue that educated policemen are more 'open-minded' than their less educated counterparts.

Niederhoffer (1967) asserted that education would effectively curb police cynicism. Studies such as those done by Regoli (1976) and Lotz and Regoli (1977) have responded with cautious support and maintained that although lower level personnel without the luxury of education are more cynical than more educated personnel, educated personnel also rank high on cynicism scales due to their supposedly identifying with the professional ethos and being unable to practice it. Wilt and Bannon (1976) also have found some support for Niederhoffer's work (i.e., a peak period of cynicism from six to ten years service), yet contend that educated policemen are generally more cynical than their less educated counterparts.

There is clearly a lack of consensus on the effect education has on individual officers. Nor is there consensus on the type of education which is most in keeping with improving the police service. Guller (1972) and Finnigan (1976) have argued that although education seemed to have a positive affect on attitudes and performance, the type of education obtained was of no great importance. Madell and Washburn (1978), on the other hand, believe that in terms of performance measures, that police

science and business administration majors fare much better (in terms of promotion and advancement) than those who have studied liberal arts.

Cascio (1977) questions the ability of the research to adequately define performance or what the police task actually entails, and contends that educational effectiveness is often influenced by confounding variables such as intelligence and motivation. Miller and Fry (1976, 1978) have emphasized the difficulties of interpreting past research and issue a cautious prognosis of educational effects in the future. Again, alluding to Niederhoffer (1967), they tell us that education may well equip the individual only with a greater sense of disillusionment, disappointment, and indifference, as opposed to the capabilities of dynamic reform oriented change agents. They suggest strongly that police agencies consider the proposition that the overall 'need' for education (given the job as it now exists) may well be pointless.

3. Police Education vs. Police Training

Santarelli (1974) expresses what has been identified as the traditional relationship between education and training: education deals with the concepts and the 'why's', whereas the 'how to's' and the doing of the task is left to training. Smith and Ostrom (1974:51), in their study, chose to deal with the two separately, although they stated:

Training and education are frequently grouped together

under the rubric of professionalization or 'upgrading police personnel'. The impact of training and education are not, however, expected to be equal in impact but frequently have the same type of effect. For example, college education is considered more important than training in shaping attitudes towards due process and other democratic values, but a unit on this subject is normally included in proposed training curricula. Training is expected to play a greater role in the acquisition of skills for handling specific police assignments, but college is expected to have a general, positive impact on the competence and self-awareness of the officer in facing complex tasks.

Beckman (1976) submits, however, that this supposed dichotomy between education and training is more a political issue and from the perspective of senior management the difference is that training is a 'non-threatening' process whereas education is indeed 'threatening'. Although perhaps a matter of semantics, Brown (1974) describes the relationship between education and training as (a) meeting the need for 'knowlege' about persons and things through theory and (b) meeting the need for 'acquaintance' with persons and things through practice, all towards the end of better understanding the implications of the democratic ideal on policing. Education and training, in this instance, are viewed as a means to an end (Lee, 1976).

Authors such as Mathias (1976) and Anderson (1977) do not make the distinction between the two, but rather choose to envisage upgrading the police wholly as an educational process. From this perspective education is seen as being both technical/vocational oriented as well as academical/theory oriented. Anderson (1977) goes on to expand the need for education to be a 'recurrent process', including three basic components; skill acquisition, internalizing professional

standards, and broadening awareness.

Criticisms have, however, been made of the training environment and its ability to prepare policemen for the complex service oriented task which confronts them. Campbell and Formby (1977) unequivocally state that the process of training is a fraud and not at all geared to what policemen do. Both education and training, they maintain, must be measured by their ability to prepare the person to 'practice'. Denyer, et al. (1975) allude back to what has previously been coined as the 'enforcement myth' and fault training for not being pragmatic in its teaching. There is a need, for training to dispel these misconceptions and impart reality in the training setting. Jagiello (1971) assuming a more critical stance contends that training is even inadequate in dealing with the subject of law. There is a need, for a wholistic approach to this subject including its inherent spirit and underlying philosophy. Both Steinberg and McEvoy (1974) and Badalamente, et al. (1973) agree that the training environment is responsible for promoting the 'crime-fighter' misconception and not addressing of the priorities which are a prerequisite in the democratic ideal. Teasly and Wright (1973) assert that if this situation persists, then training will remain a 'symbolic process'. Perhaps to aid in negating the effects of this symbolic process, one might do well to pay heed to the advice of Grant (1976) who contends that there must be a union between police training facilities and universities (in a Canadian context) in order to provide an open

challenge to time honoured convictions and police tradition. These suggestions would necessarily require eliminating counter-productive and inbred perceptions of the police task as they may presently exist. The proposition is succinctly stated by Denyer, et al. (1975:253), who state that what is urgently required is:

...training which encompasses police humanism as well as police science, police reality as well as police romanticism, and police behaviour as well as police rules,..., only then he states will the product be,...officers who are psychologically prepared to pursue their careers without becoming cynical, and subsequently unproductive, dishonest or undemocratic.

4. Comments

The educational discussion is fraught with many of the ambiguities and conflicts encountered in the earlier considerations of the police role. Education is perceived as an overall upgrading process; a means to an end. Yet most of the literature focuses on the individual policeman and various facets of his/her personality and attitude. Specifically, education is perceived as creating a more 'analytical', cosmopolitan and open minded police officer. Some studies conclude that educated officers are less authoritarian and less cynical while other studies indicate that education has no effect on these measured variables. Some research argues that specific types of education render specific and predictable results while other research indicates that educational

discipline(s) are irrelevant. The fact that divergent conclusions have been reached regarding the effect of education on attitudes, performance, and decision-making would seem to indicate that a closer analysis of the findings and implications of past research is necessary.

Professionalization of the Police

Frequent mention has been made of 'upgrading' the police. This process, for the most part, entails a commitment to advanced educational requirements, and education is deemed synonymous with professionalization.

1. The Process

The roots of professionalism in policing exist in the work of August Vollmer (1930's) in Berkely, California. Carte (1976), in discussing the early history of police professionalization, claimed that it came about simply in response to a basic need: the need to improve 'men and methods'. While perhaps the reasons for instigating the process have changed it is safe to say that the underlying premises and goals of professionalization have endured to the present. It is obvious that Vollmer had in mind a dual purpose in his strategy to professionalize the police: to augment both the individual's conceptual ability, as well as the organization's technical efficiency in order to re-align

policing with more proactive priorities. Sherman (1974) describes a period during the 1950's when a disciple of Vollmer, O.W. Wilson, and like-minded police administrators, worked to professionalize the police by stressing a 'scientific' management style, bureaucratic regularity, hierarchy, centralization, and efficiency. The process has evolved to the point where a decentralized, community-based, service oriented approach to policing is reflective of the professional ideal.

The literature deals frequently with establishing the basic criteria for professional status. Wilensky (1964:138) advises us that:

Any occupation wishing to exercise professional authority must find a technical basis for it, assert an exclusive jurisdiction, link both skill and jurisdiction to standards of training, and convince the public that its services are uniquely trustworthy.

Wilensky (1964) further asserts that professionalization which emphasizes individual initiative clashes with bureaucracy and especially the classical hierarchical and rigid police organization. He hastens to add, however, that this is a two-sided debate. Not only is the professional ideal invading the bureaucracy, but the bureaucratic process is fast invading the established professions.

The rationale for professionalization rests more on faith than on fact. Saunders (1970) accepts this stance but continues to insist that education, as a fundamental tenet of the process, will better equip the individual officer for change as well as create a more conceptual, thinking and critical creative being.

For numerous authors (i.e., Duignan, 1978; Tucker and Hyder, 1978; Lynch, 1976; and Denyer et al. 1975) education is seen, in essence, as a rite of passage to professionalization. Miller and Fry (1976:78), however, advise us again to be cautious in assessing any tangible benefit of general education. The overall need, they state, may well be pointless in light of the organizational situation and the overall confusion over what constitutes 'good' police work.

In the late 1960's, Niederhoffer (1967) gave new life to police professionalization by portraying it as a form of internal, in-house revolution by a reform based educated police elite against the inbred and entrenched old-school. Lotz and Regoli (1977) view Niederhoffer's work as a defence of professionalization and depict this educational elite as being committed to organizational change to further promote the service role of the police. Rafky et al. (1976), see professionalization as 'the insidious enemy of cynicism'. Through education and training, professional ideals are stressed and time-honoured traditions are challenged.

2. Community Sanction:

It may be rather timely, at this point, to reiterate a point made by Carte (1976:297) who suggested that:

...the professional model as it is practiced today is a recognition of the importance of face validity as a validating tie between policeman and citizen. The police

should be like the people whom they police, not like those who pay them or write about them.

Although this may seem somewhat inconsistent with the lofty aspirations to be fulfilled through educating the police, the suggestion that the police sensitize themselves carefully with public problems and maladies holds a strong intuitive appeal. In fact, a number of authors argue that the professionalization of the police is pursued strictly as an effort to gain public confidence (Regoli, 1976; Hanley, 1976; Davis, 1977; Grossman and Kohnke, 1976; Grant, 1976; and Steinberg and McEvoy, 1974). As Regoli (1976) points out, however, not only is it necessary to convince the public, a great deal of effort must be directed towards in-house skepticism in order to convince officers of their newly assumed status. Hanley (1976), although identifying public acceptance as a criterion, also recognizes it as an outstanding barrier to professional status at present. It will remain a barrier, claims Davis (1977), until professionalization becomes more than a facade and mere rhetoric. Professionalism is a conferred status which comes from the community and must be earned through public recognition of services rendered. The police must look to the community for confidence and approval and it is the community which will, in the end, bestow the earned status of 'professional'. Huber (1977) and Brown (1974) also assert that through an established basis of theory and knowledge, above the level of lay understanding, police professional authority will be recognized by its clientele. On the other hand, Grossman and Kohnke (1976) would argue that if

the police achieve true professional status, then public recognition will follow. To reach the status of a true profession is by no means an end in itself. Steinberg and McEvoy (1974) claim that by its very nature, professionalism connotes open-endedness and constant change towards improving both men and methods.

The rigidity of the the time-honoured 'crime fighter' image has been identified as a barrier to professionalization. Ashburn (1977) places the onus on the police to remove this public misconception, although he does not see this as a two-pronged effort focused at the police and public alike. Saunders (1970) on the other hand, feels that it is up to the community to relinquish its hold in the crime fighter fallacy. The community, he states, will get what it deserves.

3. Comments

Throughout the literature, education of the police has been heralded as the cornerstone of police professionalism. Although police agencies have generally adopted the 'rhetoric' of professionalism, it is equally obvious that there has been only marginal acceptance of education as being fundamental to upgrading the police. In policing circles, the term 'professionalism' may be used in many different contexts to describe numerous activities.

It can be concluded from a review of the literature that the means of achieving this preferred end-state is unclear; the end state itself and even the reason(s) posited for seeking this end-state are inadequately defined. The fact that education is directed at the individual while organizational constraints are ignored is a major problem.

Organizational Considerations

The delivery of service and the quality of that service will be, in part, organizationally defined. It is not reasonable to assume that an individual (a policeman) is an island unto himself. His attitude, behavior and performance will directly hinge on any number of mitigating circumstances which are collectively present and operative within the organization. The absence of priority attached to the organizational context is cause for serious concern.

The fact that such a lack of priority persists in police research, in general, has been well documented. Bittner (1975:19) has stated that the police have been figuratively dragged into the twentieth century. This process has been marked by a torrent of social science research directed towards the police:

The observation that the police were caught unaware, so to speak, by social science research and had no view in shaping it, gains significance when it is considered that police work is the only vocation to whom this has happened. Of all the occupations dealing with people, the police alone have not, at anytime during this century raised serious questions about the nature of their mandate, have never moved in any substantial

manner in the direction of self scrutiny and self criticism, and did not attempt to build into their operation a stable program of research and study.

Such attention by social scientists has promulgated the general transformation of the police from Niederhoffer's 'station house to glass house' (see Lefkowitz, 1975).

Guyot (1973:105), in an article entitled "Police Departments Under Social Science Scrutiny", observed:

The organizational element of police work is woefully neglected in much of our thinking about the police. Most studies treat individual police officers as the unit of analysis and do not take the total organization seriously...several principles from organizational research should be applied to our current understanding of police departments to make research both sophisticated and more useful to police managers.

These comments suggest the importance of dealing with this 'organizational element' and borrowing from related sources of research and study in an attempt to provide a more comprehensive view of policing as it is affected by education specifically and the upgrading process in general.

1. The Organization:

Education as a medium for upgrading the police is an innovative trend and is seen as an attempt to manipulate the means in order to affect the end state of the organization's quality of service. It is essential to understand that this educational enterprise, in the eyes of the police, is far from being benign in nature. To advocate educational upgrading is to advocate change: change which may effect the very foundation of

the police organization as it now exists.

Let us assume that that police departments hold true to what has been labelled the 'classical' organizational structure (i.e., hierarchical structure, division of labor, chain of command, span of control). The general posture of the police today is predominantly para-military and seen as 'little armies in the war against crime' (Guyot, 1977:231). The police have traditionally functioned under a 'loyalty and obedience' edict which has been widely accepted by both police and community as an appropriate posture for their delivery of service. To put things into perspective, it must be understood that this traditional complexion, seemingly dysfunctional today, was indeed an innovative response to the pressures and needs of its time. Paramount to police executives of the 1930's era such as August Vollmer was a 'closed' model based on bureaucratic accountability, rational decision making and mechanistic efficiency, free from political and or arbitrary interference. Perhaps, in contemporary terms, this structural attempt at creating an autonomous agency has reached the point of being counter-productive. The closed model is premised on policing as a routinized and predictable task at the street level. Cordner (1978) argues that the opposite is applicable today. Policing is inherently non-routine by definition and unpredictable in nature. The police task requires 'special knowledge' and an organizational environment conducive to the free flow of information and participative decision making.

Many complaints against the closed model bewail its rigidity, red tape, slowness and inhumanity. It is also criticized for stifling ideas, communication and creativity.... Bennis argues that rapid change, the growth in size of organizations, the complexity of modern technology and the increasing humanness of management all mitigate against the effectiveness and survival of the closed model of organizations. (Cordner 1978:29)

A number of authors (including Livingston and Sylvia, 1979; Swank and Parsons, 1974; and Hinrichs, 1974) have identified problems inherent in the traditional complexion of police agencies: it produces a hierarchical rigidity which generally inhibits all but the most tenacious efforts to orchestrate change, and necessarily limits police productivity and creativity in the undying maintenance of structural inflexibility. The lack of attention paid to organizational constraints has compromised the attainment of the goals of education. The trend towards educating the police was not at the outset, nor is it at present, a program designed for and by the police. In view of what Bittner (1975) has stated, the police were caught 'unaware' and the upgrading process has been imposed as a response to inequities and inadequacies in police practices throughout the 1960's and early 1970's. There has been an unending stream of rationales articulated by proponents of overall upgrading for the police. For the most part, the benefits one would expect to be realized by the individual officer should also be recognized and sanctioned through departmental consensus. However,

...the rigidity of the career arrangements of law enforcement have not yet relaxed to the point where many departments are able to reward those who do meet the new

educational standards. The inflexible structure of most law enforcement organizations is a factor that is at least as critical to performance as the attitudes and educational level of the personnel. (Miller and Fry, 1976:196)

Kuldau (1974:26) is prepared to take the matter one step further: it is not so much a matter of not being able to 'reward' those who choose to attain prescribed educational standards - it is a matter of 'punishing' those who have. If one is not rewarded or is discriminated against due to lack of recognition of acquired education, he is in fact being punished and discouraged from continuing in his chosen occupation.

Bowman (1976) advises us that the behavioural and social sciences which have been touted as 'tools of change' may simply have added to the rhetoric of change, and a widening disparity between words and deeds. Walters (1975) suggests that perhaps it is not so much the scarcity of existing theory or the lack of commitment behind the theory, but poor application of what has been learned. Balch (1972:119) has helped to elucidate this issue by asserting that:

The devotion of social scientists to the personality model has obscured the important role that organizational factors play in shaping the police behaviour. 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 drop-outs.

Organizational change is clearly necessary if education of the individual officer is to have maximum effect. As Heywood (1977:15) has stated:

The objective of organization change is to enable movement towards increased organizational effectiveness. It is not a question of whether or not the Force can

afford the luxury of such change; it is a question of whether or not the Force can afford the consequences of maintaining the status-quo where change is occurring all around us.

It seems not only wise, but also necessary to adopt a mandate based on organizational change towards increasing the quality and efficiency of the police service. This change should be in keeping with the cadence and aligned with the 'change occurring all around us'. The police can ill-afford to interpret the trend towards educating the police as being peripheral in importance to the police organization.

A recent report by Sherman (1978) entitled "The Quality of Police Education" has generally been accepted as representing the present state of the art. Sherman (1978) states at the outset, that one of the most important objectives of police education is to foster basic change in policing. He goes on to trace the roots of this proposition from Vollmer's assertion in the 1930's that education was necessary for the 'improvement of men and methods' through to the recommendations of the American President's Commission on Law Enforcement and the Administration of Justice (1967) in which the same objective was implicit. In presenting upgrading strategies for the police, Sherman (1978:1) underlined the necessity of change stating that:

...the present structure of police education often results in little more than tacking credentials on to police personnel, serving the status quo in policing rather than stimulating change. Police education will have to do much more if it is to help the police find new methods, new organizational structure, and a more effective role....

The growth in size and complexity of the community has been identified as a major reason for educating the police (in terms of post-secondary, liberal arts disciplines). Furthermore, the growth in size and complexity of the organization as a response to community demand has been identified as a major reason for instituting organizational change strategies. It deserves reinforcing, then, that the educational process and the change process are perhaps not such strange 'bed fellows'.

However, an increase in the size and complexity of an organization does not necessarily connote maturity. Mileti (1977) and Mansfield (1978) contend that this growth can serve only to increase both horizontal and vertical differentiation within the organization and further contribute to the likelihood of dysfunctional communications networks. Lippitt (1974, 1978) claims that maturity must be reflected in the organization's capacity to adapt to social stimuli and be flexible in nature. Warmington (1974) warns us that we may be misinterpreting obsolescence for maturity, suggesting that true organizational maturity will demand a total and complete commitment to change strategies. The management of this change will necessitate a fine co-ordination of both people and systems (Moore, 1973) and the acceptance of uncertainty as an ongoing reality (How and Norwood, 1976).

The literature pertaining specifically to organizational change and development alludes to various postures which organizations amenable to change must be prepared to adopt. The

foundations of successful change strategies are the elements of flexibility, adaptability and the acceptance of uncertainty. Of course there must be well articulated goals for which change is to be instituted and an organizational commitment to these goals.

It has been argued by Stuart-Kotze (1973) and Warmington (1974) that change, in order to benefit the whole, must affect the whole and be nurtured at the lowest rung of the organizational hierarchy. Johnson (1975) supports this contention by advising us that line policemen are indeed managers in their own right and must be approached in a persuasive and convincing manner to accept and support the change process. Lippitt (1978) argues that organizations, in general, need a new concept of people based on an increased knowledge of worker needs, a new concept of power based on collaboration and reason, and a new concept of organizational values based on humanism and democracy. He further suggests that a posture which respects the development of all human resources and stresses confidence and collaboration in place of obedience and coercion should have a definite ameliorating effect on these problems. Lippitt (1978) further argues that this mode of development must be realized through what he terms 'pragmatic education'. Education will be more effective, in this light, if it is properly coordinated with a man's development. The educational program of an organization, then, must become an integral part of organizational life..

2. Resistance to Organizational Change

It has been suggested by Johnson (1975) that collective resistance to change may exist because the organization has failed to adequately define the basic mission of change. Certainly this may be the case in view of the general upgrading process for the police. It is useful, at this point, to reiterate a concern voiced by Bennett (1977:3) who states that:

...although a need has been recognized and a tentative solution operationalized, little is actually known about the relationship between the "need" (i.e., for better police performance) and the "solution" (i.e., more education).

If the goal is inadequately defined, then it logically follows that the means to accomplish the goal will invariably be inadequately defined. Johnson (1975) goes on to state that resistance to change in policing is unavoidable through traditional complacency, mistrust of the rationale for change, defective communication of the rationale, anxieties from non-specific goals, fear of failure, and unmeasurable consequences.

Sherman (1978:13) states emphatically that many police organizations have resisted and effectively prevented higher education from becoming an agent of change. Policies towards educated personnel have artfully managed to produce the facade of 'better' personnel while requiring undying loyalty and compliance to traditional values and norms. Regardless of the

quality of education, Sherman (1978) maintains it will have little impact without widespread organizational policy change.

Education has been discussed as an innovative trend towards affecting change. Nord (1975:14) draws our attention to the fact that,

...reacting to any innovations are likely to be a function of the degree to which the organization members perceive the innovation as relevant.

If the degree of relevance is seen by members as marginal, or even worthless, then we may bear witness to the evolution of a sort of organizational 'folk lore' which attempts to negate the value of the innovation. O'Rourke (1971) cites examples of this lore pertaining to education in policing as: 'some excellent cops are not college educated', 'some bad cops are', 'college cops are easily bored', 'some expect special treatment', and 'knowledge is found on the street'.

Kelling and Kliesmet (1971) feel that the para-military nature of the police agency is in itself a 'retarding factor' to change. They claim, as do Bordua and Reiss (1966), that bureaucratization subordinates pre-occupation with the occupational role and requires conformity and obedience to interests of organizational expedience. Jagiello (1971) and Weiner (1974) have identified a further cause for resistance in the commonly held belief that the organizational environment and occupational socialization will invariably negate any positive value to be had from liberal arts education.

The classical organizational hierarchy has been previously referred to as causing significant problems with the free flow of information. Meyer (1978) claims that there may exist a disparity between what senior management chooses to convey to line personnel, and what line personnel interpret. This causes a convolution of information which may well cause misinterpretation and confusion over stated aims and goals. This is why, as Reddin (1977) argues, change must reflect the needs and priorities of line personnel, be instigated from the bottom up, not exceed the tolerance for change and be couched in the structure of the organization as opposed to behavioral predisposition. Hirschowitz (1974) similarly claims that organizations which fail to remain cognizant of investments placed in their human assets and account for entrenched values while affecting change are encouraging resistance.

4. The Human Side of the Enterprise

Research literature pertaining to job satisfaction, motivation and related areas has proliferated in recent years in the private sector where defineable and measurable units of productivity and economic growth are the tangible yardsticks of success. This literature reflects a well worked variety of theoretical under-pinnings. In general, it can be said that organizational theory is very much concerned with what has been termed 'the human side of the enterprise'. Schneider and Snyder

(1975) and Lafollette (1975) allude to this crucial area of concern in their discussion of the 'organizational climate'. Organizational members, they contend, will have some 'summary perception' of the organization within which they work - a personalized evaluation of the working conditions existing within their specific work environment. Such a construct is methodologically unrefined and suspect, yet reinforced with the understanding that working environments, whether real or perceived, will provide a mitigating influence which may either induce or stifle individual performance and commitment.

Although job satisfaction research has been recognized as a priority in the private sector, Griffin et al. (1978) take issue with the fact that it has become merely a slogan in police work. The educational upgrading process has often been defined in the same light. Lefkowitz (1977:350) similarly asserts that this is not necessarily due to a sparcity of information, but is attributable to the poor application and the lack of sophistication, in general, of police administration practices. Perhaps Nord (1977:1026) has provided us with a pragmatic observation on job satisfaction applicable to policing. Organizational managers and decision makers, he states, are largely cognizant of 'number magic', which suggests that objectives and actions which are easily quantifiable tend to take precedence over objectives and goals which are more difficult to quantify (consider clearance rates, arrests, traffic violation statistics, etc.) And, since job satisfaction

is difficult to measure, its proponents will seldom advocate it at the expense of more quantifiable criteria:

We have failed to recognize that organizations often have no incentives for experimenting with ways to increase job satisfaction, in fact they have good reasons for maintaining the present order. (Nord:1028)

Herzberg and Zautra (1976:55) have attempted to stress the importance of the organizational environment as mitigating job satisfaction and performance.

The increasing number of higher educated entries into the work force as prospects for comparatively mediocre jobs portends an even sicker and more alienated work force, . . . , what we really need is both higher productivity and healthier jobs; both efficiency and humanism.

This appears to be a logical conviction as opposed to the idealism espoused by authors such as Jacobs and Cowden (1977) who claim without qualification that education will be a catalyst to job satisfaction. This claim has not been supported by research findings. Both Lester and Genz (1978) and Griffen et al. (1978) found that education, as an independent variable, failed to account for any substantial manipulation of job satisfaction as a dependent variable.

Cordner (1978) argues that the assumption has been that public sector employees (bureaucratic services oriented) are job security and conformity oriented. He discusses three surveys (1971, 1974, 1975) of police agencies which indicated that policemen, as agents of the public sector, are not necessarily security oriented. The findings reflected higher order needs for participation, responsibility, and recognition, which were not

generally forthcoming from the organization. Younger officers, in particular, expected organizational change and the opportunity to participate in decision making.

The surveys, also indicated that educated police officers were generally not recognized (i.e., promotion) by the police administration. Cordner (1978:201) in concluding his work, cast light on a rather poignant observation made by L.A.P.D. Chief Reddin (1966).

We give too little thought to the work itself. Work must be more than congenial: it must be absorbing, meaningful and challenging. There just isn't any 'work' as inherently rich in these qualities as police work. Yet in many cases, we have done such a successful job of strangling and stifling the juices out of the 'work' that we now find ourselves searching for ways to 'make' it interesting.

Ongoing strategies to embellish task content are also recognized by Lokiel (1973) and Rotandi (1975) as being central to maintaining well motivated workers. Lokiel (1973) asserts that motivation might be bolstered by allowing for continuing education and training pertinent to job requirements and Rotandi (1975) compliments this proposition by envisaging this process as overall 'human resource development', whereby the individual worker has a structured opportunity to build on and augment his skill repertoire and the opportunity to contribute accordingly. Regardless of the mode of service delivery it seems intuitively correct to stress an organizational environment and incumbent task definitions that allow for the individual to grow in, develop with, and contribute to the overall delivery of service.

Leidecker and Hall (1974) argue that individuals will perform in a manner consistent with the attainment of goals they value and can reasonably expect to achieve and it is important to note that goals sought after are not necessarily those identified by the organization as being valuable, but those that the individual perceives as being valuable. This position (as dictated by Liu, 1974; Vanmaanen, 1975; and Alderfer, 1977) further contends that there is a 'motivational force' to perform a given act, depending on the value attached to the outcome and the probability of the outcome occurring. There appears to be a distinct possibility for disparity to exist between what the individual might perceive as important in defining his aspirations, and what the organization is prepared to concede. Vanmaanen (1975) found in his research that educated officers, although scoring high in the academy setting and ranking high in motivation, scored consistently low in field evaluations. It is not surprising that this should occur although it must surely be recognized as counter-productive. The inference is clear that the 'don't make waves' ethos should prevail at all costs. Consider this bit of advice from the 'seasoned vet':

There's only two things you gotta know around here. First, forget everything you've learned in the academy because the street's where you'll learn to be a cop and second, being first around here don't mean shit. Take it easy, that's our motto. (Vanmaanen, 1975:225)

Leidecker and Hall's (1974) and Vanmaanen's (1975) discussion demonstrates what the theoretical literature has identified as a belief in external control (Rotter, 1960:1). In

keeping with this position is recent research dealing with 'Internal/External Locus of Control' as a psychological construct. Essentially this theory contends that individuals perceive certain mitigating factors as 'controlling' the outcomes of their efforts. If a person perceives an outcome as partially or completely dictated by fate, luck, chance, or under the control of powerful others, this has been labelled as a belief in external control. If, however, a person perceives an outcome as contingent upon his own efforts, this has been labelled as a belief in internal control (Rotter, 1960:1). Empirical research has revealed that those individuals representative of the internal control category are less conforming, more likely to take risks and display a higher need for achievement (Lefcourt, 1966:214).

Lester and Genz (1978) found that a belief in internal control was correlated with increased job satisfaction in policemen. Belief in internal control, they found, was more prevalent amongst experienced policemen and, as mentioned earlier, was not affected by level of education. By inference, it would appear that this construct is readily influenced by organizational subtleties and may well be a product of the socialization process and a function of years of service.

5. Comments

It is clear that organizational subtleties have the capacity to mitigate police behavior. Thus, it is not reasonable to assume that education, as the medium for the upgrading process, will singularly improve the overall quality of service delivery.

The original proposition that education will affect performance in a positive manner seems somewhat doubtful. Definitional problems arise in addressing the police role and what education should entail. It is clear that the organization, work environment, and management structure will surely mitigate the quality and nature of the performance, regardless of arbitrarily set educational standards.

Niederhoffer (1967) argues that the upgrading of the police is epitomized and embodied in the vanguard of 'new professionals', rallying against the entrenched 'old school'. There may be some truth to the picture he has painted, but there is also truth to the realities of organizational rigidity, environmental stress factors, problems of bureaucratization, and to the unrelenting resistance to change built firmly into the structure of the police organization.

Discussion

It has been generally conceded throughout this literature review that the assumed relationship between education and the calibre of policing is tenuous at best and, as Saunders (1970:81) earlier pointed out, rests more on faith than fact. In order to impose some semblance of order on the literature presented thus far, Bennett's (1977:3) strategy is useful:

...criminal justice literature pertaining to the relationship between education, attitude and performance can be divided into three general categories: (1) Non-empirical literature (whose validity is based on conjecture and personal opinion); (2) Empirical research reporting findings on the relationship between education, attitude and other cognitions (hereafter referred to as the 'Empirical/cognitive' category); (3) Empirical research which reports findings concerning the relationship between education and occupational performance. ('Empirical/performance').

Of the articles referred to in the preparation of this literature review, approximately 65% fell into Bennett's 'conjectural' category, 30% into 'empirical/cognition' category, and 5% into the 'empirical/performance' category. The implication here is clear: for the most part, analysis of the problem has been confined to literary jousting and contending via speculation that a relationship does exist (positive or negative), between education and performance. A smaller portion of the work attempts to infer a relationship between education and performance through attitude (i.e., education affects attitude which in turn affects performance). And, a very small portion of the work, indeed, attempts to define a direct

relationship between education and performance. As Bennett (1977:4) states:

In short, the state of the art concerning research relative to the education/performance controversy is disquieting and in need of considerable remedial effort.

It should be pointed out that, by design, the author has included literature sources concerned with the role and task conflicts as well as organizational considerations. These topics, in the literature, are dealt with almost exclusively in a normative and subjective sense.

The conjectural literature seems to concern itself with issues such as program content for education and training, education vs. training, liberal arts vs. vocational education, and education towards professionalization. In dealing with the education/performance issue, the position seems somewhat polarized, i.e., education will have an effect or it will not have an effect because of personality, socialization, or organizational subtleties.

The empirical/cognition literature provides contradictory and ambiguous results. Education is seen as having a positive effect, no effect, or a negative effect as reflected through such attitudinal measures as authoritarianism, conservatism, punitiveness, dogmatism, and tolerance of ambiguity.

The empirical/performance category, much like its cognitive counter part, is conflicting in nature. Performance, or abstractions of performance, are measured by such notions as crime rates, police injuries, arrests, preventable traffic

accidents, promotions, disciplinary actions, tenure of service, time in rank, discretion, use of force, sick days, and citizen evaluations of service and image.

The assertions presented by the Canadian Police College (1978) for the most part, fall within the conjectural category, leaving a select few which are accounted for by the empirical/cognition category.

1. A Platform for Further Enquiry

Why is concern for the value of education within the police community important? The results of the literature review would indicate that research findings are variable, inconsistent, and at best tenuous with regards to educational utility, educational substance, the focus of education, and the manner in which it addresses the police role.

Martin (1979:224) recently observed, on the basis of the same body of literature, and in the wake of the American experience (L.E.E.P. and L.E.A.A. expenditures) that:

...the original goal was the promotion of an educated police community. The focus was on the police community rather than the individual made more effective through education. The goal looks to more effective police department performance including a greater facility to plan and implement change.

Numerous studies reported here have lost sight of this focus, and as noted by Guyot (1977), rest on the individual as the unit of analysis and ignore the organizational subtleties.

There exists a state of affairs in which college graduates may well continue to 'bust heads' (Balch, 1972) unless the police community is prepared to accommodate the change process, i.e., education on a more fundamental and macro scale, as a strategy to upgrade organizational effectiveness.

We are, however, confronted with a list of assertions put forth by the Canadian Police College (1978). These assertions are quite representative of traditional, if perhaps dated, sentiments pertaining to higher education, and how education might affect policing. It is interesting to note that the 'individual' remains the unit of analysis.

The purpose of the author's research, then, will be to examine the Canadian Police College's (1978) assertions. It should be noted that the Police College cites no empirical support for these assertions. It can be assumed that they (the constructs) were dredged from the literature in support of their stated position.¹

There has been no overt attempt to objectively 'state the case' to those who are to be the clientele of this program. The assertions reflect only those beliefs and convictions reflected

¹-----
It is the author's understanding that these assertions are based on the findings of two papers written under the auspices of the Canadian Police College.

1. O'Reilly, Robert R. Ph.D., Post Secondary Education for Canadian Police Officers: The Community College, (1977, C.P. College)
2. Kelloway, William. Towards a Continuing Education Program for the Police Profession, (1978, C.P. College)

One can assume, that O'Reilly (1977) and Kelloway (1978) used as a resource pool the same (or similar) literature and findings as reviewed in this thesis.

by proponents of the 'better education makes better policemen' school of thought. In essence, these assertions leave themselves open to interpretation. The author is prepared to take advantage of the latitude offered in developing a strategy of research design and methodology. There is no attempt made here to replicate any previous studies of assertions similar to those of the College.

Of the seven assertions put forward by the Canadian Police College (1978), the author refers the reader to three, which are amenable to empirical examination (empirical/cognition category) based on discussions from within the literature, i.e., educated police officers are:

1. better able to tolerate differences and ambiguity:
The author will assume that this assertion is manifested in the findings of various administrations of the 'tolerance of ambiguity scale(s)', being a derivation of Adorno's f scale.
2. more flexible, less hostile, less prejudiced, less authoritarian, and less cynical:
The author will assume that this assertion is composed of various criteria comprising the f scale (authoritarianism scale).
3. more willing to take initiative, experiment and exercise leadership:
The author will take the opportunity in this instance to test the 'I-E' scale (Internal-External locus of control).

Stated more succinctly, we shall examine a set of assertions, based on the Canadian Police College (1978), implying that educated police officers are:

1. better able to tolerate ambiguity;
2. less authoritarian; and,
3. more representative of a belief in internal control.

A set of working hypotheses will be established, at this point, in order to test the assertions made by the Canadian Police College (1978):

Working Hypothesis 1 - Education is positively related to one's ability to tolerate ambiguity

Null Hypothesis - There is no statistically significant relationship between education level and ability to tolerate ambiguity

Working Hypothesis 2 - Education is negatively related to authoritarianism

Null Hypothesis - There is no statistically significant relationship between education level and authoritarianism

Working Hypothesis 3 - Education is positively related to belief in 'internal control'

Null Hypothesis - There is no statistically significant relationship between education level and belief in 'internal control'.

Subsequent chapters of this thesis have been set in place to examine and discuss the empirical validity of these hypotheses.

III. Methodology

Introduction

The hypotheses articulated in the previous chapter were derived from assertions made by the Canadian Police College (1978). These hypotheses are premised on a causal link existing between attitude and performance. If one can say that education affects one's attitude(s), then it follows that attitude(s) will have a presumed effect on the manner in which an individual performs the 'police task'. We might best illustrate this line of reasoning by recalling from the literature that 'less authoritarianism' (as an attitudinal construct) in a policeman allegedly led to increased flexibility in matters of discretion and decision making.

The argument implicit within these hypotheses can be more succinctly stated in the following manner: certain values, opinions or attitudes must be understood as dependent on certain mitigating factors. Authoritarianism, for example, is dependent on certain variables, one of these variables being education. It is expected, that if by design (through research), one can manipulate the variable education as an independent variable, then there should be a change manifested in the value assigned to 'authoritarianism' as a dependent variable. In other words,

the value or score achieved by an individual on an authoritarianism scale depends on the value or score assigned to the level of education. This is not to say that a change in the level of education will necessarily cause a change in the authoritarianism score. The argument here implies only that if there is variance in the level of education as an independent variable, then there should be variance in 'authoritarianism' scores. These two variables, then, should covary and the change in values of the respective variables should be in a predictable direction.

The Canadian Police College (1978) alleges that education is a key independent variable and that Tolerance of Ambiguity, Authoritarianism and Belief in Internal Control, as dependent variables, are affected in a prescribed fashion.

Variables

1. Independent Variables

The independent variables used in this study were chosen as being representative of such variables used in similar research projects in the past. Data were collected from recorded 'background information' on the survey instrument.

It is generally conceded that attitudes are constantly in a state of flux and are formed and shaped in response to a variety of factors and stimuli. It has been argued, particularly

concerning attitudinal characteristics and personality traits, that formative molding takes place before the individual becomes a policeman. An argument still prevails as to whether or not policemen have prescribed attitudes simply because they are policemen, or whether individuals predisposed towards certain attitudes are more likely to become policemen. Empirical research dealing with such attitudinal constructs have traditionally included demographic (or social-biographical) variables to test the possibility that a persons' background (independent of occupation) will determine his attitudes. For this reason, the author has included a short series of demographic variables. It has further been argued that attitudes among policemen are contingent upon what is known as 'occupational socialization' (Skolnick, 1966). In other words, there is some nebulous process connected with one's tenure as a policeman which affects attitudes. This process has been identified as increasing cynicism, rigidity, and authoritarianism, decreasing tolerance and flexibility and a negation of the effects of liberal arts education.

Research in the past has argued that it would be a logistical error to ignore the possible effects of occupation on attitude, and for this reason the author has included a series of 'service' variables.

The educational variables, of course, address the specific concerns of this research as being fundamental predictors of attitude.

The independent variables cited in this research, then, may be stated as follows:

a. Demographics:)

- 1) Age: recorded by years;
- 2) Sex: male/female;
- 3) Marital Status:
married/single/divorced-separated/common law;
- 4) Socio Economic Status: recorded as 'Father's Occupation', measured by the Blishen and McRoberts scale (1976); and,
- 5) Work Experience (prior to police service): also measured on Blishen and McRoberts scale (1976).

b. Service:

- 1) Rank: present rank held by respondent in their department;
- 2) Years of Service as a Peace Officer: recorded by years; and,
- 3) Size of Department Presently Serving At: recorded by number of serving peace officers.

c. Education: (recorded by educational level attained to-date):

- 1) junior matriculation;
- 2) senior matriculation;
- 3) community college: 1st, 2nd, 3rd year;
- 4) diploma: complete, incomplete, in progress;
- 5) university: 1st, 2nd, 3rd, 4th year;

- 6) degree: complete, incomplete, in progress;
- 7) presently taking course(s): yes/no; and,
- 8) training course: course description of which respondent is a member (in-service) at time of survey.

(See Appendix A for a detailed description of how variables were operationalized.)

Dependent Variables

The dependent variables may be understood as the attitudes which education is presumed to affect. The hypotheses which have been presented in this research include the attitudinal constructs of Ambiguity Tolerance, Authoritarianism, and Belief in Internal Control.

These constructs must be defined and operationalized. The author has drawn upon past research and scaling devices to achieve this end. The following is a discussion of each construct and the manner in which it has been operationalized.

a. Ambiguity Tolerance

Ambiguity Tolerance, as a construct, might best be understood as a:

...willingness to accept a state of affairs capable of alternate interpretations, or alternate outcomes: e.g.

feeling comfortable (or at least not feeling uncomfortable) when faced by a complex social issue in which opposed principles are intermingled. Low Ambiguity Tolerance is shown by the desire to have everything reduced to black and white...". (English and English, 1958:24)

McDonald (1976:791) indicates that persons having high tolerance of ambiguity seek out and enjoy ambiguity and excel in the performance of ambiguous tasks. An ambiguous task or situation, he states (alluding to Budner, 1962:30), is one which cannot be adequately structured or categorized by the individual because of a lack of sufficient cues. McDonald (1976) further explains that ambiguity intolerance has historically been linked with 'resistance to change' (Frenkel-Brunswick, 1951) under the general psychological construct of 'rigidity'. As has already been pointed out by Bennett (1977), the major justification put forward for requiring higher education, is because of the increasing complexity of the police task and the implied increase in societal complexity. Education, then, is seen as providing the necessary prerequisite of 'Ambiguity Tolerance' in coping with this complexity.

McDonald (1976) presents us with a measure of Ambiguity Tolerance in the form of a twenty item scale. Each item takes the form of a true-false statement. The test (scale) is scored for high Ambiguity Tolerance so that a person representative of this attribute would score in the vicinity of twenty points.

The McDonald (AT-20) scale was used for this research.¹

b. Authoritarianism

Balch (1972:107) discusses this construct in the literature and observes that the 'typical policeman' is almost a classic example of the authoritarian personality as originally typified by Adorno et al., (1950):

- ...the cluster of traits that apparently make up the police personality also defines authoritarianism, i.e.,
- Conventionalism: rigid adherence to conventional values
 - Authoritarian Submission: submission, uncritical attitude towards idealized moral authorities of the in group.
 - Authoritarian Aggression: tendency to be on the look out for, and to condemn and reject people who violate conventional values.
 - Anti-intraception: opposition to the subjective, the imaginative, the tender minded.
 - Power and 'Toughness': preoccupation with the dominance-submission, strong-weak, leader-follower dimension.
 - Restructiveness and Cynicism: generalized hostility, vilification of the human....

The assertion made by the Canadian Police College (1978) that educated policemen are less authoritarian assumes that the marked absence of this trait is desirable. From the literature review the reader might recall that the absence of

¹Based on the Rydell-Rosen test (1966:139) with, items 1-16; Rydell-Rosen (1966), items 17, 18; California Personality Inventory (Gough, 1957), items 275, 363, items 19, 20; Baron's Conformity Scale (Barron, 1953), items 15, 18.
(See Appendix B(1) for a discussion of scale reliability and validity)

Authoritarianism in the policeman will allow him to function in a less officious manner and to render decisions contingent upon increased leniency and flexibility. It is implied that less authoritarian individuals are better able to cope with increased role complexity which requires the policeman to serve as an arbitrator, social worker and servant of the public, as well as an enforcer.

Lee and Warr (1969) provide us with a measure of Authoritarianism in the form of a thirty item scale. Each item takes the form of a statement, graded on a Likert-type scale: the respondent, in addressing each item, is asked to record his response to the statement along a six point continuum (i.e., strongly agree; agree; tend to agree; tend to disagree; disagree; and, strongly disagree). The Lee-Warr (F) scale was used for this research.²

c. Internal-External Locus of Control

Internal-External Locus of Control, as a construct, refers to an individual's perception of the relationship between event

² Fifteen of Lee and Warr's (1969) items were worded to score high on Authoritarianism and fifteen items were worded to score low. Two items (one positive, one negative) were found to relate strictly to American political ideology and were eliminated; thus producing a twenty-eight item scale. For positive items 'strongly agree' was scored six and for negative items this was scored one, appropriate numerical values were attached to the other responses. A total score was derived in this manner for each respondent, (scored for high Authoritarianism). (See Appendix B(2) for a discussion of scale reliability and validity)

and behavior:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate and under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him...we have labelled this belief as 'extern control'. If the person perceives that the event is contingent upon his own behavior or his own relative permanent characteristics, we have termed this a belief in 'internal control'. (Lester & Genz, 1978, p.279).

It is expected that individuals or subjects gravitating towards the internal end of the attitudinal continuum will exhibit 'better performance' because they perceive their efforts as directly affecting their station and progress through the organization and are most likely to reflect the characteristics displayed in the above assertion. Once again, higher education is seen as providing the individual with a perceptual tool to better cope with this complexity (Lester and Genz, 1978). Education, then, would afford the individual 'internal-control' which should manifest itself in individual initiative.

Reid and Ware (1974) provide a scale that measures general locus of control (internal-external) and have further identified three separate factors or sub-scales within the scale proper.

Factor 1 (F=Fatalism) measures an I-E dimension where people agree or disagree that luck, fate and fortune rather than ability, hard work and personal responsibility determines one's outcome (Reid & Ware, 1973:265).

Factor 2 (SSC = Social System Control) measures an I-E dimension concerned with the belief that people are controlled

by social system forces such as the decision of politicians, 'powerful others above me' (Reid & Ware, 1973:265).

Factor 3 (SC = Self Control) measures an I-E dimension which is concerned with the notion that one can control himself (i.e., impulses, desires, emotional behaviour) and hence control his environment in part (Reid & Ware, 1974:135).

The conceptual underpinnings for this construct were developed by Rotter (1966) who suggested that locus of control was related to need for achievement. People scoring high on need for achievement would have some belief in their own ability or skill to determine the outcome of their efforts. Reid & Ware (1974) produced a forty-five item scale including thirteen filler items. The author eliminated these filler items producing a thirty-two item forced-choice scale. Each item is comprised of two statements: the respondent is required to choose the statement which best reflects his opinion on a given issue. A formula is presented which identifies the statement for each item which is considered 'external'. The respondent scores one for indicating an external statement and zero if the external statement is not indicated. In that the scale is comprised of F, SC, and SSC items, each respondent actually receives four separate scores: one overall score and one score for each factor (scored for high externalism).³

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See Appendix B(3) for a discussion of the scale development and reliability and validity,

Research Design

1. Remarks

As opposed to contriving a true experimental approach to the research questions at hand, the author has utilized what is known as the 'ex post facto' approach. In the experimental approach, the researcher manipulates and controls one or more independent variable(s) and observes the dependent variable(s) for variation which may best be explained by the manipulation of the independent variable(s).

In a true experiment, the researcher has the option of assigning randomly chosen subjects to experimental groups, holding some groups constant (controlled) and exposing others to some form of treatment (manipulation) and subsequently making observations of change in dependent variables as a result of the treatment effect or variation in independent variables.

There is a causal theme implicit in this form of research in that we are in a position to say 'if x, then y'. The researcher seeks to explain a phenomenon by intervening and participating in the causal process. Such is not the case in ex post facto research.

Ex post facto research is systemic empirical enquiry in which the scientist does not have direct control of independent variables because these manifestations have already occurred or because they are inherently not manipulatable. Inferences about relations among variables are made without direct intervention, from concomitant variation of independent and dependent

variables. (Kerlinger 1973:379)

The researcher, in this case, starts with a dependent variable, i.e., Authoritarianism and among the many possible influential variables, he selects education. Naturally, he may pick other independent variables as well, variables such as length of service, rank, S.E.S., all of which may be related to Authoritarianism and education. This makes no difference. It is not a matter of complexity; it is a matter of control. The researcher has no power to manipulate education, nor has he the power to randomize. Education may be a correlate of the other independent variables. It may be part of the 'correlational baggage' of length of service, rank and Authoritarianism rather than a determinant of Authoritarianism in its own right. The same argument applies to Tolerance of Ambiguity and Internal Control as dependent variables.

In essence, the ex post facto approach militates against any strong statements of causal inference. Amongst other things, one must be concerned with accounting for extraneous and confounding influences as well as spurious relationships.

2. Sampling:

Throughout the literature review and substance of this thesis, the author has referred to the 'police community'. The police community may be defined as the total population of all serving policemen in this country. If we speak in terms of this

population, the police community, and present a research problem which affects the police community at large, then it is in our best interests to deal with a group of policemen or a sample which is representative of the population.

The generalizability of research findings rests, in part, on the representative qualities of the sample. Representativeness is best ensured by selecting a random sample i.e., every member of the population has an equal opportunity of being selected. Attempts at random sampling are often compromised by such pragmatic concerns as availability of time, financial resources, and accessibility of respondents. For all of these reasons, the author chose a respondent pool by purposive and quota sampling techniques (see Kerlinger, 1973:129). In this instance a deliberate effort was made to obtain a representative sample of the police community by including typical strata within the sample. An assumed knowledge of these strata (i.e., age, rank, length of service) was used to select sample respondents that were representative or typical of the population.

The sample, including both municipal/city and R.C.M.P. members (total sample size=202), was drawn from serving members of the police community enrolled on in-service training courses at the British Columbia Police Academy, Fairmont Training Academy (RCMP), and the Canadian Police College.⁴ The sample was purposefully chosen to include probationary recruits with no

⁴-----
(See Appendix E for a description of courses surveyed)

practical experience, recruit constables with limited practical street experience, a full range of constables serving in various operational capacities and representative of various work environments, line supervisors, middle management personnel, and senior police administrators. The sampling problem of self-selection should be considered at this point.

Self-selection is said to occur when subjects assign or select themselves into groups on the basis of characteristics other than those in which the researcher may be interested. The subjects and the treatments come already assigned to groups. Further, self-selection occurs when members of the groups being studied are in these groups, in part because they differentially possess traits or characteristics extraneous to the research problem, characteristics that possibly influence or are otherwise related to the dependent variables of the research problem (Kerlinger, 1973:38).

Subjects in the study may initially come to the police service, or pre-select themselves, so as to be characteristic of certain traits, unaccounted for in the design of this study. In most instances, however, members attend courses as a matter of routine (for refresher, necessary information, and skill development). Their presence at an in-service training course does not represent any particular attitudinal predisposition. Policemen present on in-service training courses should not be more intellectual, introspective, etc., simply by virtue of their attendance and can, in fact, be seen as representative of

their respective peer groups in terms of service and expertise.

The one flaw which should be accounted for in this method of sampling is that it focuses on the individual as the unit of analysis and loses sight of important organizational subtleties which may manifest themselves in the attitudes and responses of the sample (Guyot, 1977 and Balch, 1972). For this reason, an effort was made to ensure that those in the sample also came from different organizational and task environments so as to allow control of what Skolnick (1966) has termed the policeman's 'working personality' - an on the job personality which develops in response to the contingencies experienced in one's organizational and task environment.

The major benefit in deriving a sample of this sort, as tenuous as it may be in terms of drawing generalizable conclusions, is that it ensures a substantial variation within the independent variables. There is, then, a built-in variation within these variables so as to be discerning of suspected variation in dependent variables. This may impinge on the manner in which we choose to generalize about the findings of the research; however, in this instance it was a necessary compromise.

3. Data Collection

Appendix C contains a sample of the research instrument which was presented to the respondent pool. The author

delivered, administered and collected the instruments from each of the in-service courses surveyed. The completion of the instrument, by course, took approximately thirty-minutes. As a matter of routine, the author ensured that the course received prior advisement through the course coordinator that the survey would be conducted. At a pre-determined time, the author attended the course and presented a brief preamble before administering the instrument. This preamble consisted of a short introduction, explaining that the author was a serving police officer, and a graduate student. It was made clear that the survey was being conducted in order to enable the author to fulfill requirements towards the completion of a graduate degree. Respondents were advised that participation was strictly voluntary and that they were to remain anonymous. There was no discussion of the substance or rationale of the research prior to the administration of the instrument. Specific questions were answered after the respondents in the course had completed the survey.

4. Method of Analysis

Analysis of variance was used to analyze the data generated by this study. The scope of this paper does not allow for an indepth discussion of this statistical technique. The reader is referred to Appendix F and to the following sources for a more detailed discussion: Kerlinger (1973, Chapter 6, 13 and 14) and

Nie, et al., (1975, Chapter 22).

a. Level of Measurement (see Nie et al 1975:4)

The level of measurement set for each of the variables within the data base establishes the most basic criterion for selecting the statistical technique for the analysis. It is generally understood that there are four levels of measurement.

The 'nominal' level is considered the lowest, in that it makes no assumption whatever about values being assigned to the data. Each value is seen as a distinct category and the value itself serves simply as a label. No assumption of ordering or distances between categories is made. (i.e., sex, marital status, training course, presently taking courses).

The 'ordinal' level is achieved when it is possible to rank-order all of the categories according to some criterion, without making any inference as to distance between categories (i.e., rank, S.E.S, years of service, size of department, education, work experience).

The 'interval' level of measurement, as well as having the capacity to order categories, has the property that distances between categories are set in terms of fixed and equal units. It is important to note that the interval level does not have an inherently fixed zero point (scores registered for the dependent variables, Tolerance of Ambiguity, Authoritarianism, and Locus of Control have been measured with the assumption that they meet

the interval level of measurement).

The 'ratio' level has all the properties of an interval scale with the additional property that the zero point is defined by the measurement format (i.e., age).

b. Summary of Common Statistics

The statistical terms which the reader can expect to encounter in the subsequent discussion of method of analysis, and in the discussion of findings are presented here in the interests of clarity and understanding.

Definition of Statistical Terms:

i. Minimum, Maximum, and Range:

The minimum and maximum denote the smallest and largest value of a variable. The range is the minimum subtracted from the maximum (for use at all levels of measurement)

ii. Mode:

This is the value of the variable which occurs most frequently at all levels of measurement

iii. Median:

This is the numerical value of the middle case or the case lying at the 50th percentile in the case of interval or ratio levels of measurement.

iv. Mean:

This is the most common measure of 'central tendency', often referred to as the average. It is the sum of the individual values for each case, divided by the number of cases. It is used most appropriately when interval and ratio assumptions are met.

v. Variance:

This is a measure of the dispersion of the data about the mean of an interval level variable. It is a method of measuring how closely individual scores on a given variable cluster about the mean. Variance will be small when there is a great deal of homogeneity in the data.

vi. Significance:

- F ratio;

In the discussion of relationships between two variables (i.e., one independent, one dependent) we need to know whether or not a relationship is 'significant' or whether it is unlikely that such a relationship could have occurred by chance as a consequence of sampling error.

If an experimental manipulation has been influential then the 'between groups' variance (V_b) should show the influence by becoming greater than expected by chance. 'Within groups' variance (V_w) can be seen as a measure of chance variation. In analysis of variance (V_b) is divided by (V_w); and, the ratio formed is called the 'F ratio';

$$F = \frac{V_b}{V_w}$$

The F ratio, then, is a numerical value which is checked against an 'F table' to determine whether or not the relationship is significant. F is reported within the findings tables with its associated level of statistical significance. It should be noted that statistical significance is not the same thing as substantive significance.

A relationship may be statistically significant, i.e., at a given level of confidence (5%) and we may assume that the relationship observed is not simply a consequence of chance. However, if statistical significance is achieved, that does not imply that the relationship is strong enough to be of substantive significance with respect to the research problem.

vii. Correlation:

- R (coefficient of correlation);

This value can range from + 1.0 through 0 to -1.0 and is a measure of the relation between the sets of scores of two variables. As dictated by the positive and negative parameters of this value it is also an indication of the direction of the relationship (i.e., positive or negative correlation).

The value R, then, describes the 'covariance' between two variables, i.e., to what extent and in what direction does a change in the value of 'x' result in a change in the value of 'y'?

- R²:

As indicated, this value is simply the coefficient of correlation squared, i.e., if $R = .80$, then $R^2 = .64$

This value indicates that 64% of the variance of a given variable is shared with a related variable. This value then is a measure of the 'strength' of a relationship.

- eta (correlation ratio);

Its values vary from 0 to 1.0 and gives us an indication of the 'degree' of relation between two variables (independent and dependent)

- eta²:

This value indicates, in essence the variance shared by the independent and dependent variable. Specifically, it indicates the proportion of variance of the dependent variable accounted for by the variance of the independent variable.

Within the tables reported in the findings chapter of this study, the reader will find values reported for eta, R and R². The eta values are reported for unadjusted variables (and a like value 'beta' for adjusted variables. Basically eta and eta

address the issue of variance explained by specific variables. The values reported for R and R^2 address the issue of variance explained by all (both independent) variables in concert with one another.

c. Analysis of Variance

The research questions posed in this study have been discussed in narrative form and data have been collected in numerical form. The data base should serve the purpose of helping us to explain and interpret the relationships which are posited between the previously defined variables.

Our variables, then, have been defined in terms of number sets. It is generally agreed that such sets of numbers, in order to be studied and compared, must be redefined by calculating averages or measures of central tendency (means) and by calculating measures of variability (variance). As explained earlier, the data constitute information drawn from a sample of the true population (of all serving peace officers). Analysis of variance is premised on the assumption that samples are chosen randomly in order to be representative of the population.

Assuming there is a relationship between two sample variables, the technique of 'analysis of variance' is used to tell us whether this relationship is significant, or this relationship could have occurred by chance (i.e., not statistically significant). At the risk of belabouring this

point, the reader should understand that the author has chosen only one 'sample' from the entire population. Perhaps it is just a 'chance' happening that a sample has been drawn in which this relationship is found to be significant. At the outset, then, we wish to establish a confidence interval or parameters of acceptability by which to retain or reject a given relationship. Social science research generally accepts .05 as a legitimate confidence interval; which is to say that a given relationship (between independent and dependent variable) could have occurred by chance only five times out of 100. Or, in other words, 95% of the time, this will constitute a statistically significant relationship.

It is necessary now to discuss the basic precepts of variance in terms of a stated relationship between two variables. We shall return to the previously cited example of the relationship between level of education (independent) and Authoritarianism (dependent) for demonstrative purposes. The most general way to classify variance is as:

- 1) Systematic (between-groups) variance
- 2) Error (within group) variance

Systematic variance is the variation in measures due to some known influences that 'causes' scores to lean in one direction more than another. For our purposes, we can understand

'between-group' variance as being systematic. This is the variance that reflects systematic differences between 'groups' of measures (i.e., categories within a given variable).

Error variance, on the other hand, is the fluctuation or varying of measures due to chance (error variance=random variance).

As opposed to 'between groups' variance, this source of variance is determined from 'within-groups' and is unaffected by the differences between means of groups (or categories within a given variable). It can be further understood as that portion of variance which is left over in a set of measures after all known sources of systematic variance have been accounted for.

One can appreciate, then, that it is the purpose of sound research design to account for as much systematic variance as possible while minimizing the amount of error variance. It is important to appreciate that 'error variance' is a bit of a misnomer: it is a pooled category of variance which includes all sources of variance which, aside from error, cannot be identified and or controlled.

The purpose of the research in this example is to use level of education as a variable to explain degrees of Authoritarianism as a variable. The extent to which education explains Authoritarianism (maximizing systematic variance) will determine how successful it is as a predictor, either by itself or in concert with other independent variables. In essence, we wish to support a stated hypothesis that between-group variance

is larger than could be expected by chance and thus is significant. Within the confines of this research the reader must understand that the establishment of varying levels of education (six categories) and the assignment of respondents to these levels or categories loosely constitutes an 'experimental manipulation' which is expected to manifest itself in Authoritarianism scores. If an experimental manipulation or influence has been operative, the effect may be to increase the variance of obtained means:

In a sense, this is the purpose of experimental manipulation to increase the variance between means to make the means different from each other. This is the crux of the analysis of variance method. If an experimental manipulation has been influential, then it should show up in the differences between means above and beyond the differences that arise by chance alone. And the between-groups variance should show the influence by becoming greater than expected by chance. (Kerlinger, 1973:222)

Previous research would dictate for this example that as levels of education increase, mean scores of Authoritarianism should decrease (i.e., there is an inverse relationship) and that there should be significant differences between these mean scores from one group (category-level) to another.

The F ratio, when calculated (and referred to an F table) will tell us whether indeed there is a significant relationship (at a specified confidence interval such as .05) which could not have occurred by chance. Eta will tell us the proportion (percentage) of variance in Authoritarianism which can be explained by level of education. And R^2 (when more than two independent variables are cited) will tell us the percentage of

variance which the overall model accounts for.

In an analysis of the effects of education on the dependent variables, the author has utilized 'two-way' or factorial analysis of variance. This prescribes, basically, the introduction of a second independent variable.

Let us assume that we wish to consider 'length of service' as a second independent variable. It is readily apparent that the introduction of a second variable should allow us to account for more overall (systematic) variance and thus to further minimize error variance. Aside from the independent effects of the two independent variables, there will be a third 'interaction' effect which serves to enrich the overall design in explaining sources of variance. Kerlinger (1973) further enhances our understanding of two-way analysis of variance:

In a one-way analysis, we simply say: If p, then q: if such and such methods, then so and so outcomes. In factorial analysis, however, we utter richer conditional statements. We can say: If p, then q and if r, then q, which is tantamount to talking about the main effects in a factorial analysis.... We can also say, however, if p and r, then q, which is equivalent to the interaction of [independent variables]. Interaction can also be expressed by: If p, then q, under condition r.
(Kerlinger, 1973:258)

Within the scope of two-way analysis of variance, we can identify factors affecting the dependent variable as being either:

1) Main effects (joint);

- variable a

- variable b

2) Interaction Effect (2-way)

A detailed discussion of variance explained through these effects will be offered within the findings chapter.⁵

⁵ (see Appendix F for a further discussion of Analysis of Variance ANOVA program)

IV. Findings

Description of the Respondent Sample (Independent Variables)

Background information was collected on all respondents. Data on age, sex, marital status, S.E.S., previous work experience, rank, years of service, and level of education were collected and are described below. This socio-biographical and occupational information formed the independent variables against which the attitudinal scales were measured.

1. Age

The respondents ranged in age from 19 years to 56 years, with a mean age of 33 years. From Table 1 it can be seen that the sample is heavily weighted towards the 21 - 40 year category, with just under 80% of the sample falling into this category.

Table 1
Age (in years) of Police Respondents .

Age	N	Percentage	Cumulative Percentage
<20yrs	3	1.5	1.5
21-30yrs	95	47.5	48.8
31-40yrs	62	31.5	79.6
41-50yrs	33	16.5	96.0
>5lyrs	8	4.0	100.0
Total N = 201			

2. Sex

Table 2 indicates that respondents were predominantly male (95%). This is a fairly accurate representation of the police community at large.

Table 2
Sex of Police Respondents

Sex	N	Percentage	Cumulative Percentage
male	192	95.0	95.0
female	10	5.0	100.0
Total N = 202			

3. Marital Status

Seventy-four percent of the respondents sampled were married, approximately 18% were single, with 6% either divorced or separated. (see Table 3)

Table 3

Marital Status of Police Respondents

Marital Status	N	Percentage	Cumulative Percentage
Married	151	75.1	75.1
Single	36	17.9	93.0
Div./Separate.	12	6.0	99.0
Common Law	2	1.0	100.0
Total N = 201			

4. Socio-Economic Status (father's occupation):

The socio-economic status (S.E.S.) of the respondents was measured by the Revised Blishen Occupational Status Scale (Blishen and McRoberts, 1976:71) This occupational status scale rank-orders occupational prestige from low (1) to high (5) (See Appendix A). Table 4 indicates that 80% of the respondents fell within the first three status categories. As a matter of interest 7% of the respondents reported that their fathers were police officers (category 7). Police officer, as an occupation, scores '4' on the Blishen Scale. It would appear, then, that for most respondents the decision to become a police officer represents an elevation in their socio-economic status over that of their father's.

Table 4

Socio-Economic Status of Police Respondents

(father's occupation)

Occupational Status (Blishen)	N	Percentage	Cumulative Percentage
1	59	35.5	35.5
2	42	25.3	60.8
3	30	18.1	78.9
4	8	4.8	83.7
5	15	9.0	92.8
7	12	7.2	100.0
Total N= 166			

5. Previous Work Experience

As was the case with socio-economic status, the respondents' previous work experience was measured by the Revised Blishen Occupational Status Scale (Blishen and McRoberts 1976:71).

The respondents' previous work experience was scored on a scale which is rank-ordered from low (1) to high (5). Two additional categories were added by the author: category 6 indicating no previous work experience and category 7 indicating previous work experience in policing. As Table 5 indicates, almost 80% of the respondents held jobs prior to becoming policemen which fell into the first three categories, or at the lower end of the status scale. Approximately 8% of the respondents (category 6) reported joining the police directly from school. Approximately 6% of the respondents (category 7) reported having been involved in policing prior to employment with their present departments. The majority of respondents, then, experienced an increase in occupational status when they became policemen.

Table 5

Previous Work Experience of Police Respondents

Work Experience (Blishen)	N	Percentage	Cumulative Percentage
1	45	26.2	26.2
2	70	40.7	66.9
3	20	11.6	78.5
4	10	5.8	84.3
5	2	1.2	85.5
6	14	8.1	93.6
7	11	6.4	100.0

Total N = 172

6. Police Rank

The greatest portion of those surveyed were constables (approx. 60%). Non-commissioned officers (corporal, sergeants, staff sergeant) accounted for approximately 30% of the respondents, with commissioned officers accounting for the remaining 10% (see Table 6).

Table 6

Present Rank Held by Police Respondents

Police Rank	N	Percentage	Cumulative Percentage
Constable	118	59.3	59.3
Corporal	12	6.0	65.3
Sergeant	28	14.1	79.4
Staff Sgt.	18	9.0	88.4
Inspector	17	8.5	97.0
Superintendent	6	3.0	100.0
Total N = 199			

7. Years of Service:

The respondents in the sample represent a diverse cross-section of serving policemen; from recruits with less than one year of service, to senior members with in excess of 20 years of service (see Table 7).

Table 7
Years of Service of Police Respondents

Service (yrs.)	N	Percentage	Cumulative Percentage
<1yr.	35	17.3	17.3
1-3	28	13.9	31.3
3-5	12	5.9	37.1
5-10	42	20.8	57.9
10-20	57	28.2	86.1
>20	28	13.9	
Total N = 202			

8. Size of Department

Size of Respondents' Police Department

The respondents appear to be fairly evenly spread across departments or detachments of various sizes. Table 8 indicates that an almost equal proportion of the sample was serving in each of the department size categories.

Table 8

Size of Department Served at by Police Respondents

Size of Department	N	Percentage	Cumulative Percentage
<19 (men)	43	21.3	21.3
20-45	37	18.3	39.6
46-130	40	19.8	59.4
131-900	39	19.3	78.7
>901	43	21.3	100.0
Total N = 159			

9. Level of Education

Approximately 40% of the respondents reported having completed only junior or senior matriculation at high school. Approximately 28% had some college or university background. Of the total sample, 11% reported acquiring a college diploma and 10% reported acquiring a university degree (see Table 9).

As a matter of interest, 40% of the respondents reported that they were actively pursuing some form of continuing education or training.

Table 9
Level of Education Acquired by Police Respondents

Education	N	Percentage	Cumulative Percentage
Not Reported	5	2.5	2.5
Jr. Matric.	49	24.3	26.7
Sr. Matric.	30	14.9	41.6
College (incomplete)	38	18.8	60.4
Univ. (incomplete)	38	18.8	79.2
Coll. Diploma (complete)	22	10.9	90.1
Univ. Degree (complete)	20	9.9	100.0
Total N = 202			

10. Training Course

Table 10 is a recapitulation of the number of respondents surveyed, and the training course which they were taking, at the time of the survey. It is a descriptive variable and makes no assumptions of ordinality. (See Appendix E for a further discussion of this sample characteristic.)

Table 10
Training Course Attended by Police Respondents

Training Course	N	Percentage	Cumulative Percentage
*Recruit Training	23	11.4	11.4
*Recruit Train. (field)	21	10.4	21.8
**Police Studies	37	18.3	40.1
*Sr. Police Investigators	15	7.4	47.5
**Criminal Investigators	26	12.9	60.4
*Police Supervisors	16	7.9	68.3
***Sr. Police Admin.	42	20.8	89.1
***Executive Development	22	10.9	100.0

Total N = 202

*British Columbia Police Academy
 **Fairmont Training Academy (RCMP)
 ***Canadian Police College

The Dependent Variable; Score Distribution Characteristics

From the assertions made by the Canadian Police College (1978), a series of working hypotheses were articulated which stated that educated police officers were better able to tolerate ambiguity, less authoritarian, and more likely to reflect a belief in internal control. These attitudinal constructs, then, became the dependent variables. The score distribution characteristics of these dependent variable scales are reported below.

1. Ambiguity Tolerance (AT-20 Scale)

The Ambiguity Tolerance scale used in this analysis is a 20 item scale designed to measure one's capacity to tolerate ambiguity. The scale is scored for high Ambiguity Tolerance, with a maximum score possible of 20.

Respondent scores on this scale ranged from 1.0 to 16.0, with a mean score of 7.9 and a standard deviation of 3.0. The score distribution approximated the normal curve (Kurtosis = -0.2, Skewness = 0.1).

2. Authoritarianism (F-Scale)

The Authoritarianism scale used in this analysis is a 28 item scale designed to measure degrees of Authoritarianism in attitude. The scale is scored for high Authoritarianism. Each item is scaled on a six point continuum, with a maximum score possible of $(28 \times 6 =) 168$.

Respondent scores on the F scale ranged from 68.0 to 130.0, with a mean of 101.3 and a standard deviation of 9.1. The score distribution approximated the normal curve (Kurtosis = 0.9, Skewness = 0.2) with a clustering of scores near the mean.

3. Internal-External Locus of Control (I-E Scale)

a. Total scale

The I-E (total) scale used in this analysis is a 32 item scale designed to measure, in general, one's perception of events occurring around him as being contingent on his effort. Respondents believing that they have control over their destiny are said to have 'internal' beliefs, while those who believe that they have no control over such events are said to have 'external' beliefs. The scale is scored for high externalism with a maximum score possible of 32.

The respondent scores on the total I-E scale ranged from 1.0 to 30.0, with a mean score of 13.7 and a standard deviation of 5.8. The score distribution approximated the normal curve (Kurtosis = 0.2, Skewness = 0.3).

b. Fatalism Subscale

The Fatalism subscale is a 12 item scale, scored for high externalism with a maximum score possible of 12. This scale measures an I-E dimension where respondents specifically perceive luck or fate rather than ability and hard work, as determining one's outcome.

The respondent scores on the Fatalism subscale ranged from 0.0 to 12.0 with a mean score of 3.7 and a standard deviation of 2.7. The score distribution was heavily weighted towards low scores on Fatalism (Kurtosis = 0.04, Skewness = 0.8).

c. Self-control Subscale

The Self-Control subscales is an 8 item scale, scored for high externalism with a maximum score possible of 8. This scale measures an I-E dimension where respondents perceive that they can control themselves and hence can control their environment.

The respondent scores on the Self-Control subscale ranged from 0.0 to 8.0 with a mean score of 3.6 and a standard

deviation of 2.1. The score distribution approximated the normal curve (Kurtosis = -0.9, Skewness = 0.1) with a higher frequency of scoring at both ends of the scale.

d. Social System Control Subscale

The Social System Control subscale is a 12 item scale, scored for high externalism with a maximum score possible of 12. This scale measures an I-E dimension where respondents perceive that they are controlled by social system forces or 'powerful others'.

The respondent scores on the Social System Control subscale ranged from 0.0 to 12.0 with a mean score of 6.3 and a standard deviation of 2.7. The score distribution approximated the normal curve (Kurtosis = -0.7, Skewness = -0.1)

Significant Relationships Through the Analysis of Variance

The statistical analysis of this study was conducted through the use of the analysis of variance (ANOVA) sub-program of the "Statistical Package for the Social Sciences" (Nie et al., 1975:398). Specifically, the method used was two way (factorial) analysis of variance. The dependent variables were examined, in turn, with paired combinations of all independent variables. Relationships were examined between all the dependent variables with all possible (paired) combinations of the

independent variables. A higher order analysis was not possible due to the sample size, which rendered cell size too small or in some cases non-existent. The purpose of this statistical technique was to ascertain the relationships between the dependent and independent variables which were statistically significant. The working hypotheses were that education, as an independent variable, would be:

- positively related to one's ability to tolerate ambiguity;
- negatively related to authoritarianism; and
- positively related to belief in 'internal control'.

Thus, a statistically significant relationship was expected to exist between education and all of the dependent variables: Ambiguity Tolerance, Authoritarianism, Internal-External Locus of Control (including Fatalism, Self-Control, Social System Control).

What follows is a summary table (Table 11) which lists the paired independent variables which were significantly related to the respective dependent variables. The 'F' ratios and confidence intervals have also been reported.

Table 11

Significant Relationships Between Dependent Variables
and
(paired combinations of) Independent Variables.

Scale (Dependent Variable)	Independent Variable	F-Ratio	Significance
a) Ambiguity Tolerance	Rank Socio Economic Status	1.98	.05
	Rank x Soc. Econ. Status		
	Rank x Soc. Econ. Status		
b) Authoritarianism	Rank Work Experience	2.32	.01
	Rank x Work Experience		
	Rank x Work Experience		
	Rank S.E.S.	2.53	.01
	Rank x S.E.S.		
	Rank x S.E.S.		
	Training Course	2.63	.01
	Rank Training Course	2.35	.05
	Rank x Training Course		
	Rank x Training Course		
Training Course Education	Training Course	2.41	.05
	Education		
	Training Course x Education		
Education Size Department	Education	2.80	.05
	Size Department		
	Education x Size Department		

Table 11 (continued)

Scale (Dependent Variable)	Independent Variable	F-Ratio	Significance	
c) Internal-External Locus of control	i) Total	Training Course	2.50	.05
		S.E.S.		
		Training Course x S.E.S.		
	ii) Fatalism	Years Service	1.76	.05
		Size Department		
		Yrs. Service x Size Department		
	iii) Self Control	Years Service	2.49	.05
		Training Course		
		Years Service x Training Course		
	iv) Social System Control	Training Course	3.88	.01
		S.E.S.		
		Training Course x S.E.S.		
Rank		3.63	.01	
S.E.S.				
Rank x S.E.S.				
Rank	Size Department	3.69	.01	
	Rank x Size Department			
	Rank			
Rank	Years Service	3.69	.01	
	Rank x Years Service			

Table 11 (continued)

Scale (Dependent Variable)	Independent Variable	F-Ratio	Significance
Rank		3.89	.01
Education			
Rank x Education			
Education		2.50	.05
S.E.S.			
Education x S.E.S.			
S.E.S.			
Years Service			
S.E.S. x Years Service		1.68	.05
Years Service			
Training Course			
Years Service x Training Course		2.84	.01
Training Course			
Size Department			
Training Course x Size Department		2.75	.01
Training Course			
Work Experience			
Training Course x Work Experience		2.06	.05

Note: interaction effect denoted by 'x'.

The reader will recall from the discussion of analysis of variance in the previous chapter that we were seeking to account for as much systematic variance as possible, while minimizing and or controlling error variance. Having more than one independent variable increases the explanatory power of the analysis. Consideration can be given to the main effect of variable 'a' the main effect of variable 'b', the 'joint main effect' of both these variables and the 'interaction effect' of these two variables acting in concert with one another. It is quite possible to have two independent variables which, in and of themselves, have a non-significant effect on the dependent variable while at the same time the interaction effect is significant, i.e., when these two variables are allowed to 'work together', they are significant. Up to this point it has only been established that certain relationships are significant. The fact that the effect of variable 'a' is significant simply indicates that the mean of at least one category of variable 'a' is significantly different from the overall 'grand' mean. It is, therefore, important to examine the pattern of variable 'a's' relationship to the dependent variable. The sub-program ANOVA produces a Multiple Classification Analysis (MCA) table which allows the researcher to observe the patterned effects between variable categories and thus explain the relative strength and direction of the overall relationship, as well the variable effectiveness in accounting for variance.

The specific findings of this study will be presented by discussing the significant relationships using Table 11 as a guide. Although reference will be made to specific characteristics and patterns between variable relationships, the M.C.A. tables for each significant relationship have been placed in a separate appendix (see Appendix G).

1. Ambiguity Tolerance

The hypothesis that level of education would be significantly and positively related to one's ability to tolerate ambiguity was not substantiated. Neither education by itself nor the interaction effect of education and any of the other independent variables was significantly related to Ambiguity Tolerance.

Ambiguity Tolerance by Rank and S.E.S.

The interaction effect of rank and S.E.S. produced the only significant relationship with Ambiguity Tolerance. Neither rank or S.E.S., individually, were significantly related to Ambiguity Tolerance. The adjusted deviations for both variables do not show any discernible pattern. Most of the category means were around the grand mean. An R^2 value of .072 for the interaction effect indicates that only 7% of the total variation in scores can be attributed to rank and S.E.S. The interaction effect is statistically significant but not of major explanatory importance.

2. Authoritarianism

The hypothesis that level of education would be significantly and negatively related to Authoritarianism was only marginally supported by the findings. Two statistically significant relationships surfaced and are reported directly below, followed by a group of significant relationships involving other independent variables.

Authoritarianism by Training Course and Education

The main effect of education was found to support the hypothesis that education would be significantly and negatively related to Authoritarianism. There appears to be no discernible change in unadjusted and adjusted deviation for either variable which suggests that these variables are not related to one another. Although there was no linear pattern apparent for education scores, respondents' scores in category 6 (university degree complete) were notably lower than other categories. This deviation is consistent with one hypothesis which suggests that education reduces Authoritarianism. The R^2 value (.118) indicates that the overall model accounts for approximately 12% of the total variation in Authoritarianism.

Authoritarianism by Education and Size of Department

The main effect of education was found to support the hypothesis that education would be significantly and negatively related to Authoritarianism. As was the case with education paired with training course, the two independent variables were

unrelated. There was no linear pattern apparent for education scores. Respondents in category 6 (university degree complete) scored lower than the other categories. This deviation is consistent with our hypothesis which suggests that education reduces Authoritarianism. The R^2 value (.099) indicates that the overall model accounts for approximately 10% of the total variation on Authoritarianism.

Authoritarianism by Rank and Work Experience

Neither rank nor work experience were found to have a significant effect on Authoritarianism. However, it is interesting to note that with respect to rank, category 4 (Staff Sergeant) scored considerably higher on Authoritarianism than other ranks.

The interaction effect of rank and work experience was found to be significant, however, the R^2 value (.068) indicates that only 7% of the total variation in scores can be attributed to the interaction of rank and work experience. This effect is statistically significant but not of major explanatory importance.

Authoritarianism by Rank and S.E.S.

Neither rank nor S.E.S. were found to have a significant effect on Authoritarianism. The interaction effect of rank and S.E.S. was found to be significant, although the R^2 value (.081)

a

indicates that only 8% of the total variation in scores can be attributed to the interaction of rank and S.E.S. This effect is statistically significant but not of major explanatory importance.

Authoritarianism by Training Course and Rank

Both training course and rank were found to be significantly related to Authoritarianism. Changes in category values from unadjusted to adjusted deviations of both variables indicates that these variables are related to one another. On examining the adjusted deviation for both variables, it is difficult to identify any discernible pattern. It should be remembered that 'significant' relationships do not necessarily imply 'important' relationships. There was a general trend in rank categories which is predictable in that the higher the rank, the higher the authoritarianism score. The R^2 value (.120) indicates that 12% of the variations in Authoritarianism can be attributed to training course and rank.

3. Internal-external locus of control

a. Total Scale

The hypothesis that level of education would be positively and significantly related to belief in Internal Control was not substantiated. Neither education by itself nor the interaction effect of education and any of the other independent variables was significantly related to Internal Control.

I-E Total by Training Course and S.E.S.

Training course was found to be significantly related to Internal-External Locus of Control. There was no apparent linear pattern, but this variable is descriptive (nominal) in nature and makes no assumptions of ordinality. Respondents in category 6 (B.C. Police Academy - Police Supervisors) scored highest towards externality, while individuals in category 2 (B.C. Police Academy - Recruit Training, field) and category 8 (Canadian Police College - Executive Development) scored lowest indicating a belief in Internal Control. These findings conflict with the results of past research which suggest that senior policemen have a stronger internal-belief system. The overall model accounts for approximately 15% of the total variation of the

dependent variable.

b. Fatalism

The hypothesis that level of education would be positively and significantly related to belief in Fatalism was not substantiated. Neither education by itself nor the interaction effect of education and any of the other independent variables was significantly related to Fatalism.

Fatalism by Years of Service and Size of Department

The variables years of service and size of department were not found to be significantly related to Internal Control (Fatalism) as revealed by the lack of any discernible pattern in the category means of both variables. The interaction effect of years of service acting in concert with size of department was found to be significant. However, as can be seen from the R^2 value (.031), only 3% of the total variation in scores can be attributed to years of service and size of department.

Fatalism by Years of Service and Training Course

Both years of service and training course were found to be significantly related to Fatalism. The substantial changes in category values from unadjusted to adjusted deviations of both variables indicates that these two variables are related to one another. When controlling for training course, years of service categories reflected a pattern which is consistent with past

research, i.e., respondents with more service tend to be more 'internal' in their belief system: specifically, in this case, they tend to be less fatalistic and believe more in their own efforts in effecting outcomes as opposed to luck or chance. The beta value for years of service, when squared ($\beta^2 = .69^2 = .48$), indicates that years of service accounts for 48% of the variation in Fatalism.

In general terms, the low sample mean of 3.70 is interesting and indicates that the sample is more internally oriented than would be expected. The R^2 value (.093) indicates that 9% of the variation in Fatalism can be attributed to years of service and training course.

c. Self Control

The hypothesis that level of education would be positively and significantly related to belief in Internal Control (Self-Control) was not substantiated. Neither education by itself nor the interaction effect of education and any of the other independent variables was significantly related to Self Control.

Self Control by Training Course and S.E.S.

The training course an individual was attending, was found to be significantly related to individual measures of Self Control. There is no discernible pattern within the categories

of training course indicating that aside from statistically significant variation in category means, there is no information nor trends of any consequence which deserve mention in light of the stated hypothesis. The R^2 value (.136) indicates that only 14% of the variation in self-control can be attributed to training course and S.E.S. Once again, a statistically significant relationship exists, but the strength of the relationship is weak.

d. Social System Control

The hypothesis that level of education would be significantly and positively related to Internal Control (Social System Control), was also only marginally supported by the findings. One statistically significant relationship surfaced and is reported directly below, followed by a group of significant relationships involving other independent variables.

Social System Control by S.E.S. and Education

Education was found to be significantly related to Social System Control. The lack of change between unadjusted and adjusted deviations of both variables indicates that these variables are not related to one another. There is no discernible pattern between the category values of education, however, respondent scores for category 6 (university degree complete) were consistent with our hypothesis that higher

education leads to belief in internal control. The R^2 value (.113) indicates that the overall model accounts for approximately 11% of the variation in Social System Control.

Social System Control by Rank and S.E.S.

Rank was found to be significantly related to Social System Control. The lack of change between unadjusted and adjusted deviations for both variables indicates that these variables are not related to one another. There is a linear trend of decreasing category values as rank increases. This supports past research findings which suggest that occupational tenure lends itself to increased internal belief. More specifically, as rank increases, individuals attribute outcomes more to their own efforts and less to 'the system' and 'powerful others'. This finding may be a function of general attrition. It is possible that those individuals who are more 'external' in their beliefs choose to leave the police service earlier, thus leaving an over-representation of those with propensity towards internal belief. The R value (.149) indicates that the overall model accounts for approximately 15% of the total variation in Social System Control.

Social System Control by Rank and Size of Department

Rank was found to be significantly related to Social System Control. The same linear trend prevails, as was the case with the paired combination of rank and S.E.S. The same observation

can be made, i.e., that as rank increases, individuals attribute outcomes more to their own efforts and less to 'the system'. The R^2 value (.099) indicates that the overall model accounts for approximately 10% of the total variation in Social System Control.

Social System Control by Years of Service and Rank

Rank was found to be significantly related to Social System Control. The change in category values of rank between unadjusted and adjusted deviations indicates that rank and years of service are related to one another. The same linear trend prevails, as was the case with the paired combination of rank and S.E.S. The same observation can be made, i.e., that as rank increases, individuals attribute outcomes more to their own efforts and less to 'the system'. The R^2 value (.103) indicates that the overall model accounts for approximately 10% of the total variation in Social System Control.

Social System Control by Rank and Education

Rank was found to be significantly related to Social System Control. The lack of change between unadjusted and adjusted deviations between both variables indicates that these variables are not related to one another. The comments pertaining to the linear trend noted above apply. The R^2 value (.139) indicates that the overall model accounts for approximately 14% of the total variation in social system control.

Social System Control by Years of Service and S.E.S.

Neither years of service nor S.E.S. were found to have a significant effect on Social System Control. The interaction effect of years of service and S.E.S. was found to be significant. However, as can be seen from the R^2 value (.055) only 6% of the total variation in scores can be attributed to years of service and S.E.S.

Social System Control by Years of Service and Training Course

Training course was found to be significantly related to Social System Control. The change in category values of training course between unadjusted and adjusted deviations indicates that years of service and training course are related to one another. Aside from statistically significant variation in the category means of training course, there is no pattern of any consequence which deserves mention in light of the stated hypothesis. The R^2 value (.107) indicates that only 10% of the variation in Social System Control can be attributed to training course and years of service.

Social System Control by Training Course and Size of Department

Training Course was found to be significantly related to Social System Control. The lack of change in category values of training course between unadjusted and adjusted deviations indicates that size of department and training course are not related to one another. Aside from a statistically significant

variation in category means of training course, there is no pattern of any consequence which deserves mention in light of the stated hypothesis. The R^2 value (.100) indicates that only 10% of the variation in Social System Control can be attributed to training course and size of department.

Social System Control by Training Course and Work Experience

Training Course was found to be significantly related to Social System Control. The lack of change in the category values of training course between unadjusted and adjusted deviations indicates that work experience and training course are not related to one another. Aside from a statistically significant variation in the category means of training course, there is no pattern of any consequence which deserves mention in light of the state hypothesis. The R^2 value (.131) indicates that 13% of the variation in Social System Control is accounted for by Training Course and Work Experience.

Comments

The findings reveal a series of weak statistically significant relationships. Education, as an independent variable, presents itself infrequently as a weak predictor of attitude. In general, the statistically significant relationships presented in this chapter do not provide us with any substantive evidence to support the working hypotheses, i.e., that education as an independent variable will be:

- a. positively related to one's ability to tolerate ambiguity;
- b. negatively related to authoritarianism; and,
- c. positively related to belief in 'internal control'.

Police Attitudes Towards Higher Education: An Overview

Aside from the three dependent variable scales presented within the survey instrument, a battery of statements was also included which was designed to tap the respondents' general attitudes towards some issues of higher education in policing. These statements were refined from a set of interviews conducted with a sample group (unrelated to this research sample) chosen specifically to address police attitudes towards education (see Appendix H for further discussion and development).

It was the author's intention in including this sub-scale to record general attitudes towards higher education and discuss differences in attitude due to such factors (independent variables) as rank, years of service and level of education. At the outset, a simple 'frequencies' run was conducted (see Nie et al., 1975:194) to determine any trends and patterns in how the overall respondent group reported. A series of one-way analysis of variance runs were made as well using each statement as a dependent variable against the independent variables of rank, years of service and education respectively.

Using this method, it was possible to determine whether differences in (categories of) rank, service, or education produced significant differences in attitude reflected through a series of statements pertaining to higher education and policing.

The coding format was established as:

Strongly Agree	(S.A.)	1
Agree	(A.)	2
Tend to Agree	(T.A.)	3
Tend to Disagree	(T.D.)	4
Disagree	(D.)	5
Strongly Disagree	(S.D.)	6

The scale statements have been listed below:

Descriptive statistics have been included to give the reader a general understanding of how the respondent group, as a whole, scored. The value contained in square brackets in the left margin represents the respondent sample mean score on the Likert scale. Beneath each point on the Likert scale (SA,A,TA,TD,D,SD) is reported the total number of respondents who scored at that point and their percentage of the total sample contained in parentheses.

1. There is a notable trend in most occupations these days, including policing, which stresses the importance of post secondary education as a tool for advancement.

[2.0]	SA	A	TA	TD	D	SD	Total
	55(27.4)	109(54.5)	27(13.4)	8(4.0)	2(1.0)	0(0.0)	201(100)

2. A post secondary education is a valuable asset to any individual and will thus contribute to the overall value of the Force.

[2.8]	SA	A	TA	TD	D	SD	Total
	18(9.0)	78(38.8)	48(23.9)	36(17.9)	16(8.0)	5.2.5)	201(100)

3. The only education a policeman needs can be found on the street and will come with experience

[4.6]	SA	A	TA	TD	D	SD	Total
	4(2.0)	5(2.5)	17(8.6)	51(25.8)	82(41.4)	39(19.7)	198(100)

4. Education for police officers should be strictly job related, to address the immediate needs of the man on the street.

[4.4]	SA	A	TA	TD	D	SD	Total
	4(2.0)	13(6.5)	23(11.4)	52(25.9)	78(38.8)	31(15.4)	201(100)

5. In order to function in a complex society, with increasingly complex role requirements, street police officers should possess a university education.

[4.3]	SA	A	TA	TD	D	SD	Total
	3(1.5)	11(5.5)	27(13.6)	73(36.7)	61(30.7)	24(12.1)	199(100)

6.A post secondary education is a valuable asset to any individual and will thus contribute to the overall value of the Force.

[2.6]	SA	A	TA	TD	D	SD	Total
	28(13.9)	77(38.3)	70(34.8)	13(6.5)	9(4.5)	4(2.0)	201(100)

7.Post secondary education should be considered as a strategy to upgrade the individual and the Force towards becoming more professional.

[2.7]	SA	A	TA	TD	D	SD	Total
	30(14.9)	66(32.8)	70(34.8)	19(9.5)	11(5.5)	5(2.5)	201(100)

8.If the effects of formal education cannot be directly measured in terms of job performance, then we shouldn't bother.

[4.2]	SA	A	TA	TD	D	SD	Total
	4(2.0)	11(5.5)	23(11.4)	74(36.8)	73(36.3)	16(8.0)	201(100)

9.All the importance placed on education for policemen recently is strictly a political exercise, thought up by politicians and academics, and has nothing to do with day to day police work.

[4.5]	SA	A	TA	TD	D	SD	Total
	4(2.0)	5(2.5)	21(10.4)	61(30.3)	79(39.3)	31(15.4)	201(100)

10.More than anything, policemen need to be educated in the law, recent case law, and relevant federal and provincial statutes.

[2.4]	SA	A	TA	TD	D	SD	Total
	45(22.4)	72(35.8)	48(23.9)	26(12.9)	9(4.5)	1(0.5)	201(100)

11.The best school a policeman can hope to graduate from is the 'school of hard knocks'.

[4.3]	SA	A	TA	TD	D	SD	Total
	3(1.5)	10(5.0)	27(13.6)	70(35.2)	77(38.7)	12(6.0)	201(100)

12. Education, to be meaningful; should teach policemen how to relate to people and to better communicators.

[2.0]	SA	A	TA	TD	D	SD	Total
	49(24.4)	100(49.8)	50(24.9)	1(0.5)	(0.5)	0(0.0)	201(100)

13. Because good policework largely depends on one's ability to deal with people, education should address itself to understanding why people behave the way they do.

[2.2]	SA	A	TA	TD	D	SD	Total
	36(17.9)	101(50.2)	61(30.3)	1(0.5)	2(1.0)	0(0.0)	201(100)

14. Post secondary education should make a policeman more effective by exposing him to different theories which will cause him to be more aware of what goes on around him.

[2.4]	SA	A	TA	TD	D	SD	Total
	31(15.4)	88(43.8)	65(32.3)	13(6.5)	2(1.0)	2(1.0)	201(100)

15. The role of the front line policeman is to serve the public and render assistance in times of crisis.

[2.0]	SA	A	TA	TD	D	SD	Total
	52(26.0)	111(55.5)	30(15.0)	5(2.5)	2(1.0)	0(0.0)	200(100)

16. The police today are like the 'thin blue line' between peaceful social order and total chaos.

[3.0]	SA	A	TA	TD	D	SD	Total
	24(11.9)	52(25.9)	65(32.3)	37(18.4)	20(10.0)	3(1.5)	201(100)

17. The primary responsibility of the police is the control of crime through aggressive enforcement and investigation.

[3.6]	SA	A	TA	TD	D	SD	Total
	9(4.5)	36(18.0)	49(24.5)	57(28.5)	37(17.5)	12(6.0)	200(100)

18. Protection of life and property and prevention of crime are story book theories taught at the academy, which have little relevance to working policemen.

[5.0]	SA	A	TA	TD	D	SD	Total
	2(1.0)	4(2.0)	5(2.5)	40(20.0)	84(42.0)	65(32.5)	200(100)

19. The benefit personally derived from a post secondary education by a policeman should simply be a sense of self-satisfaction and accomplishment.

[3.5]	SA	A	TA	TD	D	SD	Total
	11(5.5)	34(16.9)	50(24.9)	66(32.8)	34(16.9)	6(3.0)	201(100)

20. Today, police departments should be giving serious preferential treatment to the hiring and advancement of university and college graduates.

[4.0]	SA	A	TA	TD	D	SD	Total
	3(1.5)	18(9.0)	43(21.5)	71(35.5)	44(22.0)	21(19.5)	200(100)

21. Factors such as length of service and loyalty to the Force should be prime considerations for advancement and promotion.

[4.0]	SA	A	TA	TD	D	SD	Total
	6(3.0)	17(8.5)	52(26.0)	60(30.0)	45(22.5)	20(10.0)	200(100)

22. Policemen who wish to pursue post secondary level studies in police related areas should have their tuition paid for by the Force.

[2.2]	SA	A	TA	TD	D	SD	Total
	47(23.4)	85(42.3)	54(2.69)	10(5.0)	4(2.0)	1(0.5)	201(100)

23. There should be programs set in place which allow members to take temporary leaves of absence (with pay) in order to study in job related areas.

[2.3]	SA	A	TA	TD	D	SD	Total
	39(19.4)	83(41.3)	62(30.8)	12(6.0)	5(2.5)	0(0.0)	201(100)

24. The way things are today, a university or college educated policeman can reasonably expect accelerated advancement and preferential postings, assuming his performance is equal to his non-educated peers.

[2.8]	SA	A	TA	TD	D	SD	Total
	16(8.0)	79(39.3)	58(28.9)	25(12.4)	14(7.0)	9(4.5)	201(100)

From these statistics, it is possible to make some general observations. Policemen are prepared to concede that there is a trend towards higher education which affects them. Although not necessarily proponents of the 'education=experience' school of thought, the respondents appear cautious in accepting post secondary education as necessary preparation for police work. Education is seen as being an asset to the individual which may contribute to overall professionalization without being necessarily 'job-specific'. The respondents tend to adhere to the 'liberal arts' precepts which cite education as affording policemen an increased ability to understand and relate to what goes on around them. This general attitude tends to compliment their overall acceptance of the 'service' role of the police. The respondents strongly adhered to the 'order maintenance' and 'protection of life and property' mandates. It is clear that collectively, the respondents have incorporated in their role perceptions all the community expectations and demands which have been cited as major causes of role confusion. In keeping with their being cognizant of the trend towards higher education, the respondents are also mindful that having an education is important in 'getting ahead' within the organization. Although being somewhat reticent in accepting the 'loyalty-tenure' basis for advancement, the respondents are equally leary of preferential treatment being afforded to university and college graduates. Although it may be argued that the respondents find this emphasis on education at least

covertly threatening they tend to endorse organizational programs which encourage further education (i.e., paid tuition and educational leave).

Through the analysis of variance, we are provided with a breakdown of summary statistics which reflects the relationship between each of the twenty-four statements and the variables education, rank and years of service (see Appendix I).

As a note of clarification, two observations should be made. First, for each statement the overall category mean scores were virtually the same for all three independent variables. For example, regarding statement #1, the respondent groups had a mean score of 2 (Tend to Agree) regardless of (difference in the variables) rank, service, or education. Second, one would anticipate some significant variation in category scores within variables. Although some weak statistically significant relationships were found, specifically within education, these relationships failed to account for any notable change of scores along the Likert scale.¹

Further, these relationships which were found to be statistically significant were often lacking in any linear pattern between categories, thus defying any meaningful interpretation.

¹ For example, regarding statement #7, a statistically significant relationship was found ($p=.01$) with the education variable. Category means were reported as: 3.0, 2.8, 2.5, 2.3, 3.0, 2.0 (grp.1 to grp.6). We would interpret this as those respondents with a Jr. matriculation (grp. 1) scoring 3=Tend to Agree, while those respondents with university degrees (grp. 6) scoring 2=Agree: hardly a monumental difference.

V. Conclusions

An Overview:

This thesis has focused on the notion that 'better education makes better policemen'. Bennett (1977) was cited earlier in this thesis (chapter 1:4) as having stated that:

...although the need (for better police performance) has been recognized as well as a tentative solution (more education), little is acutally known about the relationship between the two (Bennett, 1977:3).

A series of issues were identified from past research and analyzed in detail. The police role, its conceptual basis and inherent conflicts were discussed. Education was defined and an attempt was made to explain how education was expected to help the police perform their role. Assumptions concerning the relationship between education and training were discussed and education was examined in light of the role it was expected to play in recent trends towards professionalization. Education, seen as an upgrading process, was also considered in light of the organizational environment it was intended to improve.

A review of the literature, to date, reveals that research findings show only an inconsistant and tenuous relationship between education and an improved ability to deal with increasingly complex and ambiguous police tasks. Given that the utility, substance and focus of education and the manner it

addresses the police role has never been clearly defined, this is not surprising.

It is noteworthy that the bulk of the literature was generated in the United States in response to civil unrest in the 1960's. During this period the role of the police and the integrity of the police establishment was brought into question. This explains the preoccupation of the literature with such constructs as 'the democratic ideal' and problems such as role conflict. Education was seen as a panacea for upgrading the police service. It would appear that the focus on organizational upgrading gave way to individual upgrading and the notion that better education makes better policemen. Improvement of organizational management and methods became subverted by improvement of the individual police officer. The individual became the unit of analysis and funding programs were devised to meet this end (i.e., the Law Enforcement Assistance Administration and Law Enforcement Educational Program).

It was found that the literature could be divided into three general categories (Bennett, 1977):

1. conjectural, based on non-empirical speculation and opinion;
2. empirical/cognitive, based on empirical relationships between education and attitude; and,
3. empirical/performance, based on empirical relationships between education and occupational performance.

Most literature fell into the conjectural category, with the remaining empirical research falling almost entirely into

the empirical/cognitive category.

It was within the empirical/cognitive category that the author formulated the working hypotheses of this study. These hypotheses were derived from recent assertions made by the Canadian Police College (1978). This study specifically, addressed the assertions that educated policemen are:

1. better able to tolerate ambiguity;
2. less authoritarian; and,
3. more representative of a belief in internal control.

Discussion of Findings

1. Remarks

Initially, this thesis introduced a series of assertions made by the Canadian Police College (1978) as being representative of general trends in previous literature and research. If one is prepared to concede that the College's position is reflective of traditional views pertaining to the relationship between higher education and policing, then a cautious prognosis for the future should be issued. The findings of this study revealed a series of weak statistically significant relationships which failed to provide adequate support for the working hypotheses. The working hypotheses, then, should be rejected and the null hypothesis should be accepted in all cases, i.e., 1) there is no substantively

significant relationship between education level and the ability to tolerate ambiguity; 2) there is no substantively significant relationship between education level and Authoritarianism; and, 3) there is no substantively significant relationship between education level and belief in 'internal control'.

Education was defined as an independent variable which would affect the constructs of Ambiguity Tolerance, Authoritarianism, and Internal-External Locus of Control. A further series of independent variables were identified to augment the predictive accuracy of the research.

If education was indeed critical or important as a predictor of attitude, then it would manifest itself consistently in statistically significant relationships with the constructs of Ambiguity Tolerance, Authoritarianism, and Internal-External Locus of Control. Although it may be said that the research identified a select group of significant relationships, one would be hard pressed to state that there were any relationships or trends within the relationships which were of notable importance. The paired combination of any two independent variables, regardless of the dependent variable, rarely accounted for more than 10% of the total variance. As was revealed through examination of the Multiple Classification Analysis tables, significant relationships did not necessarily reveal any meaningful patterns in light of the stated hypotheses. The method of analysis served only to identify statistically significant relationships, or relationships where

an independent variable category mean was significantly different from the grand mean. Statistical significance, in the case of this research, was frequently established without any meaningful patterning of category means.

2. Level of Education as related to Ambiguity Tolerance

There were no significant relationships established between education and Ambiguity Tolerance. It is clear, then, that as a predictor of attitude in this case education appears to have no effect. The assertion by the Canadian Police College (1978) indicates that education is positively related to one's ability to tolerate ambiguity. The findings of the analysis do not support this assertion.

3. Level of Education as related to Authoritarianism

When paired with the variables training course and size of department, education produced a statistically significant, although weak, relationship. It did not manifest itself in any consistent manner throughout the analysis and in isolated instances only accounted for 12% of the total variation in Authoritarianism scores. In light of this, we can safely state that the hypothesis is not supported. The Canadian Police College (1978) assertion indicates that education is negatively

related to Authoritarianism. There is very little evidence from the present analysis to support such an assertion.

4. Level of Education as Related to Internal-External Locus of Control

Education failed to account for any significant relationships with the total I-E scale, Fatalism subscale, or Self Control subscale. When paired with S.E.S., education produced a weak statistical relationship with the Social System Control subscale. The direction of the relationship was as predicted, with university graduates scoring more internally. This relationship was weak ($R = .11$) and was without any linear pattern within variable categories. The assertions of the Canadian Police College (1978) indicate that education is positively related to belief in 'internal control'. The findings of this analysis provide only scant evidence that such a relationship exists.

5. Rank as a Predictor of Attitude

The interaction effect between rank and S.E.S. was found to be significantly related to both Ambiguity Tolerance and Authoritarianism. Again, the relationships were weak, accounting for between 7% and 12% of the variation in the dependent

variables. When coupled with work experience and training course, rank related in a predictable manner. Although there was no distinctive trend, it appeared that higher ranks were scoring slightly higher on Authoritarianism scores. This could be a function of attrition, with those less authoritarian officers leaving the police service before having the opportunity to rise through the ranks. Alternatively, it may be that the Authoritarianism scale is also measuring 'authoritativeness', something which may be generated over time as an occupational requirement in a paramilitary organization. Rank did score in a consistent and predictable fashion when related to Social System Control (coupled with S.E.S., service, education, size of department). As would be expected, as rank increased, so did the belief in 'internal control' or more specifically, respondents felt more in control of their circumstances and less under the influence of 'powerful others'. This, again, may be a function of attrition with those more 'external' officers leaving the police service before having the opportunity to rise through the ranks. Although statistically significant, these relationships accounted for only 10-15% of the total variance in Social System Control.

6. Years of Service as a Predictor of Attitude

Years of service, when paired with the variables size of department and training course, produced a weak statistically

significant relationship ($R = .093$). Years of service categories reflect a pattern which is consistent with the hypothesis that individuals with more years of service tend to be more 'internal' in their belief systems. Specifically, respondents tend to be less fatalistic and believe more in their own efforts as opposed to luck or chance. It is worthy of note that the sample mean for Fatalism is 3.70 (maximum score possible = 12). This indicates that the respondents, in general, are more internally oriented than would be expected.

7. Training Course as a Predictor of Attitude

As previously explained, the variable training course is a descriptive variable and simply identifies the respondent as participating in a specific course during the administration of the survey. The variable training course was found to form weak statistically significant relationships with Authoritarianism, I-E total, Fatalism, Self Control and Social System Control. Without exception, these relationships rarely accounted for more than 10% of the total variance, and exhibited no discernible pattern among category means.

It can safely be said that the variable training course is a correlate of both rank and years of service (i.e., recruits associated with recruit training course and senior officers associated with the Senior Police Administration Course and the Executive Development Course), something which is simply an

artifact of organizational policy.

8. Attitude towards Education

There was a high degree of consensus among the respondents pertaining to recent trends and issues involving higher education for policemen. Contrary to what might be expected, attitudes towards issues in higher education were not affected by such variables as the respondent's education, rank, or years of services as a policeman. One might conclude that the respondents are 'cautious proponents' of higher education. They are cognizant of a general trend towards higher education and see this trend as affecting them as policemen. They perceive education as a means to 'get ahead' within the organization. Although being somewhat reticent in accepting the 'loyalty-tenure' basis for advancement, the respondents are equally leary of preferential treatment being afforded to university and college graduates. Although the respondents may find this emphasis on higher education at least covertly threatening, they tend to endorse organizational programs which encourage further education.

It is worth considering that a certain amount of 'social desirability' bias may be reflected in the responses to this scale. Simply stated, perhaps the respondents, as a group, are 'telling us what we want to hear', thus accounting for a rather abnormal degree of consensus. It could also be that this trend

towards higher education has been with us long enough that it is no longer perceived as a novelty and/or threat and has been reconciled by many as 'a sign of the times'.

Implications

The findings of the research component of this thesis do not give us reason to be optimistic about the benefits of higher education to policing. Yet, the findings are predictable and consistent with the trends of empirical/cognitive research which have preceded this study. It is noteworthy that the bulk of past research and inquiry has taken place in the United States. The scant contributions from Canadian sources stand as a revealing comment on our general level of awareness and concern. Since The President's Commission on Law Enforcement and the Administration of Justice (1967), American investment in the educational enterprise has been keen and, until recently, quite insatiable. But, in the wake of their 'progress' and the stepped-up cadence to upgrade the police service, problems and inconsistencies have manifested themselves. The Canadian policing community has the opportunity to learn from the American experience. The question seems to be whether or not we can afford to remain complacent with the present situation. Swanson (1977:319) provides a biting, if somewhat anecdotal, response:

The current state of the art is like the response of the woman who fell from the top of a forty story building and asked, as she passed the twentieth floor, how she was doing: "Okay so far". Because of its relative

recency in police organizations, education is "okay so far". But given the stakes, we cannot afford to continue on our present course; enthusiastic but undemonstrated claims must give way to careful study.

The findings of this thesis lend credence to Swanson's (1977) statement and suggest that assertions such as those represented by the Canadian Police College (1978) should not be accepted at face value. Claims regarding the impact and effects of their program have yet to be validated and further study is clearly necessary.

Considering the cost - both organizational and financial - and the expectations associated with these costs and given Treasury Board requirement that where feasible programs be evaluated (Treasury Board of Canada 1981) it would seem appropriate that this particular program be evaluated further. Consideration might be given to a (field-oriented, naturalistic) quasi-experimental design. Standardized testing of all police personnel should take place at the entry level to the program. Periodic re-testing of sub-samples over time, using different sub-samples to minimize the re-test effect, should be established. The purpose of such an evaluative design would be to compare, over time, using statistical controls, those who are in the program vs. those who are not. Specifically, such an evaluation should explore whether or not the program is indeed meeting its stated objectives and goals. Consideration might also be given to departing from the empirical/cognitive research category and attempting to draw conclusions based on observations of police performance (i.e., personnel assessments

and promotions).

The assertions made by the Canadian Police College (1978) have served as a basis for the arguments presented in this thesis. This is not to imply that programs such as the one presented by the College should be indicted or dismissed due to lack of 'empirical' evidence. On the contrary, it is being suggested that further research give way to a more 'systemic' analysis and application of what has gone before us. It seems clear that there is substantial intuitive appeal for building and nurturing a truly professional police service. It is similarly clear that higher education will figure prominently in this process. What is being sought is a more effective, efficient and responsive police service. The organizational context is implicit in this position. It is not sound reasoning to expect that a 'collective' of better educated police officers will necessarily produce a better police organization by default. Police organizations must first be prepared to concede that there is a need for change and room to consider numerous methods of improving the quality of service. Secondly, alternative strategies for affecting this change should be considered. Higher education should be viewed as one such strategy. It is in this respect that the true value of higher education may be realized.

Appendix A

Operationalization of Variables:

1. Independent Variables

- Age: years (numerical value)
- Sex: male = 1
Female = 2
- Marital Status: married = 1
single = 2
divorced/
separated = 3
common law = 4
- Fathers Occupation (S.E.S.): Blishen Occupational Status Scale, (1976:71)

The revised Blishen Occupational Status Scale (Blishen and McRoberts, 1976:71) is constructed through utilization of income, education and Pineo-Porter prestige ranks and standardized on a Canadian population. In constructing the occupational status intervals used in this analysis Blishen's formula (Blishen and McRoberts, 1976:73) as modified as it was

felt that it was unresponsive to the lower ranges of occupational prestige. Below is a comparison of the Blishen scale of class and the scale utilized in this analysis.

Blishen status categories	Modified status categories
70+	66-75
60.0 - 69.99	56-65
50.0 - 59.99	46-55
40.0 - 49.99	36-45
30.0 - 39.99	26-35
Below 30	

(Klein et al, 1978:441)

Status	26-35 = 1
	36-45 = 2
	46-55 = 3
	56-65 = 4
	66-75 = 5

The occupation reported by the respondent was matched to Blishen's status scale and assigned the prescribed numerical value.

- Work experience:

A numerical value was assigned, as with Father's Occupation by selecting the occupation which scored highest on Blishen's scale. (if more than one occupation listed).

- Rank:

Constable (cst., P.C.)	= 1
Corporal (cpl.)	= 2
Sergeant (sgt., det., det.sgt.,)	= 3
Staff Sgt. (s/sgt.)	= 4
Inspector (insp., lieut., capt.)	= 5
Superintendent (supt., maj.)	= 6

- Years of Service as a Police Officer:

less than 1 year	= 1
1 to 3 years	= 2
3 to 5 years	= 3
5 to 10 years	= 4
10 to 20 years	= 5
more than 20 years	= 6

- Size of Department where Presently Employed:
recorded by number of serving peace officers

- Education:

Junior Matriculation (grade 11/12) = 1

Senior matriculation (grade 12/13) = 2

Community College 1st year)

2nd year)

3rd year) = 3

diploma; in progress)

incomplete)

University 1st year)

2nd year)

3rd year) = 4

4th year)

in progress)

degree incomplete)

diploma complete) = 5

degree complete) = 6

- Presently Taking (educational) Courses:

yes = 1

no = 2

- Training Course:

This variable is descriptive in nature and basically summarizes the courses surveyed by the author in terms of course substance. There were a total of ten courses surveyed. For the most part, the courses were significantly different in nature. Exceptions to this were the 'Police Studies' Courses (2) and the Sr. Police Administration Courses (2). The police studies courses were combined into one entity as was the S.P.A. Course; thus leaving a total of eight courses:

B.C. Police Academy, Recruit Training	= 1
B.C. Police Academy, Recruit Training (field)	= 2
Fairmont Training Academy, Police Studies	= 3
B.C. Police Academy, Sr. Police Investigators	= 4
Fairmont Training Academy, Criminal Investigators	= 5
B.C. Police Academy, Police Supervisors	= 6
Canadian Police College, Sr. Police Administration	= 7
Canadian Police College Executive Development	= 8

Appendix B

Scale Reliability and Validity

1. McDonald's (AT-20) Ambiguity Tolerance Scale

a. Reliability

The coefficient of internal consistency (split half corrected by Spearman-Brown) for the Rydell-Rosen test was computed as .64. The C.P.I and Barron Conformity items were added (producing the 20 item test) to increase reliability. The internal consistency estimate for the 20 item test was computed at .86. Reliability for the 20 item scale was also computed by using the Kuder-Richardson Formula 20. K-R 20 yielded an r of .73). The A-T 20 was cross-validated on a subsequent respondent pool (n=789). Retest reliability was estimated at .63 (p .01) for a six month interval.

2. Validity

The hypothesis that ambiguity tolerance would be associated with levels of performance in ambiguous tasks was tested by

McDonald on 50 students at Cornell University. Subjects were administered the AT-20 and an Anagram test developed by McDonald (Scrambled Word test). Subjects were assigned the task of unscrambling as many words as possible with a set time limit. A significant correlation ($r = .33$, $p .01$) was obtained between scores on the AT-20 and the scores on the Scrambled Word Test.

Construct validity was tested by administering the AT-20 along with measures of related concepts to 789 undergraduates at Ithaca College. Rigidity (Gough-Sanford Rigidity Scale; Rokeach, 1960:418) and Dogmatism (Form E; Rokeach, 1960) were measured along with ambiguity tolerance. The results indicated that the AT-20, Rokeach Dogmatism Scale, and the Gough-Sanford Rigidity scale were tapping a common dimension. AT-20 accounted for approximately 18% of the variance in Dogmatism scores, and 17% of variance in Rigidity scores.

To account for the extent to which AT-20 might be affected by social desirability response tendencies, the Marlowe-Crowne Social Desirability Scale (Crowne and Marlow, 1960) was also administered. An obtained coefficient of .02 indicated that the AT-20 is free of response bias.

2. Lee-Warr Authoritarianism Scale

a. Reliability:

The average item-item correlation is reported at .13 (Lee and Warr, 1969:116) being identical to that obtained by Adorno et al. (1950:261) as well as by Kerlinger and Rokeach (1966:391) in administration of the California F-scale. The average item-whole correlation is reported as being slightly better than the California F-scale at .33.

Test-retest reliability was checked by sampling two sets of 34 Princeton undergraduates during an interval of six weeks. The dogmatism scale (Rokeach, 1960) was also administered on both occasions. Stability coefficients were noted as .86, .82, .77, .83 for D, total F, positive F items, and negative F items respectively.

b. Validity

Lee and Warr (1969:122) offer a summary table where correlations have been reported separately between several indices and total F score (F), score on the fifteen positive items (F+) and score on the fifteen negative items (-F). This table is reproduced here for the benefit of the reader:

Lee-Warr Authoritarianism Scale
Correlations Between the Balanced Scale and
Selected Personality Measures

Measure	F	F+	F-	N
SSRC S-A Scale-Form 1860	+.87**	+.81**	+.73**	54
Paragraph Completion Test	-.32**	-.37**	-.23*	54
	-.15	-.08	-.20	152
Princeton Objective Test	-.16	-.33**	+.00	54
Dogmatism Scale	+.19	+.41**	-.01	54
	+.17	+.37**	-.09	64
	+.35**	+.45**	+.18**	152
	+.22*	+.39**	-.03	60
G.-S. Rigidity Scale	+.39**	+.44**	+.25**	152
Tomkins Conservatism Scale	+.51**	+.48**	+.44**	54
Embedded Figures Test	-.01	+.00	-.02	152
Wonderlic Personnel Test	-.25*	-.24*	-.22	54
Ship Destination Test	-.28*	-.20	-.28*	54
S.A.T.-Verbal	-.29**	-.29**	-.33**	152
S.A.T.-Mathematics	-.14	-.16*	-.23**	152

* p<.05

** p<.01

For a detailed discussion of these correlations, see Lee and Warr (1969:121-123). A substantial relationship between the 100 item Form 1860 and the Lee-Warr scale is to be expected, in that the latter is a refinement of the longer scale.

Both the Princeton Objective Test and the Paragraph Completion Test purport to measure cognitive complexity. A high score on these scales indicates a high conceptual level: negative correlations with the Lee-Warr scale are to be expected.

The Dogmatism scale is considered to be a measure of authoritarianism, but with emphasis on belief system structure rather than on content. D-scale scores are usually found to correlate significantly with F-scale scores; this association is also found with the Lee-Warr scale.

Both the Gough-Sanford Rigidity Scale and the Tomkins Conservatism Scale are significantly correlated in a positive fashion. This is to be expected, intuitively, and in that the G-S scale is also deemed to be a valid measure of authoritarianism.

The other tests cited in the summary table are measures of one or more facets of intelligence. Lee and Warr (1969) cite several pieces of research which indicate that there is a low negative correlation between the California F scale and such intelligence tests. This finding, then, is to be expected with the Lee-Warr scale.

3. Reid-Ware I-E Scale

The scale is a refinement of Rotter's (1966) I-E scale (29 items; forced choice). Rotter (1966:13) reports reliability data in the form of summary tables. (see discussion 1966:13-17). Internal consistency estimates are shown to be relatively stable across various university samples and polls. (Kuder-Richardson R ranging from .69 to .73). Test-retests reliability over a one month interval also appears consistent (r ranging from .60 to .83). Correlations of Rotter's scale with the Marlow-Crowne Social Desirability Scale ranged from -.07 to -.35.

) Discriminant Validity was ascertained by checking Rotter's scale against a series of intelligence tests (Ohio State Psychological Exam, Revised beta I.Q.) with r ranging from -.11 to .01 across three sample groups (N ranging from 72 to 107). It is suggested that low correlations are to be expected as was the case with the preceding sixty item I-E scale.

Construct Validity was assessed by comparing Rotter's scale with other methods of assessing the same variable; such as questionnaire (r = .56, .58). Likert Scale (r = .55, .60), interview assessment (bi-serial correlation = .61, p .001) and ratings for a 'story-completion' technique (anova significant at .001).

Reid and Ware (1974) report that their scale, is in substance, much the same as Rotter's. With specific regard to the three Factors (F, SSC, SC), they report the alpha

coefficients as .76, .76, and .71 respectively. The intercorrelations between these I-E factors were reported as:

SC - SSC	(r = 0.30)
SC - F	(r = 0.27)
F - SSC	(r = 0.39)

The low intercorrelations between these factors, together with the relatively high internal consistency, indicates that they are reasonably independent of one another. (Reid-Ware, 1974:140) Prior to identifying Self Control (SC) as a third factor; Reid and Ware (1974:140) provided comparison statistics regarding Rotter's scale:

Previous research (Reid and Ware, 1973b) involving only the 12-item Fatalism and 12-item SSC factors found a multiple correlation of 0.75 with scores on Rotter's scale for a sample of 102 S's taking Introductory Psychology. The correlations and normalized regression coefficients (Beta) between Rotter's scale and Fatalism and SSC were $r = 0.71$, $\text{Beta} = 0.65$ and $r = 0.42$, $\text{Beta} = 0.25$ respectively. This multiple correlation, approximately equal to the reliabilities of the variables, indicates that two of the factors within the three-dimensional scale are measuring a response claim very similar to that indexed by Rotter's scale.

Appendix C

Survey Instrument

CONSIDERATIONS IN EDUCATING THE POLICE

SPECIAL INSTRUCTIONS:

Please answer these items CAREFULLY but do not spend too much time on any one item. CIRCLE EITHER (a) or (b) FOR EACH OF THE ITEMS, depending on which alternative you MORE STRONGLY BELIEVE to be the case as far as you are concerned.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item INDEPENDENTLY when making your choice; do not be influenced by your previous choices.

-
1. a) There will always be wars no matter how hard people try to prevent them.
b) One of the major reasons why we have wars is because people do not take enough interest in politics.
 2. a) Even when there was nothing forcing me, I have found that I will sometimes do things I really did not want to do.
b) I always feel in control of what I am doing.
 3. a) There are institutions in our society that have considerable control over me.
 4. a) For the average citizen becoming a success is a matter of hard work, luck has little or nothing to do with it.
b) For the average person getting a good job depends mainly on being in the right place at the right time.
 5. a) In my case getting what I want has little or nothing to do with luck.
b) It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
 6. a) Sometimes I impulsively do things which at other times I definitely would not let myself do.
b) I find that I can keep my impulses in control.
 7. a) In many situations what happens to people seems to be determined by fate.
b) People do not realize how much they personally determine their own outcomes.
 8. a) Most people do not realize the extent to which their lives are controlled by accidental happenings.
b) For anyone, there is no such thing as luck.
 9. a) If I put my mind to it, I could have an important influence on what a politician does in office.
b) When I look at it carefully, I realize it is impossible for me to have any really important influence over what politicians do.

10. a) With fate the way it is, many times I feel that I have little influence over the things that happen to me.
b) It is impossible for me to believe that chance or luck plays an important role in my life.
11. a) When I put my mind to it I can constrain my emotions.
b) There are moments when I cannot subdue my emotions and keep them in check.
12. a) As far as the affairs of our country are concerned, most people are the victims of forces they do not control and frequently do not even understand.
b) By taking part in political and social events the people can directly control much of the country's affairs.
13. a) People cannot always hold back their personal desires; they will behave out of impulse.
b) If they want to, people can always control their immediate wishes, and not let these motives determine their total behaviour.
14. a) Many times I feel I might just as well decide what to do by flipping a coin.
b) In most cases I do not depend on luck when I decide to do something.
15. a) I do not know why politicians make the decisions they do.
b) It is easy for me to understand why politicians do the things they do.
16. a) Although sometimes it is difficult, I can always wilfully restrain my immediate behaviour.
b) Something I cannot do is have complete mastery over all my behavioural tendencies.
17. a) In the long run people receive the respect and good outcomes they work for.
b) Unfortunately, because of misfortune or bad luck, the average guy's worth often passes unrecognized no matter how hard he tries.
18. a) With enough effort people can wipe out political corruption.
b) It is difficult for people to have much control over the things politicians do in office.
19. a) By active participation in the appropriate political organizations people can do a lot to keep the cost of living from going higher.
b) There is very little people can do to keep the cost of living from going higher.

20. a) It is possible for me to behave in a manner very different from the way I really want to be.
- b) It is easy for me to avoid and function independently of any social forces that may attempt to have control over me.
21. a) In this world I am affected by social forces which I neither control nor understand.
- b) It is easy for me to avoid and function independently of any social forces that may attempt to have control over me.
22. a) What people get out of life is always a function of what they put into it.
- b) Quite often one finds that what happens to people has no relation to what they do, what happens just happens.
23. a) Generally speaking, my behavior is not governed by others.
- b) My behavior is frequently determined by other influential people.
24. a) People can and should do what they want to do both now and in the future.
- b) There is no point in people planning their lives too far in advance because other groups of people in our society will invariably upset their plans.
25. a) There is no such thing as luck, what happens to me is a result of my own behaviour.
- b) Sometimes I do not understand how I can have such poor luck!
26. a) Many of the unhappy things in people's lives are at least partly due to bad luck.
- b) People's misfortune result from the mistakes they make.
27. a) Self-regulation of one's behavior is always possible.
- b) I frequently find that when certain things happen to me I cannot restrain my reaction.
28. a) The average man can have an influence on government decisions.
- b) This world is run by a few people in power and there is not much the little man can do about it.
29. a) When I make my mind up, I can always resist temptation and keep control of my behavior.
- b) Even if I try not to submit, I often find I cannot control myself from some of the enticements in life such as over-eating or drinking.

30. a) My getting a good job or promotion in the future will depend a lot on my getting the right turn of fate.
- b) When I get a good job, it is always a direct result of my own ability and/or motivation.
31. a) Most people do not understand why politicians behave the way they do.
- b) In the long run people are responsible for bad government on a national as well as on a local level.
32. a) I often realize that despite my best efforts some outcomes seem to happen as if fate planned it that way.
- b) The misfortunes and successes I have had were the direct result of my own behavior.

SPECIAL INSTRUCTIONS:

Please mark what you think about the following statements. Read each statement below. Consider the extent to which you agree or disagree with it. Then circle the letters after it that tell how you feel.

The letters mean:

SA - Strongly Agree
A - Agree
TA - Tend to Agree

TD - Tend to Disagree
D - Disagree
SD - Strongly Disagree

-
1. What a youth needs most is the flexibility to work and fight for what he considers right personally even though it might not be best for his family and country.
SA A TA TD D SD
 2. The poor will always be with us.
SA A TA TD D SD
 3. It is the duty of a citizen to criticize or censure his country whenever he considers it to be wrong.
SA A TA TD D SD
 4. Disobedience to the government is sometimes justified.
SA A TA TD D SD
 5. Most censorship of books or movies is a violation of free speech and should be abolished
SA A TA TD D SD
 6. It is only natural and right for each person to think that his family is better than any other.
SA A TA TD D SD
 7. One way to reduce the expression of prejudice is through more forceful legislation.
SA A TA TD D SD
 8. The facts on crime and sex immorality suggest that we will have to crack down harder on some people if we are going to save our moral standards.
SA A TA TD D SD
 9. Members of religious sects who refuse to salute the flag or bear arms should be treated with tolerance and understanding.
SA A TA TD D SD
 10. The minds of today's youth are being hopelessly corrupted by the wrong kind of literature.
SA A TA TD D SD
 11. There is a divine purpose in the operations of the universe.
SA A TA TD D SD

12. One of the greatest threats to the true Canadian way of life is for us to resort to the use of force.

SA A TA TD D SD

13. Divorce or annulment is practically never justified.

SA A TA TD D SD

14. Army life is a good influence on most men.

SA A TA TD D SD

15. As young people grow up, they ought to try to carry out some of their rebellious ideas and not be content to get over them and settle down.

SA A TA TD D SD

16. We should be grateful for leaders who tell us exactly what to do and how to do it.

SA A TA TD D SD

17. The church has outgrown its usefulness and should be radically reformed or done away with.

SA A TA TD D SD

18. Few weaknesses or difficulties can hold us back if we have enough will power.

SA A TA TD D SD

19. Science declines when it confines itself to the solution of immediate practical problems.

SA A TA TD D SD

20. A world government with effective military strength is one way in which world peace might be achieved.

SA A TA TD D SD

21. Honesty, hard work, and trust in God do not guarantee material rewards.

SA A TA TD D SD

22. No person who could ever think of hurting his parents should be permitted in the society of normal decent people.

SA A TA TD D SD

23. In the final analysis parents generally turn out to be right about things.

SA A TA TD D SD

24. It usually helps the child in later years if he is forced to conform to his parents' ideas.

SA A TA TD D SD

25. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse.

SA A TA TD D SD

26. An insult to our honour should always be punished.

SA A TA TD D SD

27. Unless something drastic is done, the world is going to be destroyed one of these days by nuclear explosion or fallout.

SA A TA TD D SD

28. One of the troubles with our present economy is that full employment depends on a substantial military budget.

SA A TA TD D SD

SPECIAL INSTRUCTIONS:

Please do not spend much time on the following items. There are no right or wrong answers and therefore your first response is important. Mark T for true and F for false. Be sure to answer every question by placing your response in the bracket provided after each statement.

1. A problem has little attraction for me if I don't think it has a solution. ()
2. I am just a little uncomfortable with people unless I feel that I can understand their behavior. ()
3. There's a right way and a wrong way to do almost everything. ()
4. I would rather bet 1 to 6 on a long shot than 3 to 1 on a probable winner. ()
5. The way to understand complex problems is to be concerned with their larger aspects instead of breaking them into smaller pieces. ()
6. I get pretty anxious when I'm in a social situation over which I have no control. ()
7. Practically every problem has a solution. ()
8. It bothers me when I am unable to follow another person's train of thought. ()
9. I have always felt that there is a clear difference between right and wrong. ()
10. It bothers me when I don't know how other people react to me. ()
11. Nothing gets accomplished in this world unless you stick to some basic rules. ()
12. If I were a doctor, I would prefer the uncertainties of a psychiatrist to the clear and definite work of someone like a surgeon or x-ray specialist. ()
13. Vague and impressionistic pictures really have little appeal for me. ()
14. If I were a scientist, it would bother me that my work would never be completed (because science will always make new discoveries). ()

15. Before an examination, I feel much less anxious if I know how many questions there will be. ()
16. The best part of working a jigsaw puzzle is putting in that last piece. ()
17. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to do. ()
18. I don't like to work on a problem unless there is a possibility of coming out with a clear cut and unambiguous answer. ()
19. I like to fool around with new ideas, even if they turn out later to be a total waste of time. ()
20. Perfect balance is the essence of all good composition. ()

SPECIAL INSTRUCTIONS:

Please mark what you think about the following statements. Read each statement below. Consider the extent to which you agree or disagree with it. Then circle the letters after it that tell how you feel.

The letters mean:

SA - Strongly Agree

A - Agree

TA - Tend to Agree

TD - Tend to Disagree

D - Disagree

SD - Strongly Disagree

* note: 'education', in this context, refers to post secondary (university, college) study either prior to becoming, or while serving as a peace officer.

-
1. There is a notable trend in most occupations these days including policing, which stresses the importance of post secondary education as a tool for advancement.
SA A TA TD D SD
 2. In terms of education for police officers, the minimum Force requirement (grade 12) is adequate and in keeping with the role we perform.
SA A TA TD D SD
 3. The only education a policeman needs can be found on the street and will come with experience.
SA A TA TD D SD
 4. Education for police officers should be strictly job related, to address the immediate needs of the man on the street.
SA A TA TD D SD
 5. In order to function in a complex society, with increasingly complex role requirements, street police officers should possess a university education.
SA A TA TD D SD
 6. A post secondary education is a valuable asset to any individual and will thus contribute to the overall value of the Force.
SA A TA TD D SD
 7. Post secondary education should be considered as a strategy to upgrade the individual and the Force towards becoming more professional.
SA A TA TD D SD

8. If the effects of formal education cannot be directly measured in terms of job performance, then we shouldn't bother.
SA A TA TD D SD
9. All the importance placed on education for policemen recently is strictly a political exercise, thought up by politicians and academics, and has nothing to do with day to day police work.
SA A TA TD D SD
10. More than anything, policemen need to be educated in the law, recent case law, and relevant federal and provincial statutes.
SA A TA TD D SD
11. The best school a policeman can hope to graduate from is the 'school of hard knocks'.
SA A TA TD D SD
12. Education, to be meaningful, should teach policemen how to relate to people and to be better communicators.
SA A TA TD D SD
13. Because good policework largely depends on one's ability to deal with people, education should address itself to understanding why people behave the way they do.
SA A TA TD D SD
14. Post secondary education should make a policeman more effective by exposing him to different theories which will cause him to be more aware of what goes on around him.
SA A TA TD D SD
15. The role of the front line policeman is to serve the public and render assistance in times of crisis.
SA A TA TD D SD
16. The police today are like the 'thin blue line' between peaceful social order and total chaos.
SA A TA TD D SD
17. The primary responsibility of the police is the control of crime through aggressive enforcement and investigation.
SA A TA TD D SD
18. 'Protection of life and property' and 'prevention of crime' are story book theories taught at the cademy, which have little relevance to working policemen.
SA A TA TD D SD
19. The benefit personally derived from a post secondary education by a policeman should simply be a sense of self-satisfaction.
SA A TA TD D SD
20. Today, police departments should be giving serious preferential treatment to the hiring and advancement of university and college graduates.
SA A TA TD D SD

21. Factors such as length of service and loyalty to the Force should be prime considerations for advancement and promotion.
SA A TA TD D SD
22. Policemen who wish to pursue post secondary level studies in police related areas should have their tuition paid for by the Force.
SA A TA TD D SD
23. There should be programs set in place which allow members to take temporary leaves of absence (with pay) in order to study in job related areas.
SA A TA TD D SD
24. The way things are today, a university or college educated policeman can reasonably expect accelerated advancement and preferential postings, assuming his performance is equal to his non-educated peers.
SA A TA TD D SD

BACKGROUND INFORMATION:

- a) Age: __ Sex: Male __, Female __, Rank: __,
Time Spent at Present Rank: _____
- b) Marital Status: married __, single __, divorced/separated __, c.l. __
- c) Father's Occupation (regardless if retired or deceased): _____
- d) Years of Service as a Peace Officer:
less than 1 __, 1-3 __, 3-5 __, 5-10 __, more than 10 __
- e) Type of Service (years/months spent at each):
patrol __, plain clothes __, traffic __,
police-community relations __, admin. __,
other support (specify) _____
- f) Size of Department/Detachments Served at (specify length of service at each):
1-5man __, 5-20 __, 20-40 __, 40-100 __, more than 100 __
- g) Size of Department/Detachment Presently Serving At: _____
- h) Acquired Education (please check All levels attained to date):
grade 11/12 (jr. matric) __, grade 12/13 (sr. matric.) __
community college; 1st year __, 2nd yr. __, 3rd yr. __
degree complete __, incomplete __, in progress __
university; 1st year __, 2nd yr. __, 3rd yr. __, 4th yr. __
degree complete __, incomplete __, in progress __
courses pursued; crim. justice related __, arts __, sciences __, business/admin. __,
other (specify) _____
presently taking courses; yes __, no __

i) Work Experience, Jobs, Positions Held Prior to Becoming a Police Officer:

Appendix D

Alterations of Selected Independent Variables

The reader will note that there are three variables which, having been delineated within the background information have since been dropped or altered within the analysis.

1. Type of Service

It was hoped that this portion of the background information would reveal some semblance of a 'service profile' for each respondent. It was found that there was insufficient data reported to sustain any meaningful analysis or interpretations. As opposed to indicating their responses in terms of years or months, many of the respondents indicated their service involvement by marking 'x' or ' '; thus defying further correlation.

2. Size of Department where Presently Employed

Fundamentally, the same problem arose, as with the preceding variable, thus rendering any meaningful interpretation

futile. The intent in trying to sound these two facets of the respondent's background, was to address such issues as task environment and the organizational element, as a mitigating influence on the dependent variable attitudes.

The author took the precaution of administering a modified research instrument (comprised of the battery of questions pertaining to higher education and the background information) to three courses at the B.C. Police Academy, prior to beginning the formal research. This was done, in part to account for readability and clarity of the background information. No problems were encountered at this phase and respondents indicated verbally that there were no noticable problems of comprehension. The absence of this same information on the formal research instrument was a rather vexing concern.

3. Education

Respondents were asked expressly to indicate ALL levels of acquired education, with the intent of constructing a more detailed profile of educational tenure and substance. This variable was plagued with the same 'failure to report' problem as the preceding two variables. Enough data were collected, however, to derive a 'highest level of education attained' variable (scaled 1 to 6).

Appendix E

Police Training Courses Surveyed

The following is a recapitulation of the courses surveyed for this research:

81 March 03 B.C. Police Academy Course: Recruit Training (9 weeks academy; BLK.I)	N=23
81 March 03 B.C. Police Academy Course: Recruit Training (Field) [10 weeks academy; BLK I] [6 weeks field; BLK II] [8 weeks academy; BLK III]	21
81 March 12 Fairmont Training Academy Course: Police Studies 2-5 years service	17
81 March 12 Fairmont Training Academy Course: Police Studies 2-5 years service	20
81 March 25 B.C. Police Academy Course: Senior Police Investigators 6-10 years service	15
81 April 15 Fairmont Training Academy Course: Criminal Investigators 6-10 years service	26
81 May 05 B.C. Police Academy Course: Police Supervisors 9-12 years service	16

81 May 21
Canadian Police College 22
Course: Senior Police Administration
15-20 years service

81 May 22 20
Canadian Police College
Course: Senior Police Administration
15-20 years service

81 May 26 22
Canadian Police College
Course: Executive Development
20-30 years service

TOTAL N=202

Appendix F

Discussion of ANOVA Program

The reader is referred to Nie et al, (1975) "Statistical Package for the Social Sciences", Chapt. 22.1 and 22.2 as source material for the method of analysis employed for this study. The program 'ANOVA' was utilized for most statistical manipulations. ANOVA is capable of coping with unequal cell size as well as empty cells, both of which are present in this study.

This study is premised on a 'fixed effects' model or linear hypothesis model, which is to say that the author intends to make inference to only those categories considered within the stated independent variables. In other words the level or categories of a given variable are considered to be fixed over any series of repeated studies. The study presented here is characteristic of a 'nonorthogonal' design (unequal cell frequency). ANOVA is premised on a fixed effect model for calculation of F ratios and is capable of coping with non-orthogonal designs.

Appendix G

Multiple Classification Analysis Tables

The M.C.A. Table provides the following information:

- a) Grand Mean: the mean of the sample group regarding a specific scale.
- b) Variables and categories within variables.
- c) N: the number of respondents within each category.
- d) Unadjusted deviation: the mean of each category expressed as a deviation from the grand mean.
- e) η (beta): this value ranges from 0 to 1 and indicates the degree of relationship with the dependent variable. This value squared (η^2 , β^2) indicates the amount of variation explained in the dependent variable.
- f) Adjusted deviation: this is the adjusted mean value of each category, when the other variable is adjusted (controlled) for.
- g) R: indicates the overall relationship between the dependent variable and the independent variables (ranges in value from +1.0 to -1.0). R^2 indicates the proportion of variation in the addition effects of the independent variables.

1. Ambiguity Tolerance

Table a.

Significant Relationship:
 Ambiguity Tolerance by Rank, S.E.S.
 Grand Mean = 7.92

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Rank					
1	92	0.16		0.18	
2	12	-0.67		-0.94	
3	23	0.38		0.40	
4	14	-1.28		-1.38	
5	16	0.33		0.45	
6	6	-0.42		-0.44	
			0.16		0.19
S.E.S.					
1	59	-0.38		-0.38	
2	40	-0.12		-0.09	
3	29	0.94		1.06	
4	8	0.08		-0.20	
5	15	-0.72		-0.89	
7	12	0.83		0.85	
			0.19		0.22
Multiple R Squared					0.072
Multiple R					0.269

2. Authoritarianism

Table b.

Significant Relationship

Authoritarianism by Rank, Work Experience

Grand Mean = 101.05

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted For Independents Dev'n	Beta
Rank					
1	103	-0.45		-0.57	
2	11	-0.32		-0.75	
3	20	-1.53		-1.48	
4	12	6.62		7.53	
5	17	-0.63		-0.23	
6	5	2.35		2.08	
			0.21		0.23
Work Experience					
1	44	0.65		0.80	
2	67	0.17		0.29	
3	20	0.96		1.21	
4	10	-4.55		-5.49	
5	2	0.45		-0.30	
6	14	-0.36		-1.50	
7	11	-0.87		-0.21	
			0.13		0.16
multiple R Squared				0.068	
Multiple R				0.262	

Table c.

Significant Relationship:

Authoritarianism by Rank, S.E.S.

Grand Mean = 101.35

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted For Independents Dev'n	BETA
Rank					
1	92	-0.20		-0.11	
2	12	0.24		0.69	
3	23	-0.94		-0.94	
4	14	3.51		3.67	
5	16	-2.22		-3.38	
6	6	3.99		4.38	
			0.16		0.19
S.E.S.					
1	59	1.57		1.71	
2	40	0.65		0.58	
3	29	-2.74		-3.03	
4	8	2.75		3.78	
5	15	-1.32		-1.40	
7	12	-3.48		-3.79	
			0.21		0.24
Multiple R Squared					0.081
Multiple R					0.285

Table d.

Significant Relationship:

Authoritarianism by Training Course, Rank

Grand Mean = 101.32

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Training Course					
1	22	-2.73		-2.52	
2	20	-0.32		-0.12	
3	37	1.41		1.60	
4	14	-3.81		-2.61	
5	26	-2.76		-2.30	
6	15	3.15		4.28	
7	41	2.52		8.13	
8	22	-0.50		-13.75	
			0.25		0.68
Rank					
1	117	-0.49		-0.20	
2	12	0.26		0.15	
3	27	-1.27		-7.93	
4	18	4.40		-3.72	
5	17	-0.90		11.56	
6	6	4.01		17.76	
			0.18		0.61
Multiple R Squared				0.120	
Multiple R				0.346	

Table e.

Significant Relationship:

Authoritarianism by Education, Size of Department

Grand Mean = 101.41

Variable + Category	N	Unadjusted Dev'n ETA	Adjusted for Independents Dev'n BETA
<hr/>			
Training Course			
1	23	-2.06	-2.34
2	21	-0.55	-0.05
3	37	1.32	1.50
4	14	-3.90	-3.90
5	26	-2.85	-2.91
6	16	2.21	1.96
7	37	2.79	2.65
8	21	0.02	0.01
		0.24	0.24
Education			
1	48	-0.55	-0.63
2	29	0.46	0.54
3	38	-0.14	-0.15
4	38	2.24	2.41
5	22	2.18	1.96
6	20	-5.73	-5.71
		0.24	0.25
Multiple R Squared			0.118
Multiple R			0.344

Table f.

Significant Relationship:

Authoritarianism by Training Course, Education

Grand Mean = 101.41

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Education					
1	48	-0.55		-0.58	
2	29	0.46		0.28	
3	38	-0.14		0.36	
4	38	2.24		2.23	
5	22	2.18		2.19	
6	20	-5.73		-6.33	
			0.24		0.26
Size Department					
1	42	-0.09		-0.26	
2	37	1.27		1.38	
3	38	-1.21		-0.99	
4	38	2.35		2.69	
5	40	-2.16		-2.16	
			0.18		0.20
Multiple R Squared				0.099	
Multiple R				0.314	

3. Internal External Locus of Control

a. Total Scale

Table g.

Significant Relationship:

I-E Total by Training Course, S.E.S.

Grand Mean = 13.34

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
<hr/>					
Training Course					
1	19	0.92		0.97	
2	17	-1.81		-2.55	
3	26	0.62		1.14	
4	14	1.66		1.56	
5	20	1.31		1.33	
6	14	3.02		3.12	
7	33	-1.46		-1.52	
8	22	-2.11		-2.13	
			0.29		0.32
S.E.S.					
1	59	0.73		1.03	
2	42	-0.17		-0.17	
3	29	-0.72		-1.30	
4	8	-3.96		-4.18	
5	15	1.99		2.16	
7	12	-1.09		-1.22	
			0.22		0.26
Multiple R Squared				0.148	
Multiple R				0.385	

b. Fatalism

Table h.

Significant Relationship:

Fatalism by Years Service, Size Department

Grand Mean = 3.70

Variable + Category	N.	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Years Service					
1	35	0.61		0.51	
2	28	0.55		0.64	
3	12	-0.54		-0.47	
4	42	-0.01		0.03	
5	85	-0.35		-0.37	
			0.15		0.15
Size Department					
1	43	-0.31		-0.27	
2	37	-0.14		-0.16	
3	40	0.40		0.45	
4	39	-0.09		-0.05	
5	43	0.13		0.03	
			0.09		0.09
Multiple R Squared				0.031	
Multiple R				0.176	

Table i.

Significant Relationship:
Fatalism by Years Service, Training Course

Grand Mean = 3.70

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Years Service					
1	35	0.61		1.20	
2	28	0.55		3.44	
3	12	-0.54		2.86	
4	42	-0.01		-0.98	
5	85	-0.35		-1.55	
			0.15		0.69
Training Course					
1	23	0.78		-0.52	
2	21	0.54		-0.67	
3	37	-0.38		-3.39	
4	15	0.56		1.85	
5	26	0.07		1.16	
6	16	0.61		1.98	
7	42	-0.56		0.96	
8	22	-0.52		1.00	
			0.19		0.66
Multiple R Squared				0.093	
Multiple R				0.304	

c. Self Control

Table j.

Significant Relationship:

Self Control by Training Course, S.E.S.

Grand Mean = 3.50

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Training Course					
1	19	-0.18		-0.21	
2	17	-1.50		-1.71	
3	27	0.43		0.60	
4	14	0.50		0.45	
5	20	0.25		0.24	
6	14	0.79		0.80	
7	33	-0.20		-0.22	
8	22	0.05		0.07	
			0.29		0.33
S.E.S.					
1	59	0.26		0.27	
2	42	-0.29		-0.20	
3	30	0.10		-0.18	
4	8	-1.38		-1.66	
5	15	0.43		0.79	
7	12	-0.17		-0.09	
			0.19		0.23
Multiple R Squared					0.136
Multiple R					0.369

d. Social System Control

Table k.

Significant Relationship:

Social System Control by Rank, S.E.S.

Grand Mean = 6.16

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Rank					
1	93	0.43		0.39	
2	12	1.25		1.54	
3	23	-0.25		-0.29	
4	14	-0.88		-0.85	
5	16	-1.23		-1.23	
6	6	-2.83		-2.78	
			0.33		0.33
S.E.S.					
1	59	0.14		0.28	
2	41	0.27		0.16	
3	29	-0.92		-1.03	
4	8	-0.54		-0.44	
5	15	0.97		0.88	
7	12	-0.25		-0.26	
			0.20		0.21
Multiple R Squared					0.149
Multiple R					0.386

Table 1.

Significant Relationship:

Social System Control by Rank, Size, Department

Grand Mean = 6.30

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Rank					
1	118	0.38		0.37	
2	12	1.12		1.07	
3	28	-0.12		-0.01	
4	18	-1.02		-1.03	
5	17	-1.12		-1.15	
6	6	-2.96		-3.06	
			0.30		0.30
Size Department {					
1	43	-0.09		-0.28	
2	37	-0.03		-0.01	
3	40	-0.17		-0.21	
4	38	-0.30		0.04	
5	41	0.56		0.47	
			0.11		0.10
Multiple R Squared					0.099
Multiple R					0.315

Table m.

Significant Relationship:

Social System Control by Years Service, Rank

Grand Mean = 6.30

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Years Service					
1	33	0.37		-0.38	
2	28	0.24		-0.51	
3	12	-0.30		-1.04	
4	42	0.32		-0.26	
5	84	-0.34		0.59	
			0.12		0.20
Rank					
1	118	0.38		0.75	
2	12	1.12		0.74	
3	28	-0.12		-0.65	
4	18	-1.02		-1.61	
5	17	-1.12		-1.71	
6	6	-2.96		-3.42	
			0.30		0.42
Multiple R Squared					0.103
Multiple R					0.320

Table n.

Significant Relationship:

Social System Control by Rank, Education

Grand Mean = 6.31

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Rank					
1	118	0.36		0.38	
2	12	1.10		0.76	
3	27	-0.02		0.10	
4	15	-1.11		-1.04	
5	16	-1.31		-1.50	
6	6	-2.98		-2.90	
			0.31		0.30
Education					
1	48	0.04		0.06	
2	29	0.86		0.74	
3	37	0.04		0.19	
4	38	-0.18		-0.24	
5	22	0.32		0.30	
6	20	-1.41		-1.45	
			0.22		0.22
Multiple R Squared				0.139	
Multiple R				0.373	

Table o.

Significant Relationship:

Social System Control by S.E.S., Education

Grand Mean = 6.16

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
S.E.S.					
1	58	0.12		0.09	
2	39	0.31		0.18	
3	29	-0.91		-0.82	
4	8	-0.53		-0.63	
5	15	0.98		1.26	
7	12	-0.24		-0.20	
			0.20		0.21
Education					
1	42	0.06		0.01	
2	24	0.84		0.96	
3	32	0.16		0.18	
4	31	-0.51		-0.51	
5	17	0.79		0.72	
6	15	-1.69		-1.70	
			0.27		0.27
Multiple R Squared				0.113	
Multiple R				0.337	

Table p.

Significant Relationship:

Social System Control by Years Service, S.E.S.

Grand Mean = 6.14

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Years Service					
1	27	0.08		-0.09	
2	23	0.47		0.56	
3	7	-0.14		-0.01	
4	36	0.17		0.21	
5	73	-0.25		-0.25	
			0.10		0.11
S.E.S.					
1	59	0.17		0.24	
2	42	0.27		0.22	
3	30	-0.97		-1.03	
4	8	-0.51		-0.60	
5	15	0.99		0.96	
7	12	-0.22		-0.16	
			0.21		0.22
Multiple R Squared				0.055	
Multiple R				0.235	

Table q.

Significant Relationship:

Social System Control by Years Service, Training Course

Grand Mean = 6.26

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Years Service					
1	35	0.25		0.66	
2	28	0.27		1.25	
3	12	-0.26		0.81	
4	42	0.36		-0.68	
5	85	-0.33		-0.46	
			0.12		0.27
Training Course					
1	23	0.48		-0.18	
2	21	-0.17		-0.72	
3	37	-0.07		-1.07	
4	15	0.34		0.90	
5	26	0.97		1.61	
6	16	1.30		1.83	
7	42	-0.41		0.07	
8	22	-1.76		-1.29	
			0.31		0.40
Multiple R Squared				0.107	
Multiple R				0.327	

Table r.

Significant Relationship:

Social System Control by Training Course, Size Department

Grand Mean = 6.26

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Training Course					
1	23	0.48		0.26	
2	21	-0.17		-0.21	
3	37	-0.07		0.07	
4	15	0.34		0.19	
5	26	0.97		1.04	
6	16	1.30		1.27	
7	42	-0.41		-0.35	
8	22	-1.76		-1.79	
			0.31		0.31
Size Department					
1	43	-0.05		-0.19	
2	37	0.01		-0.12	
3	40	-0.14		-0.07	
4	39	-0.31		-0.07	
5	43	0.46		0.43	
			0.10		0.09
Multiple R Squared					0.100
Multiple R					0.317

Table s.

Significant Relationship:

Social System Control by Training Course, Work Experience

Grand Mean = 6.23

Variable + Category	N	Unadjusted Dev'n	ETA	Adjusted for Independents Dev'n	BETA
Training Course					
1	21	0.34		0.37	
2	20	0.12		0.29	
3	31	-0.03		-0.01	
4	14	0.13		0.03	
5	23	0.90		0.75	
6	12	1.36		1.46	
7	30	-0.39		-0.46	
8	21	-1.70		-1.66	
			0.30		0.29
Work Experience					
1	45	0.42		0.46	
2	70	-0.18		-0.16	
3	20	0.62		0.37	
4	10	-1.83		-1.58	
5	2	-0.23		0.46	
6	14	0.56		0.63	
7	11	-0.68		-1.01	
			0.22		0.21
Multiple R Squared				0.131	
Multiple R				0.363	

Appendix H

Police Attitudes Towards Higher Education (Scale Development)

The author was concerned with how the trend towards higher education was perceived by incumbents of the police community. Specifically, this concern grew from a general curiosity as to how factors such as rank, years of service, and (level of) education might affect one's perceptions of this issue.

A series of questions were created to present to a selected sample of policemen. The author's intention was to get a general feeling as to how policemen from diverse backgrounds would respond. It was expected that respondents would offer their own attitudes and suggestions, regarding what they deemed to be pertinent questions on the issue(s) of higher education. It was expected that through this question/interview approach a series of 'statements' would emerge which would reflect an overall appreciation of the issue. The questions which the author posed (in the form of an interview schedule) were as follows:

- How would you define education as it relates to police work?
- Do you see this trend as developing within policing?
- How valuable do you perceive education to be (indiv./org.)?
- What do you see as the purpose of this educational process?

- What kind of education do you perceive as being most beneficial?
- Will education make the individual more effective in his work?
- Would a particular type of education make the individual more effective?
- What do you see as the role of the line police officer?
- What benefits should the individual personally derive from acquiring an education?
- Should educated policemen be given preferential treatment in recruitment, advancement, promotion, pay?
- Should education be financially subsidized by the organization?
- Do you believe that policemen should be given the opportunity for extended educational leave (with pay/without pay)?
- Do you feel that the organization in general rewards the efforts of those possessing or presently pursuing advanced education?

It was the author's intention that a series of interviews be conducted, utilizing these questions, until 'closure' was effected (i.e., all or most predictable responses were obtained). To this end, the interview schedule was administered to twenty serving policemen, arbitrarily selected during their working schedule. The interviews were conducted 'on site' (at the Surrey R.C.M. Police Detachment) and required one half hour of the respondent's time. The author made no attempt to obtain a statistically random sample: respondents were approached with the intention of acquiring a sample with diverse policing backgrounds, i.e., years of service, positions within the organization, rank, education, etc.

Having analyzed the responses, a series of statements were compiled which best represented the various facets, of the 'higher education' issue. The following list of statements were chosen by the author: (The number appearing in parentheses at the left of each statement indicates the original question-source from which it was derived).

(2) There is a notable trend in most occupations these days, including policing, which stresses the importance of post secondary education as a tool for advancement.

(1) In terms of education for police officers, the minimum Force requirement (grade 12) is adequate and in keeping with the role we perform.

(1) The only education a policeman needs can be found on the street and will come with experience.

(1) Education for police officers should be strictly job related and address the immediate needs of the man on the street.

(1) In order to function in a complex society, with increasingly complex role requirements, street police officers should possess a university education.

(3) A post secondary education is a valuable asset to any individual and will contribute to the overall value of the Force.

(4) Post secondary education should be considered as a strategy to upgrade the individual and the Force towards becoming more professional.

(4) If the effects of formal education cannot be directly measured in terms of job performance or increased efficiency, then we shouldn't bother.

(4) All the importance placed on education for policemen recently is strictly a political exercise, thought up by politicians and academics, and has nothing to do with day to day police work.

(5) More than anything, policemen need to be educated in law, recent case law, and relevant federal and provincial statutes.

(5) The best school a policeman can hope to graduate from is the 'school of hard knocks'.

(5) Education, to be meaningful, should teach policemen how to relate to people and to be better communicators.

(5) Because good police work largely depends on one's ability to deal with people, education should address itself to understanding why people behave and interact the way they do.

(6) Post secondary education should make a policeman more effective by exposing him to different theories which will cause him to be more aware of what goes on around him.

(8) The role of the front line policeman is to serve the public and render assistance in times of crisis. (8) The police today are like the 'thin blue line' between peaceful social order and total chaos.

(8) The primary responsibility of the police is the control of crime through aggressive enforcement and investigation.

(8) 'Protection of life and property' and 'prevention of crime' are story book theories taught at the academy, which have little relevance to working policemen.

(9) The benefit personally derived from a post secondary education by a policeman should simply be a sense of self-satisfaction and accomplishment.

(10) Today, police departments should be giving serious preferential treatment to the hiring and advancement of university and college graduates.

(10) Factors such as length of service, acquired skills, loyalty to the Force, etc., should be the prime considerations for advancement and promotion.

(11) Policemen who wish to pursue post secondary level studies in police related areas should have their tuition paid for by the Force.

(12) There should be programs set in place which allow members to take temporary leaves of absence (with pay) in order to study in job related areas.

(13) The way things are today, a university or college educated policeman can reasonably expect accelerated advancement and preferential postings, assuming his performance is equal to his non-educated peers.

These statements were then used in the development of a pilot instrument. The statements were assigned a (6 point) Likert-type scaling format. A brief instruction was included at

the beginning of the statements, explaining the scoring procedure and a 'background information' section was developed and included following the list of statements. The background information section was later utilized in the survey analysis of the thesis research. This instrument was then administered to three separate in-service police training courses (N=68) at the B.C. Police Academy and the Fairmont Training Academy. This was done to ensure 'readability' and comprehensiveness of the background information. The substance of this survey instrument was discussed with the respondent groups to achieve this end. In that no fundamental problems of understanding or comprehension were encountered, the instrument was accepted in its existing form and later incorporated into the author's thesis survey instrument.

Appendix I

Police Attitude Towards Higher Education

Summary Statistics

1. There is a notable trend in most occupations these days, including policing, which stresses the importance of post-secondary education as a tool for advancement.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	1.94	0.74	1	117	1.97	0.78	1	38	1.68	0.76	1	38	1.68	0.76
2	29	1.90	0.85	2	12	1.75	0.87	2	28	2.10	0.83	2	28	2.10	0.83
3	38	2.13	0.84	3	28	1.89	0.91	3	12	2.00	0.85	3	12	2.00	0.85
4	38	1.87	0.74	4	18	2.17	0.92	4	41	1.98	0.69	4	41	1.98	0.69
5	22	2.14	1.12	5	17	1.94	0.66	5	85	2.04	0.87	5	85	2.04	0.87
6	20	1.75	0.55	6	6	2.17	0.98								
T	196	1.96	0.81	T	198	1.97	0.81	T	201	1.97	0.81	T	201	1.97	0.81

2. In terms of education for police officers, the minimum Force requirement (grade 12) is adequate and in keeping with the role we perform.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.29	0.87	1	117	2.88	1.29	1	35	3.37	1.50	1	35	3.37	1.50
2	29	2.76	1.09	2	12	2.92	0.79	2	28	2.93	1.15	2	28	2.93	1.15
3	38	2.71	1.14	3	28	2.57	1.00	3	12	2.75	1.22	3	12	2.75	1.22
4	38	2.24	1.32	4	18	2.72	1.27	4	41	2.51	1.08	4	41	2.51	1.08
5	22	3.27	1.35	5	17	3.18	1.29	5	85	2.78	1.10	5	85	2.78	1.10
6	20	3.45	1.31	6	6	3.00	0.63								
T	196	2.85	1.21	T	198	2.85	1.21	T	201	2.85	1.20	T	201	2.85	1.20

3. The only education a policeman needs can be found on the street and will come with experience.

Grp.	Education			Rank			Service				
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	48	4.48	1.13	1	114	4.57	0.11	1	35	4.69	1.30
2	28	4.29	0.60	2	12	4.83	0.24	2	27	4.67	1.33
3	38	4.66	1.24	3	28	4.57	0.22	3	12	4.0	0.95
4	38	4.79	1.14	4	18	4.67	0.26	4	39	4.72	0.88
5	21	4.62	1.16	5	17	4.88	0.17	5	85	4.6	1.03
6	20	5.10	1.07	6	6	4.17	0.30				
T	193	4.63	1.10	T	195	4.61	0.08	T	198	4.61	1.09

4. Education for police officers should be strictly job related, to address the immediate needs of the man on the street.

Grp.	Education			Rank			Service				
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	3.98	1.23	1	117	4.37	1.21	1	35	4.54	1.27
2	29	4.07	1.16	2	12	4.58	1.38	2	28	4.25	1.24
3	38	4.68	1.14	3	28	4.29	1.24	3	12	4.50	1.09
4	38	4.66	1.07	4	18	4.78	1.16	4	41	4.43	1.05
5	22	4.41	1.18	5	17	4.41	1.00	5	85	4.34	1.23
6	20	5.05	1.00	6	6	4.17	0.75				
T	196	4.42	1.19	T	198	4.40	1.19	T	201	4.39	1.19

5. In order to function in a complex society, with increasingly complex role requirements, street police officers should possess a university education.

Education						Rank						Service					
Grp.	N	Mean	S.D	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D	Grp.	N	Mean	S.D		
1	49	4.69	0.94	1	115	4.26	1.15	1	35	4.14	1.38						
2	28	4.25	1.93	2	12	4.25	0.87	2	27	3.92	1.04						
3	38	4.26	1.01	3	28	4.32	1.16	3	12	4.25	1.00						
4	38	4.00	1.25	4	18	4.56	0.92	4	40	4.47	1.00						
5	21	4.14	1.42	5	17	3.76	1.15	5	85	4.30	1.08						
6	20	3.70	1.00	6	6	4.00	0.63										
T	194	4.25	1.11	T	196	4.24	1.10	T	199	4.26	1.10						

195

6. A post secondary education is a valuable asset to any individual and will thus contribute to the overall value of the Force.

Education						Rank						Service					
Grp.	N	Mean	S.D	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D	Grp.	N	Mean	S.D		
1	49	2.71	1.21	1	117	2.64	1.10	1	35	2.49	1.42						
2	29	2.83	0.89	2	12	2.42	0.67	2	28	2.57	0.92						
3	38	2.61	1.10	3	28	2.46	1.23	3	12	2.42	0.90						
4	38	2.32	1.07	4	18	2.78	1.35	4	41	2.80	0.93						
5	22	2.55	1.06	5	17	1.94	0.56	5	85	2.47	1.06						
6	20	1.95	0.80	6	6	2.33	0.82										
T	196	2.54	1.08	T	198	2.55	1.09	T	201	2.55	1.08						

7. Post secondary education should be considered as a strategy to upgrade the individual and the Force towards becoming more professional.

Grp.	Education			Rank			Service				
	N	Mean	S.D	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D
1	49	2.98	1.15	1	117	2.74	1.14	1	35	2.49	1.34
2	29	2.79	0.90	2	12	3.00	1.28	2	28	2.75	1.08
3	38	2.52	1.13	3	28	2.32	1.12	3	12	2.67	0.78
4	38	2.32	1.21	4	18	2.89	1.32	4	41	3.00	1.25
5	22	3.05	1.46	5	17	2.00	0.87	5	85	2.52	1.10
6	20	2.00	0.79	6	6	2.83	1.17				
T	196	2.64	1.17	T	198	2.65	1.16	T	201	2.65	1.16

8. I the effects of formal education cannot be directly measured in terms of job performance, then we shouldn't bother.

Grp.	Education			Rank			Service				
	N	Mean	S.D	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D
1	49	4.12	0.90	1	117	4.20	1.04	1	35	4.9	1.25
2	29	3.76	1.09	2	12	4.50	1.17	2	28	4.39	0.92
3	38	4.24	1.15	3	28	4.21	1.17	3	12	4.00	0.74
4	38	4.26	1.13	4	18	4.17	1.25	4	41	4.22	0.88
5	22	4.27	0.98	5	17	4.59	0.80	5	85	4.21	1.17
6	20	5.20	0.66	6	6	4.17	1.17				
T	196	4.25	1.07	T	198	4.25	1.07	T	20	4.24	1.07

9. All the importance placed on education for policemen recently is strictly a political exercise, thought up by politicians and academics, and has nothing to do with day to day police work.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	4.23	0.90	1	117	4.50	1.07	1	35	4.71	1.20	1	35	4.71	1.20
2	29	4.00	1.10	2	12	4.58	0.79	2	28	4.68	1.19	2	28	4.68	1.19
3	38	4.87	1.02	3	28	4.04	1.23	3	12	4.33	0.89	3	12	4.33	0.89
4	38	4.61	1.13	4	18	4.61	1.24	4	41	4.29	0.90	4	41	4.29	0.90
5	22	4.23	0.87	5	17	4.82	0.81	5	85	4.45	1.09	5	85	4.45	1.09
6	20	5.45	0.76	6	6	4.83	0.75								
T	196	4.52	1.06	T	198	4.48	1.08	T	201	4.49	1.08	T	201	4.49	1.08

19

10. More than anything, policemen need to be educated in the law, recent case law, and relevant federal and provincial statutes.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.35	1.05	1	117	2.31	1.09	1	35	2.20	1.08	1	35	2.20	1.08
2	29	2.14	1.00	2	12	2.67	1.44	2	28	2.32	1.09	2	28	2.32	1.09
3	38	2.68	1.21	3	28	2.68	1.22	3	12	2.00	0.74	3	12	2.00	0.74
4	38	2.37	1.26	4	18	2.33	0.91	4	41	2.46	1.25	4	41	2.46	1.25
5	22	2.32	0.95	5	17	2.65	1.27	5	85	2.60	1.15	5	85	2.60	1.15
6	20	2.75	1.37	6	6	2.83	1.47								
T	196	2.42	1.15	T	198	2.43	1.14	T	201	2.43	1.13	T	201	2.43	1.13

11. The best school a policeman can hope to graduate from is the 'school of hard knocks'.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	4.22	0.94	1	116	4.16	1.06	1	35	4.31	1.21	1	35	4.31	1.21
2	29	4.07	0.96	2	12	4.33	0.98	2	27	4.11	0.89	2	27	4.11	0.89
3	37	4.27	1.17	3	28	4.32	1.06	3	12	3.83	1.34	3	12	3.83	1.34
4	38	4.27	1.20	4	18	4.50	0.92	4	41	4.9	0.93	4	41	4.9	0.93
5	21	4.10	0.83	5	16	4.19	0.98	5	84	4.25	1.00	5	84	4.25	1.00
6	20	4.45	1.05	6	6	3.83	0.98								
T	194	4.23	1.04	T	196	4.22	1.03	T	199	4.23	1.03	T	199	4.23	1.03

12. Education, to be meaningful, should teach policemen how to relate to people and to better communicators.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.14	0.71	1	117	1.98	0.74	1	35	1.77	0.69	1	35	1.77	0.69
2	29	2.03	0.68	2	12	2.77	1.11	2	28	2.00	0.86	2	28	2.00	0.86
3	38	2.13	0.88	3	28	2.14	0.65	3	12	2.08	0.79	3	12	2.08	0.79
4	38	1.79	0.66	4	18	2.00	0.77	4	41	2.12	0.68	4	41	2.12	0.68
5	22	2.27	0.70	5	17	1.94	0.66	5	85	2.09	0.75	5	85	2.09	0.75
6	20	1.65	0.75	6	6	2.33	0.82								
T	196	2.02	0.75	T	198	2.03	0.75	T	201	2.03	0.75	T	201	2.03	0.75

13. Because good police work largely depends on one's ability to deal with people, education should address itself to understanding why people behave the way they do.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.29	0.82	1	117	2.16	0.73	1	35	2.17	0.86	1	35	2.17	0.86
2	29	2.21	0.90	2	12	2.50	1.17	2	28	2.00	0.77	2	28	2.00	0.77
3	38	2.21	0.70	3	28	2.18	0.72	3	12	2.25	0.62	3	12	2.25	0.62
4	38	1.92	0.67	4	18	2.00	0.84	4	41	2.22	0.61	4	41	2.22	0.61
5	22	2.32	0.57	5	17	2.00	0.61	5	85	2.18	0.78	5	85	2.18	0.78
6	20	2.05	0.76	6	6	2.50	0.55								
T	196	2.17	0.76	T	198	2.17	0.76	T	201	2.16	0.75	T	201	2.16	0.75

14. Post secondary education should make a policeman more effective by exposing him to different theories which will cause him to be more aware of what goes on around him.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.45	0.71	1	117	2.34	0.91	1	35	2.26	1.01	1	35	2.26	1.01
2	29	2.59	1.02	2	12	2.33	0.89	2	28	2.21	0.99	2	28	2.21	0.99
3	38	2.53	1.08	3	28	2.54	0.88	3	12	2.58	0.79	3	12	2.58	0.79
4	38	2.05	0.84	4	18	2.44	1.29	4	41	2.49	0.84	4	41	2.49	0.84
5	22	2.45	1.10	5	17	2.12	0.60	5	85	2.38	0.94	5	85	2.38	0.94
6	20	1.95	0.69	6	6	2.50	0.84								
T	196	2.36	0.93	T	198	2.36	0.92	T	201	2.37	0.92	T	201	2.37	0.92

15. The role of the front line policemen is to serve the public and render assistance in times of crisis.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	1.98	1.98	1	116	1.92	0.75	1	35	1.77	0.81	1	35	1.77	0.81
2	28	1.82	1.82	2	12	2.17	0.83	2	27	1.96	0.90	2	27	1.96	0.90
3	38	1.92	1.92	3	28	2.00	0.82	3	12	1.92	0.51	3	12	1.92	0.51
4	38	1.97	1.97	4	18	1.94	0.73	4	41	1.98	0.72	4	41	1.98	0.72
5	22	2.05	2.05	5	17	2.24	0.83	5	85	2.06	0.78	5	85	2.06	0.78
6	20	2.15	2.15	6	6	1.50	0.55								
T	195	1.97	1.97	T	197	1.96	0.77	T	200	1.97	0.78	T	200	1.97	0.78

16. The police today are like the 'thin blue line' between peaceful social order and total chaos.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.90	1.10	1	117	3.01	1.22	1	35	3.06	1.30	1	35	3.06	1.30
2	29	2.62	1.15	2	12	2.25	1.36	2	28	3.25	1.10	2	28	3.25	1.10
3	38	3.32	1.40	3	28	2.82	1.10	3	12	2.83	1.11	3	12	2.83	1.11
4	38	2.76	1.15	4	18	2.56	1.34	4	41	2.95	1.28	4	41	2.95	1.28
5	22	2.77	1.02	5	17	3.06	1.14	5	85	2.78	1.18	5	85	2.78	1.18
6	20	3.35	1.31	6	6	2.00	0.63								
T	196	2.94	1.21	T	198	2.93	1.21	T	201	2.93	1.21	T	201	2.93	1.21

17. The primary responsibility of the police is the control of crime through aggressive enforcement and investigation.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	48	3.63	1.18	1	116	3.53	1.19	1	35	3.86	1.30	1	35	3.86	1.30
2	29	2.97	1.32	2	12	3.50	1.38	2	27	3.89	1.10	2	27	3.89	1.10
3	38	3.82	1.27	3	28	3.57	1.29	3	12	3.00	0.74	3	12	3.00	0.74
4	38	3.61	1.26	4	18	3.33	1.57	4	41	3.29	1.10	4	41	3.29	1.10
5	22	3.45	1.37	5	17	4.00	1.46	5	85	3.55	1.40	5	85	3.55	1.40
6	20	3.95	1.05	6	6	3.50	1.38								
T	195	3.57	1.26	T	197	3.56	1.27	T	200	3.57	1.30	T	200	3.57	1.30

18. 'Protection of life and property' and 'prevention of crime' are story book theories taught at the academy, which have little relevance to working policemen.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	N	Mean	S.D.	
1	49	4.88	0.93	1	117	4.95	0.95	1	35	4.77	0.94	1	35	4.77	0.94
2	29	5.63	0.94	2	12	5.00	1.41	2	28	5.18	0.77	2	28	5.18	0.77
3	38	5.05	0.23	3	28	4.79	1.03	3	12	5.00	0.74	3	12	5.00	0.74
4	37	5.03	0.87	4	18	5.11	0.96	4	41	4.93	1.19	4	41	4.93	1.19
5	22	5.00	0.87	5	16	5.25	1.06	5	84	5.01	1.00	5	84	5.01	1.00
6	20	4.85	0.99	6	6	5.33	0.52								
T	195	4.97	0.98	T	197	4.98	1.00	T	200	4.98	1.00	T	200	4.98	1.00

19. The benefit personally derived from a post secondary education by a policeman should simply be a sense of self-satisfaction and accomplishment.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	3.45	1.12	1	117	3.4	1.21	1	35	3.20	1.35	1	35	3.20	1.35
2	29	3.55	1.09	2	12	4.00	0.95	2	8	3.50	1.14	2	8	3.50	1.14
3	38	3.58	1.24	3	28	2.92	0.90	3	72	3.33	1.07	3	72	3.33	1.07
4	38	3.42	1.41	4	18	3.56	1.25	4	41	4.49	1.21	4	41	4.49	1.21
5	22	3.18	1.30	5	17	4.24	1.25	5	85	3.60	1.18	5	85	3.60	1.18
6	20	3.60	1.14	6	6	3.83	1.47								
T	196	3.47	1.21	T	198	3.48	1.21	T	201	3.48	1.20	T	201	3.48	1.20

20. Today, police departments should be giving serious preferential treatment to the hiring and advancement of university and college graduates.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	4.29	1.02	1	116	3.99	1.18	1	35	3.89	1.39	1	35	3.89	1.39
2	29	4.28	0.84	2	12	3.92	1.16	2	27	3.70	1.20	2	27	3.70	1.20
3	38	4.18	1.16	3	28	4.14	1.24	3	12	4.17	1.11	3	12	4.17	1.11
4	38	3.55	1.18	4	18	4.28	1.13	4	41	4.27	1.00	4	41	4.27	1.00
5	21	3.90	1.22	5	17	3.47	1.07	5	85	3.96	1.13	5	85	3.96	1.13
6	20	3.20	1.36	6	6	3.83	1.00								
T	195	3.97	1.17	T	197	3.98	1.17	T	200	3.99	1.16	T	200	3.99	1.16

21. Factors such as length of service and loyalty to the Force should be prime considerations for advancement and promotion.

Grp.	Education				Rank				Service			
	N	Mean	S.D	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D	
1	48	3.98	1.16	1	116	3.73	1.21	1	35	3.63	1.54	
2	29	3.76	1.12	2	12	3.92	1.44	2	27	3.85	0.86	
3	38	3.66	1.40	3	28	4.07	1.30	3	12	4.33	1.07	
4	38	4.13	1.12	4	18	4.11	1.28	4	41	3.63	1.11	
5	22	3.50	1.10	5	17	4.65	0.93	5	85	4.11	1.22	
6	20	4.30	1.38	6	6	4.00	0.63					
T	195	3.90	1.22	T	197	3.91	1.23	T	200	3.90	1.22	

22. Policemen who wish to pursue post secondary level studies in police related areas should have their tuition paid for by the Force.

Grp.	Education				Rank				Service			
	N	Mean	S.D	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D	
1	49	2.41	0.93	1	117	2.13	1.00	1	35	2.06	1.11	
2	28	2.31	0.97	2	12	2.58	1.31	2	28	2.00	0.72	
3	38	2.16	0.92	3	28	2.32	1.12	3	12	2.25	0.75	
4	38	1.79	0.93	4	18	2.17	0.86	4	41	2.34	1.00	
5	22	2.27	0.83	5	17	2.12	0.93	5	85	2.28	1.00	
6	20	2.35	1.09	6	6	2.83	0.75					
T	196	2.20	1.00	T	198	2.21	1.00	T	201	2.21	1.00	

23. There should be programs set in place which allow members to take temporary leaves of absence (with pay) in order to study in job related areas.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.47	1.10	1	117	2.20	1.00	1	35	2.14	1.06	1	35	2.14	1.06
2	29	2.34	1.00	2	12	2.67	1.20	2	28	2.04	0.70	2	28	2.04	0.70
3	38	2.45	1.00	3	28	2.43	1.00	3	12	2.25	1.14	3	12	2.25	1.14
4	38	1.95	0.73	4	18	2.33	1.03	4	41	2.5	1.00	4	41	2.5	1.00
5	22	2.41	1.00	5	17	2.24	0.80	5	85	2.37	0.90	5	85	2.37	0.90
6	20	2.10	1.00	6	6	3.17	0.40								
T	196	2.30	1.00	T	198	2.30	1.00	T	201	2.31	1.00	T	201	2.31	1.00

24. The way things are today, a university degree or college educated policeman can reasonably expect accelerated advancement and preferential postings, assuming his performance is equal to his non-educated peers.

Grp.	Education				Rank				Service						
	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.	Grp.	N	Mean	S.D.
1	49	2.94	1.27	1	117	2.83	1.26	1	35	2.77	1.40	1	35	2.77	1.40
2	29	2.79	1.21	2	12	2.75	1.36	2	28	3.00	1.25	2	28	3.00	1.25
3	38	2.74	1.20	3	28	2.82	1.12	3	12	3.42	1.16	3	12	3.42	1.16
4	38	3.00	1.30	4	18	2.67	1.14	4	41	2.68	1.11	4	41	2.68	1.11
5	22	2.41	1.05	5	17	3.00	1.27	5	85	2.82	1.21	5	85	2.82	1.21
6	20	3.10	1.30	6	6	3.67	1.21								
T	196	2.85	1.22	T	198	2.85	1.23	T	201	2.85	1.23	T	201	2.85	1.23

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