The Psychological Determinants of Occupational and Non-Occupational Risk-Taking Among Law Enforcement Officers

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The psychological determinants of occupational and non-occupational risk-taking among law enforcement officers

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City University of New York, 1991
THE PSYCHOLOGICAL DETERMINANTS OF OCCUPATIONAL AND NON-OCCUPATIONAL RISK-TAKING AMONG LAW ENFORCEMENT OFFICERS

by

William F. McCarthy

A dissertation submitted to the Graduate Faculty in Criminal Justice in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1991
This manuscript has been read and accepted for the Graduate Faculty in Criminal Justice in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

May 24, 1991

Date

Chair of Examining Committee

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Abstract

THE PSYCHOLOGICAL DETERMINANTS OF OCCUPATIONAL
AND NON-OCCUPATIONAL RISK-TAKING AMONG
LAW ENFORCEMENT OFFICERS

by

William F. McCarthy

Advisor: Professor Carl Wiedemann

The goal of this study was to identify and statistically
examine the psychological determinants of risk-taking among
law enforcement officers. This study was conceptualized and
designed on a rather simple premise that risk-taking in one's
leisure would have a dramatic and predominant influence on the
grouping of subjects into definable personality trait
categories. The suspicion regarding these categories was that
subjects who engaged in risk-taking in their leisure time
would be distinctively different from all other emerging
groups, with regard to the 16 PF Cattell factors. It was also
suspected that this leisure time risk-taking group's
personality profile would be split between a well adjusted
group, who would be high in the personality traits of control
and independence; and a less well adjusted group, who would
have a pathological or marginal personality trait profile.

In total, four hundred and fourteen (414) law enforcement
officers' "Leisure Time Questionnaires" and "Cattell 16 PF
Questionnaires" were analyzed. The subjects were from a total of one hundred and forty-five (145) different law enforcement agencies from thirty-three (33) different States in the United States.

The anonymous "Leisure Time Questionnaire" was designed to collect biographical information about the subjects and arranged the leisure time activities in alphabetical order, in an attempt to mask the risk-taking activities evaluation. The activities listed include all popular leisure-time activities that have been identified by the insurance industry, to which is attached an additional insurance premium. This questionnaire also included questions that evaluated occupational autonomy and discretion, and a fantasy leisure time question that elicited responses that were not dependent on the availability of free time or money.

The Cattell Sixteen Personality Factor questionnaire was also administered to this sample and provided scores in twenty-six (26) personality trait categories.

Although the original hypotheses of this study, were not largely supported, there were significant findings between the general population and law enforcement officers, within three (3) occupational law enforcement groups, and within six (6) law enforcement occupational/risk-taking groups; which are displayed in twenty (20) tables and nine (9) figures.
Acknowledgements

I wish to thank Professor Carl Wiedemann, my mentor, who encouraged my idea, operationalized it, and drove me to new statistical heights. Professors Robert Kelly and Ronald McVey, who were there for me, when I needed them; and guided me through the dangerous passages without disastrous consequences.

Professor Kenneth Lenihan, who interested me in research methods and analysis; but most of all, for the gift of the "edgework" article.

Finally, I wish to thank my family, and especially my wife Millie, who endured much with patience and support. I promise I won't be spending as much time in the basement, for awhile.
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CHAPTER I

INTRODUCTION

Many people have said: "ANY PERSON THAT WOULD DO THAT WOULD HAVE TO BE CRAZY". Well, are we certain that applies to all people for all behaviors? Is it possible that a particular behavior could be appropriate for one person and inappropriate for another? Is it possible that the inherent danger associated with the behavior is only in the mind of the person who is unwilling to engage in that behavior? Or maybe the behavior is only dangerous if you do not know what to do.

Life, for all of us, is a series of right or wrong choices or risks. We are more aware of the risks we avoid than the risks we take. We admire the risks that other people take more than our own risk-taking. Decisions to be or not to be, to do or not to do, how to be, where to live, whom to love, to be sure safe sex is safe, what to eat, what to wear, when to speak, when to cross the street, whether to fly, or believe the doctor are but a few of the many decisions that daily challenge humankind and that may never be convincingly answered.

Man is the only animal that knows that he will inevitably die; the only things he does not know is when and whether the
cause of death will be natural, an accident, or the result of a wrong decision. He labors under this threat of risk his entire life, making decisions throughout his life, always attempting to avoid negative consequences. Death for some is the ultimate failure of life, for others it is the ultimate challenge or risk in life. Life happens in spite of uncertainty or risk; in fact, uncertainty and risk are central to the definition of our human condition. Although risk or chance is a common element in everyone's life, how he or she deals with risk or chance can vary and can dramatically influence a person's self-concept and status within his/her community.

Physical risk-takers are revered, glorified and institutionally honored in our society. All risk-takers, however, are not fearless individuals but rather, individuals who like being in fear; individuals who can appear to remain calm in the face of chaos or fear and can continue to function in a manner that doesn't increase their chances of being injured or killed. Erving Goffman (1967) argued that life-threatening behavior or physical confrontations provide opportunity for the working class to achieve social status, if they can remain calm, in spite of the potential danger.

For the risk-taker, the danger is not in the potential risk, but in the unskilled or inappropriate response of the
individual to the perceived risk. Risk is what makes a risk-taker real, it is at the moment of risk that life becomes something exciting and worth living. The issue of unavoidable risks as opposed to unnecessary or voluntary risk-taking present challenging distinctions.

Ralph Keyes (1985) categorized risk into two levels: risks at the first level are physical risks, exciting, stimulating, often dangerous and seldom long lasting, arousal is the participant's principal goal; risks at the second level are long lasting, usually unstimulating activities that involve more danger to the spirit than to the body. Activities at the second level would include getting married, changing jobs, or making financial investments.

This dissertation will examine the issue of level one, voluntary physical risk-taking by law enforcement officers in both their occupational activities, their free time, or during leisure activities. This study will focus on the differences between people who engage in life-threatening activities for recreation and those who engage in life-threatening activities in work.
"To the extent that we are not perceived to be the unsleeping sentinels who guard the outposts of society, we earn your scorn. For you see, you want us to be better than we are. You want us to be better than you are. Because what we do is so important to you, you want us to be heroic.

Courage is almost a contradiction in terms. It means a strong desire to live taking the form of a readiness to die."

G. K. Chesterton

STATEMENT OF THE PROBLEM

Danger and voluntary risk-taking are the very fabrics on which our society's perception and expectations about criminal justice and law enforcement behavior are painted. History, news media and all forms of popular entertainment are filled with demonstrations of police danger and bravery. No police television show could exist without a hair-raising car chase or shoot-out before the first commercial. A John Jay College graduate study "Television Images of Police Realities - 1989" supervised by Professor Charles Bahn, found that television over represents violent crime and that unrealistic distorted TV images create a climate that leaves the general public with false expectations of police and policing. Police candidates are selected from this same population that has been falsely influenced by these television images and arrive in American police academies believing that acceptance and the achievement
of occupational status within the world of police work is dependent on their display of risk-taking and physical bravery. Nothing in the training curricula of these academies or the public speech of the police leaders in America would suggest that these police recruits are misinformed. In fact, American law enforcement policies encourage and support the aspect of risk-taking in an attempt to distinguish police from other governmental services and to therefore win a larger share of the public budget. The identification with risk-taking provides important status for the individual police officer within his occupational group and for the police department among other governmental entities.

The question of why anyone would be willing to choose or be attracted to an occupation which promises to place them in life-threatening situations has never been satisfactorily answered. The socialization process of police candidates or recruits that encourages them to perceive risk or danger as an "opportunity" or "rite of passage" is mystifying, although numerous theories have been offered.

Niederhoffer (1967) stated that it is the police system, rather than the personality of the police candidate, that is the determinant of the behavior and ideology of police officers. The training period experienced by the police recruit is referred to by Niederhoffer, in Goffman's terms, as
a time of "stripping" and "mortification" by a "total institution." The intended effect is to reduce the influence of the individual's past on his present; the process continues in later years as a latent function of occupational socialization.

Marvin Zuckerman (1964), the developer of the "Sensation Seeking Scale", found that voluntary risk-takers are primarily attempting to overcome boredom and social alienation through involvement in their life-threatening activities, activities which provide control, concentration, calm, camaraderie, and character experiences for the risk-takers. Danger is simply the ultimate test of the ability for these individuals to prevail.

The increasing popularity of leisure time risk taking in such activities as skydiving, hang gliding, scuba diving, race car driving, speed skiing, mountain climbing, river rafting, survival war games, at the same time when there is a national obsession with improving safety in the work place is vexing.

In an attempt to explain this, Stephen Lyng (1990) introduced a new classifying concept, "edgework", based on numerous themes emerging from primary and secondary data on risk-taking and explained "edgework" in terms of the newly emerging social-psychological synthesis of the Marxian and
Meadian frameworks. The Marx and Mead synthesis he offers is a framework for tracing the connection between various aspects of risk-taking behavior and the structural characteristics of modern American society. Lyng argues that "control," "thrill seeking," "gambling," "learned helplessness," "autonomy," "discretion," and "alienation" are personality characteristics or traits of voluntary risk-takers that somehow interact to explain risk-taking as a result of "oversocialization" and frustrated attempts at "self-actualization."

Lyng, who failed to distinguish occupational risk-taking from leisure time risk-taking, concluded his article by calling for future empirical analyses in the area of research relating to the institutional circumstances (especially in the domain of work) of edgework enthusiasts—in particular, data that measure the degree to which alienation and oversocialization characterize the institutional routines of those who value the edgework experience.

This dissertation will examine the psychological determinants of voluntary risk-taking by law enforcement officers in both their occupational activities and their free time or leisure activities. This study will focus on the differences between law enforcement officers who engage in life threatening activities for recreation and those who engage in life threatening activities in work providing
valuable new information to the examination of voluntary risk-taking both in occupational and leisure time activities.

It will also compare and contrast unique specialty subgroups (dangerous specialties, non-dangerous specialties, and generalists) within the law enforcement occupation and their comparative relationships with risk-taking among the rest of the general adult population. Information that would assist in the identification and evaluation of "appropriate personality factors" for prudent risk-taking will emerge.

Lyng's (Mark/Mead synthesis framework 1990) explanation of voluntary risk-taking as a response to "over-socialization" and lack of "self actualization" in postindustrial occupational life will be empirically tested.

Hypotheses

This study will utilize The Sixteen Personality Factor Questionnaire" (16 PF) and a "Leisure Time Questionnaire," designed by this investigator to test the following hypotheses:

1. Law enforcement officers as a group will appear high on the traits of "control" and "thrill-seeking" and low in "gambling" and "learned helpless" when compared with people in
2. Law enforcement officers who engage in leisure activities with a clear risk component -- e.g. hang-gliding, motor bike racing, mountain climbing, etc. -- will be notably higher in "control" and "thrill-seeking" and notable lower in "gambling" and "learned helplessness" than their fellow officers.

3. Law enforcement officers in specialized functions -- Hostage Negotiation, Bomb Squad, Emergency Service, Crime Scene, etc. -- will demonstrate elevated need for "autonomy," "control," and "task discretion" relative to non-specialists.

4. Law enforcement officers in a risk-related specialty -- e.g. bomb squad, will be of two types: Type A -- those who engage in dangerous leisure-time activities will show an exaggerated profile similar to other non-specialists who engage in reckless hobbies, i.e., high "control" and "thrill-seeking," low "gambling" and "learned helplessness;" Type B -- those who engage in tamer leisure activities will display a profile not distinguishable from other non-risk-related specialists, i.e., high in "control", "autonomy", and "task discretion."

5. Specialists with dangerous hobbies will be uniquely general.
high in "control," being at the intersection of two trait clusters. Analogously, generalists with safe hobbies will be particularly low in "control."
CHAPTER III

REVIEW OF THE LITERATURE

Miller and Form (1951) argued that the deciding factor in the determination of occupational choice was an accident. The accident is the consequence of birth which establishes family, race, nationality, social class, residential district, educational and cultural opportunity. Super (1963) stated that most men have established their individual occupational pattern by the age of 35. Super's vocational self-concept theory assumes that basic development of the self-concept occurs in childhood through the identification with a parental figure; that adolescence provides a time of exploratory experiences in which the self-concept is expanded and clarified, and that interests, values, and abilities are integrated and attain vocational significance through the development and reality-testing of the self-concept. In choosing an occupational preference, the individual identifies the kind of person he is. The occupation makes possible the playing of a role appropriate to the self-concept.

Super (1957), in an article on vocational development, presented the following "Vocational Life Stages":

1. Growth Stage (Birth—14). Self-concept develops through identification with key figures in family and in school; needs and fantasy are dominant early in this stage; interest and capacity become more important in this stage with
increasing social participation and reality-testing.

2. Exploration Stage (Age 15-24). Self-examination, role tryouts, and occupational exploration take place in school, leisure activities, and part-time work.

3. Establishment Stage (Age 25-44). Having found an appropriate field, effort is put forth to make a permanent place in it. There may be some trial early in this stage, with consequent shifting, but establishment may begin without trial, especially in the professions.

4. Maintenance Stage (Age 45-64). Having made a place in the world of work, the concern is now to hold it. Little new ground is broken, but there is continuation along established lines.

5. Decline Stage (Age 65 on). As physical and mental powers decline, work activity changes and in due course ceases. New roles must be developed; first that of selective participant and then that of observer rather than participant.

Unlike Super’s model of stage-related development, Holland’s (1966; 1973) offers a different view, arguing for a theory of careers using a congruity model, stating that job satisfaction is most likely to be found in work situations in which the personality characteristics of the individual are congruent with the characteristics of the work environment. Essentially there are six broad personality types:

The Realistic Type—Has preference for activities which involve an ordered and systematic manipulation of objects, tools, machines and animals. This type tends to acquire skills of manual, electrical, mechanical, agricultural and technical nature. They usually do not develop high competency in educational and social areas of skill.

The Investigative Type—Has preferences for activities that concern observational, systematic, symbolic and creative undertakings often in the areas of science and culture. These preferences often lead the individual to develop high competence in science and mathematics, and to have lower competencies in social and persuasive areas.
The Artistic Type—Has preference for ambiguous, free, unsystematic activities which involve the manipulation of words, pictorial, musical, or physical things in order to create art forms. These preferences lead to the development of competencies in music, art, drama, language and writing, and to a deficit in clerical or business systems competencies.

The Social Type—Has preference for activities which involve interacting with others in order to train, develop, cure or enlighten. These preferences lead to the development of human relations competencies and to a deficit in manual and technical competencies.

The Enterprising Type—Has preferences for activities that involve the manipulation of others to achieve organizational objectives or economic gain. Tends to have competencies in interpersonal, persuasive and leadership behaviors, and a deficit in scientific competencies.

The Conventional Type—Has preference for activities that are ordered and systematic and involve the keeping of data or records, organizing materials, operating business machines and data processing. Tends to have high competencies in clerical, computational and business systems areas. Tends to have little artistic competence.

Holland’s Theory of Careers is a model that defines job satisfaction in terms of the extent to which a work situation has within it, opportunities and requirements that fulfill the psychological needs of the worker. Roe, too, sees a correlation between individual needs and choice of occupation.

Roe (1956) stated "that in order to understand the role of the occupation in the life of the individual we must first have some understanding of the individual and of his needs. The concept of economic man has proved totally inadequate to explain why men work as they do, or what it is that they are working for. "That men work just to make a living is obviously not true." Feelings of personal esteem are closely
linked to the amount of responsibility a job entails. It may be that occupations have become so important in our culture just because so many other needs are so well satisfied by themselves. Roe in discussing the "Genesis of Interest," stated that the forms in which drives find their first satisfactions will later be expressed as dominant interests; drives which are most effectively frustrated will be the ones which will later become dominant motivators. This proposition implies that long or severe frustration ending in satisfaction will have more impact.

Further, Maslow's Theory of Motivation (1943) states that when man's physiological needs are satisfied and he is no longer fearful about his physical welfare, his social needs become dominant. Love, affection and belongingness become a new center of attention. He will hunger for affectionate relations with people and will want to win acceptance in the groups he considers important. Unlike the lower needs, these needs are rarely satisfied. Once they have become important to the individual, they provide an indefinite basis for motivational drive.

Niederhoffer (1967) examined the results of 1200 background investigations of men who graduated from the New York City Police Academy and found that 85% of the fathers were employed in occupations classified as "working class," an
occupational status similar to that of a police officer.

In his research, Katzell (1964) stated that the values in occupational choice which are originally most intense are related to survival and security, while those which are originally least intense have to do with esteem and self actualization. Niederhoffer (1967) found that 68% of the police rookies cited financial security as their primary reason for entering police work. Becker (1964) argued that the individual adjusts to the occupation as he interacts with his occupational peers and responds to institutional expectations and the day-to-day job to be done. As a result of this process, the individual comes to experience a greater or lesser congruence with the characteristics of his occupational group which is manifested, in part, by the extent to which he is involved with his work.

Becker identified three modal responses: situational adjustment, resistance to adjustment, and commitment. Situational adjustment is explained in terms of movement through various institutions and learning what is required to continue in each situation. If an individual has a strong desire to continue in a situation, the ability to assess accurately what is required, and can deliver the required performance, then "he turns himself into the kind of person the situation demands" (Becker, 1964). Viewing situational
adjustment as an explanation of part of the process of personal adjustment leads to the consideration of the nature of the situation to explain why an individual adjusts as he does. According to Becker, the situational context, rather than the inherent personality characteristics of the individual, is the stronger determinant of behavior and attitudes. The important factor in situational adjustment is that the individual wants to continue in the occupation.

Thus, if the individual resists appropriate adjustment to the situational demands it indicates:

1) a corresponding weakness in the desire to remain in the situation;

2) a determination to remain in the situation only on the individual’s own terms;

3) a determination to remain in the situation only for as long as the individual can get what he wants out of it.

The committed individual tends to be more consistent in response to various situations in the course of his career, which is an indication of a greater degree of occupational identification that results from this consistent process of socialization. If the "situational context" can be represented by the social system itself, then Becker and Niederhoffer agree.
Niederhoffer (1967) stated that it is the police system rather than the personality of the police candidate that is determinant of the behavior and ideology of police officers. The training period experienced by the police recruit is referred to by Niederhoffer in Goffman's terms as a time of "stripping" and "mortification" by a "total institution." The intended effect is to reduce the influence of the individual's past on his present, and the process continues in later years as a latent function of occupational socialization. This point of view is clearly in agreement with Becker's position, but in disagreement with the findings of Rokeach, Miller and Snyder (1971) who argued that police officers are self-selectively recruited as a function of personality predisposition.

Modification of needs was noted by Sterling (1972) when he studied the personality changes of police officers in four cities and discovered that:

As the subjects completed the highly structured classroom situation and later moved to confront the uncertainties of the street environment, one would expect significant changes in the hierarchy of personality needs from what they were at the time of entry into recruit training. After eighteen (18) months of enacting the patrolman's role, the subjects' scores indicated higher needs in autonomy, aggression and affiliation, abasement and nurturance. The higher scores on autonomy and aggression, when combined with the lower scores on deference and abasement, suggest that the general conformity and dependency which characterized the subjects at the start of recruit school has diminished. The subjects' personality needs have shifted toward a more active, assertive and self-directing orientation. The decrease in the score for nurturance suggests that the need to help others and treat them with sympathy has also diminished since the start of
recruit school. Thus, it can be inferred from the changes in personality need scores that the subjects' general orientation toward people might be more conflict-producing than it was at the time they originally entered law enforcement.

This observation suggests that the "working personalities" of the police officers develop from the social-psychological processes of police-citizen interaction. Task-related values, attitudes and behavior are occupationally derived or created out of specialized roles rather than being primarily caused by the selection factors of background or personality. (Skolnick, 1967) Skolnick argues that in order to protect themselves physically, as well as mentally and organizationally, police officers develop an occupational cognitive suspiciousness. This suspiciousness and the countering reaction of citizens give rise to feelings of isolation and social distance. In turn, these feelings allow the policeman to carry out his job without causing him undue emotional or cognitive strain, leading police officers to have a preoccupation with danger and the creation of cognitive beliefs which substantiate the legitimacy of their work and positive self-images.

In reference to this preoccupation with danger in life-threatening contexts, James Webb wrote in his novel "Fields of Fire",

"They ran wildly toward Hodges and the others. Closer, closer they came, and Hodges felt a joy and anticipation so hard to contain that he found himself bobbing up and down
inside the trench where he hid.... A rush that resembled passion crept from the insides of his guts and somehow drew the skin from every part of his body toward that center of his joy and fear, so tight that when he smiled it made his cheeks burn..."

In addition to Skolnick, Marvin Zuckerman (1964) developer of the "Sensation Seeking Scale," found that voluntary risk takers are primarily attempting to overcome boredom and social alienation through life-threatening activities. These activities provide control, concentration, calm, camaraderie, and character experiences for the risk takers. Danger is simply the ultimate test of their ability to prevail over the loss of control or chaos.

Stress-seeking was noted by Klausner (1968) who viewed it as a way to fulfill a need for arousal; as a way to develop capacities for competent control over environmental objects as a form of tension-reduction behavior with addictive qualities related to the buildup of intoxicating stress hormones. (Delk, 1980).

Stephen Lyng (1990) introduced a new classifying concept "edgework" based on numerous themes emerging from primary and secondary data on risk taking and explained "edgework" in terms of the newly emerging social psychological synthesis of the Marxian and Meadian frameworks. The Marx and Mead synthesis he offers as a framework for tracing the connection
between various aspects of risk-taking behavior and the structural characteristics of modern American society.

Lyng argues that:

what is missing from the literature is an explanation of risk-taking behavior that focuses on the relationship between relevant psychological factors and the broader social historical context in which risk taking occurs.

At issue here is the seemingly irreconcilable nature of studies that focus on the psychological or interactional dimensions of a phenomenon and of those that examine the influence of macro-level social structural factors, a problem that has recently become the subject of much discussion in sociology (Alexander et al. 1987; Coleman 1985; Knorr-Cetina and Cicourel 1981; Giddens 1984).

Participants in all types of "edgework" claim that the experience produces a sense of "self-realization," or "self-determination" and that these participants have a high regard for their own abilities to deal with danger but a low regard for the abilities of those outside the risk-taking circles. They do not place much value in gambling but have a high regard for skill, technique and control; spontaneity and impulse predominate voluntary risk-taking.

Lyng's "Marx/Mead synthesis" suggests that the opposition between spontaneity and constraint is the basic tension confronting members of postindustrial society. Mead's concepts of spontaneity and constraint are developed in the formation of the "I" and the "Me" interactions. The "me," is the constrained dimension of the self, involving the organized
set of attitudes of others which one himself assumes; the "I" refers to the actual response of the individual to the immediacy of the present moment. The ego fails to fully develop because of this constant tension between the "I" and the "me" and produces a response of "oversocialization," a process in which the social world has become so reified that it becomes completely opaque to individual understanding and action.

For the voluntary risk-taker or edgeworker, success in negotiating the boundaries or the edge of controlled risk is in a large part chance-determined. Edgeworkers are convinced that their behavior is not chance but skill-determined, controlling the seemingly uncontrollable. Age and sex play important roles in risk-taking behavior, with younger people as opposed to older people and male as opposed to female. Lyng explains that males are more likely than females to have an illusory sense of control over fateful endeavors because of the socialization pressures on the males to develop a skill orientation toward their environment. Males are encouraged to use their skills to effect the outcome of all situations; even those situations that are almost entirely chance determined, males are likely to develop a distorted sense of their ability to control fateful circumstances (Deaux and Emswiller, 1974).

Unlike chance-controlled situations, edgework is one of
the few experiences in modern life where "success" (survival) can be unambiguously attributed to individual skill. "Crowding the edge" is regarded as empirical proof that one possesses the essential survival instinct, as Tom Wolfe (1979) would say the "Right Stuff."

Control was stressed by Langer (1975), who states that the illusion of control may be the inverse of "learned helplessness" -- the perception of independence between actions and outcomes. It is the belief that one cannot influence the production of positive events. The element of learned helplessness is a direct consequence of oversocialization, the coercive power over behavior, which gives little sense to individual authorship of one's actions. The first challenge in risk-taking behavior is to negotiate one's way past hazards that can be anticipated; however, the ultimate challenge is to survive those hazards that cannot be anticipated.

Lyng also states: "that it appears that lower-income edgeworkers tend to gravitate toward more financially accessible activities such as high-risk subcultures ("biker" groups, "survivalists," etc.) or they completely reject highly alienating factory or service work in favor of high-risk occupations such as police work, fire fighting, or combat soldiering." (emphasis added)

Lyng reminds us that the assumption that blue-collar workers experience high levels of alienation while white
collar workers do not is being abandoned by sociologists of work and occupations in favor of an approach that divides the labor force into primary and secondary sectors, the distinction of income and degree of control that workers have over the conditions of their labor being the determining factors.

Risk-takers confronted with life-and-death situations often must respond immediately to save themselves; they must respond instinctively rather than rely on the reflective process of the over-socialized "me." The "I" must act spontaneously and creatively because the "voice of society" ceases to speak, and the edgewoker is left with his residual self. The experience of self in risk-taking is the direct opposite of the conditions of "over-socialization," alienation and reification. Lyng argues that the experience of self involves the feelings of self-determination and self-actualization. Risk-takers experience a sense of direct control or personal authorship in their actions, when their behavior is not coerced by the normative or structural constraints of their social environment.

Lyng argues that "control," "thrill seeking," "gambling," "learned helplessness," "autonomy," "discretion," and "alienation" are personality characteristics or traits of voluntary risk takers that somehow interact to explain risk
taking as a result of "over-socialization" and frustrated attempts at "self actualization."

In his summary and conclusions, Lyng calls for future empirical analyses in this area of research relating to the institutional circumstances (especially in the domain of work) of edgework enthusiasts—in particular, data that measure the degree to which alienation and oversocialization characterize the institutional routines of those who value the edgework experience. This experience of "living on the edge" is given by Bouza.

Anthony Bouza (Police Mystique, 1990, p.71) stated that:

Cops either possess or develop, as a result of role assignment (a not-to-be-underrated force), the courage to risk physical harm. They learn how to cope with moments of sheer terror that create urges in the rest of us to flee for our lives. Cops are physically brave and live with the absolute certainty that this is the prime value of their existence. Coward is such a powerful epithet that, even in a profession accustomed to the rawest language, it is a word that is used very sparingly.

Bouza also stated (Police Mystique, 1990, p.66):

Some cops, though, adopt the media's image and act out the impulses of such avenging angels as Clint Eastwood's "Dirty Harry" or Charles Bronson's character in Death Wish. The simplistic, idealistic view offered by these dispensers of perfect justice proves irresistibly tempting to some cops. The result are very often tragic, either for the cops or for their targets. Controlling these would-be heros may very possibly be a chief's greatest challenge.
RISK TAKING

Baron, Dion, and Miller (1971) found group consensus and cultural values to be determinants of "risk-taking" insofar as they support the cultural-value explanation of locus of control. The link between locus of control and risk taking is seen by Nowicki-Strickland (1972) to be consistent with social learning theory in the selected areas. Rotter (1966) found that:

"when a reinforcement is perceived by the person 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, as under the control of powerful others or as unpredictable because of the great complexity of forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this belief in external control. If the person perceives that the event is contingent upon his own behavior on his relatively permanent characteristics we have termed this a belief in internal control."

Rotter (1972) also found that "in many instances one's true or internal beliefs will correlate with socially approved beliefs since what one believes to be true may well be a reflection of what others believe to be true." Rotter discovered that individuals inclined to see themselves as determiners of their own fate, they tend to commit themselves to personal and decisive action and the "need-for-approval" motive which showed weak tends across the degree of social action, with the higher-need-for-approval subjects less likely to verbalize willingness to become involved.
Locus of control (external control or internal control) has been argued to be a major variable in behavior theory and there is a natural conceptual link between locus of control and risk taking behavior. In task situations characterized by uncertain outcomes with different probabilities of occurrence, an individual's beliefs about control over outcomes could be expected to affect the subjective probabilities he attaches to various outcomes taking place.

Risk-taking as a context-dependent behavior versus personality trait has received an extensive experimental and theoretical treatment (Cohen, 1960; Kogan & Wallach, 1964; Musolino & Hershenson, 1977). Risky actions may reflect either a spontaneous action carried out by an individual without previous consideration or planning or a steady inclination on the part of an individual to undertake roles in which the probability to remain safe and healthy is relatively low. Risk-takers have several central characteristics according to Keinan, Meir & Gome-Nemirovsky (1984):

1. Sensation seeking -- The risk-taker is a person who needs stimulation and seeks change, novelty and adventure (Zuckerman, Albright, Marks, & Miller, 1962).

2. Activity level -- The risk-taker is characterized by high activity level, energy and dynamism (Torrance & Ziller, 1957).
3. Self control — The risk-taker often has difficulty in restraining his drives and is prone to act on impulse (Dicinson, 1953).

4. Independence — The risk-taker tends to exhibit a high degree of independence in his thinking and actions (Torrance & Ziller, 1957). He seldom finds himself in need of advice or support and believes that he can successfully solve problems on his own.

5. Adaption to norms—personal freedom — The risk-taker struggles against norms or rules that impinge on his personal freedom. He resists authority and avoids supervision of other peoples' activities, since these restrict his freedom (Zuckerman, Kolin, Price, & Zoob, 1964; Zuckerman & Link, 1968).

6. Time perspective — The risk-taker tends to refrain from long-term planning. He prefers to act according to the prevailing situational demands with the limitations of previous commitments and undertakings (Meir & Keinan, 1980).

High-risk activities are those which occur in or create an environment hostile to the participant, in the restricted sense that it is not supportive of human life so that without proper equipment, technique, and training, the participant could not survive exposure to this hostile environment. Through skilled and knowledgeable use of equipment and technique, and through constant vigilance, the participant is
able to, in some measure, control the environment's hostility and attempt to achieve a preconceived purpose. The environment, of course, remains hostile so that any significant loss of control is certain to result in severe injury or death.

This loss of control may occur in four areas: equipment failure, failure of technique, personal failure, or environmental failure. Personal control of risk is a prerequisite for high risk activity. As the British writer and rock climber Alvarez (1967) has said, "The fascination for me is keeping the risk in complete control." High-risk activities have little in common with gambling or daredevilry. The latter Alvarez refers to as a form of exhibitionism, "a vulgarity to one's self."

Leisure-time risk-taking activities are generally undertaken under careful control, so their risk should remain quite low, while paradoxically, their apparent risk is high; this contradiction is precisely what confounds the general public. It is characteristic of all high-risk activities that their riskiness is highly visible and has a high (life-death) value, but that their actual risk, when properly conducted, is kept comparatively low; that is, they have a high perceived risk and a low actual risk. The point is not that the person is somehow tricked into perceiving risk where there is none.
The risk is, in fact, real; it is the environment that is hostile. It is rather that the person is placed in a difficult situation in which the actual risk depends to some extent on his or her own actions as well as on those of others and on the integrity of equipment, skills, and technique; in addition, this situation has immeasurable potential for self-discovery, self-realization, and personal growth.

Mihaly Csikszentihalyi (1990) in his book *Flow — The Psychology of Optimal Experience* states that "the best moments usually occur when a person's body or mind is stretched to its limits in a voluntary effort to accomplish something difficult or worthwhile. Csikszentihalyi (1990), speaking about the paradox of control, stated that" the flow experience is typically described as involving a sense of control—or, more precisely, as lacking the sense of worry about losing control that is typical in many situations of normal life." He continued stating that:

this sense of control is also reported in enjoyable activities that involve serious risks, activities that to an outsider would seem to be much more potentially dangerous that the affairs of normal life. People who practice hang gliding, spelunking, rock climbing, race-car driving, deep-sea diving, and many similar sports for fun are purposefully placing themselves in situations that lack the safety nets of civilized life. Yet all these individuals report flow experiences in which a heightened sense of control plays an important part.

Ralph Keyes (1985) in his book *Chancing It — Why We Take Risks*, in speaking about a taste for danger, stated that:
We forget that although fear begins as a negative sensation, once endured it can be something quite different: exhilaration, arousal, and a source of camaraderie when shared with others. This is why survivors of what appear to be awful experiences -- floods, hurricanes, plane hijackings -- so typically describe their ordeals in the most glowing terms and schedule reunions to relive them.

Keyes concluded that:

Ecstasy may just be nature's common reward for behavior she most wishes to encourage: making babies, and taking risks.

Keyes also argues that a great value of fear, is the way it makes people need each other, what psychologists call fear affiliation. "One reason that a sense of community has become such a rare commodity in contemporary life is simply that the decline of immediate hazards has reduced our need for each other." Keyes reports that the most important trait that predicts risk-taking is what the psychologist refers to as an "action tendency." This can be seen in London's work.

Perry London (1970) studied a group of twenty-seven Christians who helped rescue Jews during World War II and found that the only characteristic that united this group was their love of daring.

In fact, London stated:

almost all the rescuers interviewed regardless of where they came from and what they did to fall into our sample, seemed to possess a fondness for adventure. They had not only a desire to help, but also a desire to participate in what were inherently exciting activities. For example, we interviewed a man from the Netherlands who
responded to a question about his recreational hobby — racing motorcycles, especially over narrow boards on top of deep ditches. His work as a rescuer in the Dutch underground was a fairly tame job, but he and his friends had a sort of extracurricular hobby of putting sugar in the gas tanks of German army trucks. This was not part of any organized sabotage, just something they did for fun.

Jessie Bernard (1968) in a paper entitled "The Eudaemonists," used Nietzsche's categories of Dionysianism and Apollonianism to catalogue two aspects of human nature: the one irrational, lusting for life, conquest, drunkenness, and mystic ecstasy; the other rational, seeking peace, harmony, balance, and self-restraint. Dionysus was the Greek god of chaos and destruction and Apollo was the god of light, beauty, and harmony. Bernard identified Dionysianism with what she call eudaemonism, characterizing a person searching for pleasure in the form of eustress or pleasant stress, as that associated with excitement, adventure, and thrilling experience. High risk activities she would consider to be eudaemonistic, eustressful, and Dionysian. The converse than is Apollianism, characterizing a person with dys-stress or unpleasant stress as that associated with duties and responsibilities (puritanism or protestant ethic). Bernard argued that society is Apollian in nature and discourages overt Dionysian expression, thereby discouraging eudaemonism and the pursuit of eustress. The problem then is to find appropriate outlets in society for eudaemonism and the Dionysian spirit.
Elias and Dunning (1970) spoke about a "mimetic" class of leisure activities which they felt produced an outlet for contemporary society, providing spontaneous and elementary excitement in juxtaposition to a dominant social code or moral and emotional restraint. Elias and Dunning describe the pursuit of such activities not as a quest for release from emotional tension but rather a quest for a specific kind of tension, an exciting kind connected with fear, sadness, and other emotions we usually try to avoid. The result of the quest was what they called a protracted climax: rising tension gives way through a climax to a form of tension-resolution. The pleasure associated with this experience is similar to what is described as "Aristotelian catharsis".

Zuckerman, Kolin, Price and Zoob's (1964) Sensation Seeking Scale is based on an assumption that people differ reliably in their preference for or aversion to arousing stimuli. Generally, those who score high on sensation-seeking are more restless when confined to monotonous situations (Zuckerman, Persky, Hopkins, Murtaugh, Basu & Schilling, 1966). Zuckerman argues for a bio-chemical basis for the preference or aversion to risk taking attributed to the positive correlation of testosterone levels with sensation seeking for males. In fact, sensation-seeking peaks in the late teens and early twenties and continues to decline with
Sensation-seeking studies have identified four factors:

1. Thrill and Adventure Seeking (TAS): a desire to seek sensation through physically risky activities that provide unusual sensations and novel experiences, e.g. parachuting and scuba diving.

2. Experience Seeking (ES): a desire to seek sensation through a non-conforming lifestyle, e.g. travel, music, art, drugs, and unconventional friends.

3. Disinhibition (DIS): a desire to seek sensation through social stimulation, e.g. parties, social drinking, and a variety of sex partners.

4. Boredom Susceptibility (BS): an aversion to boredom produced by unchanging conditions or persons and a great restlessness when things are the same for any period of time. (Zuckerman, 1988)

Zbigniew Zaleski (Polish Psychological Bulletin, 1980) presented findings of a study conducted to identify the personality traits in high and low risk takers according to R.B. Cattell’s 16 Factor Questionnaire”, the identical questionnaire used in this study, and found in women high risk-takers, in comparison with low risk takers, obtained significantly higher results on factors E (dominant, assertive, aggressive, stubborn, competitive, bossy), H (bold,
venturesome, uninhibited, can take stress), I (tender-minded, sensitive, over-protected, intuitive, refined), and M (imaginative, absent-minded, absorbed in thought, impractical), and almost significantly lower results in the factor L (trusting, accepting conditions, easy to get on with). In men, high risk takers, in comparison with low risk takers, obtained significantly higher results on factors E (dominant, assertive, aggressive, stubborn, competitive, bossy), H (bold, venturesome, uninhibited, can take stress), and almost significantly higher results on factors A (warm, outgoing, kindly, easygoing, participating, likes people) and B (abstract-thinking, more intelligent, bright).

Fenz and Epstein (1969) investigated the relationship between psychological and physiological variables in an examination of the approach-avoidance conflict found among people involved in skydiving. Their investigation indicated that jump experiences significantly reduced anxiety and that control of the stressful aspects of jumping was mediated by an unconscious denial or an emotional displacement.

Bruce C. Ogilvie (1973), in an article titled "The Stimulus Addicts," argued that in spite of reliable data, there have been a number of psychological and psychiatric hypotheses positing a negative or pathological basis for risk-taking behavior:
1. Counter-phobic reactions in which the individual continually exposes himself to situations that provoke, at an unconscious level, the greatest psychological or physical fears.

2. Fear displacement, in which the fear-provoking object or situation is denied by redirecting behavior toward less threatening objects or situations.

3. Dangerous behavior which is manifestation of unconscious feelings of inadequacy, disguised or blocked from awareness by acting at a conscious level in some super-masculine overt form.

4. The psychopathic personality acting out a dangerous activity. This is seen as a reflection of basically immature, shallow contact with reality.

5. Trying to prove omnipotence, superiority, sexual adequacy, or masculinity.

6. The unconscious death wish, perhaps the most frequently reported causal factor, in which a constant flirtation with danger is interpreted as a means of seeking temporary relief from unconscious impulses.

Ogilvie continued stating:

"All these explanations can be validated. Clinical experience at every level of sport, from Pop Warner football to the Olympics and to professional sports, has provided support for each during the last two decades. It would be wrong, however, to say that any one or any interaction of these syndromes represents a general cause of dangerous behavior."

Gideon Aran (1972) studied the unusual social aspects of parachuting and challenged the hedonistic and equilibrium models which tend to view men as beings who seek pleasure and routine while trying to avoid states of emotional arousal in general and of fear and stress in particular. Aran argued that the example of the enthusiastic jumpers challenged this popular belief; "they loved thrilling action and actively seek it." Aran continued to assert that "an integral part of
parachuting in general and of military parachuting in particular is an elaborate ritual that starts with the preparations on the ground and reaches its climax in the air before the exit." Continuing, he said, "It is an intricate series of detailed and highly standardized actions, the significance of which goes far beyond its obvious strict instrumental value." Aran observed that the common pool of responsibility and trust is created, dramatizing critical interdependence and enhancing group solidarity. Social cohesion is further enhanced while individuality disappears, similar to Durkheim's concept of mechanical solidarity.

Basowitz, et al. (1955), also studied the stress in airborne training and found that the amount of anxiety is relative to group bonds and their effectiveness. As long as the group was cohesive, not only was little anxiety expressed but the locus of anxiety was found not in the impending physical danger but in the possibility of not measuring up to internalized ideals or external expectations.

This group cohesiveness was demonstrated in a study of military bomb disposal personnel by Rachman, 1984, who found that the regular practice of courageous behavior leads first to a palpable decrease in fear and then finally to a state of fearlessness. Courageous behavior is an uncoupling of the components of fear, in which the person's manifest behavior
advances beyond his subjective discomfort (in the presence of danger). Dangerous situations become less dangerous in the mind or in the attitudes of the experienced bomb technician. Studies have demonstrated that the decorated senior bomb technicians maintain a lower cardiac rate while making difficult discriminations under the threat of shock than other, non-decorated senior bomb technicians. (Cox, Rachman, Hallam, and O'Connor, 1983) Therefore, bureaucratic recognition and regard for courageous behavior may actually play a role in the visceral response of a bomb technician to danger by confirming his deeply felt convictions about himself and his professional identity.

There is clear evidence that the effects of training substantially increase the skill and confidence of those who have completed specialized training (Rachman, 1983). The value of the course is illustrated by the finding that after its completion, rookies (i.e., those who had not yet carried out a tour of duty as a bomb technician) expressed as much confidence as experienced bomb technicians. Training succeeded in taking them 80% of the way toward that desirable combination of confidence and competence that makes a successful bomb technician. The process of adaption was accelerated once the bomb technician successfully carried out his first operation on a genuinely dangerous device. Experience in dealing with hoaxes or false alarms made no
measurable contribution to their confidence or competence. However, once the inexperienced bomb technician successfully completed one real bomb-disposal task, his confidence and feelings of competence rose close to the level of the more experienced personnel. (Rachman, 1984)

Cullen, Link, Travis, and Lemming (1983) studied the general police population perceptions of danger and noted in particular that it appeared that police officers perceive their work to be both safe and unsafe and that such perceptions are both functional and dysfunctional. It is further argued that these features are largely integral to the occupational role of the police officer and thus are not readily amenable to alteration.

The image of crime control as dangerous and stressful is one of the key images used by police officers to order, and give meaning to, the other job roles expected of them. The public association of police work with crime and danger also makes the notion of crime control suitable for establishing a social mandate and professional stature for police work. (Terry, 1985) Terry further argued that the professionalization strategy of the police, the use of police stress and dangerousness is a means of gaining external occupational legitimacy and prestige, as well as a means of bringing coherence to a number of internal conceptions
surrounding police tasks and role expectations. By dovetailing the idea of dangerousness with the ideal of personal dedication and service to others, the notion of police stress gives to the police occupation the ideological coherence needed for professional status and recognition.
CHAPTER IV

RESEARCH DESIGN

This study sampled approximately 400 law enforcement officers (during required in-service training sessions) with a "questionnaire" designed to evaluate how they occupy themselves in free or leisure time, and with the "16 PF," a personality-factor test.

Universe

The universe for the study was formed by three law enforcement "in-service" training areas in the United States. The first was the New York Metropolitan Area, which is rich in law enforcement agencies; sampling was done at in-service training programs being conducted by the New York City Police Academy and the New York and New Jersey Port Authority Police Academy; the second area was the Illinois State-Wide Law Enforcement Assist Training Projects; and the third area, the Federal Bureau of Investigation managed Hazardous Devices School, Redstone, Alabama, the only certified bomb technician training program in the United States. Training coordinators at these facilities were solicited to be test proctors.
The questionnaire is designed to collect biographical information about the subjects and to provide a list of "leisure time" activities in alphabetical order, with a frequency scale response grid. The activities and frequencies were numerically weighted to score for a risk-taker/non risk-taker scale designation of each subject.

The activities were arranged in alphabetical order in an attempt to mask the risk-taking activities evaluation. The activities listed include all popular leisure-time activities that have been identified by the insurance industry to which is attached an additional insurance premium. (The New England Underwriting Guide, 1989) The questionnaire also included questions that evaluate occupational autonomy and discretion, and what other occupational interests the law enforcement officers would have if they were to leave police work. A fantasy leisure time question was presented last to elicit responses that are not dependent on the availability of free time or money. Each questionnaire was assigned a control number that was also recorded on the machine-scorable answer sheet for the 16 PF test. This research design guaranteed that the actual identities of the participants were unknown and also that accurate comparisons between the leisure time questionnaire and the 16 PF test could be made together.
Along with the questionnaire, the law enforcement officers were also requested to complete the "16 PF" personality factor test. The Cattell's Sixteen Personality Factor Questionnaire was chosen because it has been in use for over forty (40) years internationally and is one of the most widely accepted, reliable, and valid personality-assessment tools available. The 16 PF machine-scoreable answer sheets were processed by the Institute For Personality and Ability Testing, Inc., Champaign, Illinois which provided a single page report, consisting of eighteen (18) Sten scores (raw, corrected and uncorrected), five (5) second-order factors scores and three (3) composite scores for each participant.

The 16 PF, Form A, 1967-68 Edition R, contains 187 questions and is scored in terms of sixteen (16) bipolar dimensions, or primary source traits; a host of additional second-order factors can also be derived.

The test offers two important additional features: (1) a random responding scale which can be used to detect persons who are confused or randomly answering questions; and (2), a motivational distortion scale which can be employed to detect persons who are either faking "good" or faking "bad." Finally, it can be read by someone with as little as a third-grade education. This instrument can be completed within forty-five (45) minutes, an important feature to be considered when subjects are being asked to voluntarily participate.
By segmenting the sixteen (16) scales into standard ten (STEN) scores, the Cattell model allows psychological description of more than ten (10) quadrillion personality categories simply by learning the meanings and relationships of the scales. The sixteen (16) primary source traits are:

**LOW STEN SCORE**  
(1 - 3)

Cool, reserved, impersonal, detached, formal, aloof

Concrete-thinking, less intelligent, Lower scholastic mental capacity

Affected by feelings, emotionally less stable, easily annoyed  
Lower ego strength

Submissive  
Humble, mild, easily led, docile, accommodating,  
Submissiveness

Sober, taciturn, prudent, restrained, serious,  
Desurgency

Expedient, disregards rules, self-indulgent,  
Weaker superego strength

Shy, timid, threat-sensitive, hesitant, intimidated

**HIGH STEN SCORE**  
(8 - 10)

Warm, outgoing, kindly, easygoing, participating, likes people

Abstract-thinking, more intelligent, bright, Higher scholastic mental capacity

Emotionally stable, mature, faces reality, calm  
Higher ego strength

Dominant  
Assertive, aggressive, competitive, stubborn, bossy,  
Dominance

Enthusiastic, spontaneous, heedless, expressive, cheerful,  
Surgency

Conscientious, conforming, moralistic, staid, rule-bound,  
Stronger superego strength

Venturesome, uninhibited, socially bold, can take stress
Tough-minded, self-reliant, realistic, no-nonsense, rough

Tender-minded, sensitive, overprotected, intuitive, refined

Trusting, accepting conditions, easy to get on with

Suspicious, hard to fool, distrustful, skeptical

Practical, "down-to-earth" issues, steady

Imaginative, bohemian, absent-minded, absorbed in thought, impractical

Forthright, unpretentious, genuine but socially clumsy, artless

Shrewd, polished, socially aware, diplomatic, calculating

Self-assured, secure, feels free of guilt, untroubled, self-satisfied, Untroubled adequacy

Apprehensive, self-blaming, guilt-prone, insecure, worrying, Guilt proneness

Conservative, respecting traditional ideas, Conservatism of temperament

Experimenting, liberal, free-thinking, critical, open to change, Radicalism

Group dependent, a joiner and sound follower, listens to others, Group adherence

Self-sufficient, resourceful, prefers own own decisions, Self-sufficiency

Undisciplined self-conflict, lax, follows own urges, careless of social rules, Low integration

Following self-image, socially precise, compulsive, following self-image, High self-concept control

Relaxed, tranquil, torpid, unfrustrated, composed, has low drive, unfrustrated,

Tense, frustrated, overwrought, has high drive,

Second-Order Factors provided, as described in the Cattell Handbook, include:

Extraversion -- The person who scores low tends to be shy, self-sufficient, and inhibited in interpersonal contacts.
Anxiety -- People who score low on this factor tend to be those whose lives are generally satisfying. The people who score high on this factor are high on anxiety as it is commonly understood.

Tough Poise -- People who score low on this factor tend to be strongly influenced by their emotions. People who score high on this factor are more influenced by facts than by feelings. They tend to be bold, hard people, decisive and enterprising, but often insensitive to other people.

Independence -- People who score low on this factor are group dependent, chastened, passive personalities. People who score high on this factor tend to be aggressive, independent, daring, incisive people.

Control -- People who score low on this factor typically do not act according to others' values or out of a sense of duty. People who score high on this factor typically have strong superego controls; that is, they have internalized the rules of the milieu in which they function.

Composite Scores provided, described in the Cattell Handbook, include:

Adjustment -- People who score low on this composite have traits that indicate the possibility of neurotic maladjustment. People who score high on this composite tend to be well adjusted.

Leadership -- People who get a low score on this composite tend to lack the attributes typically found in good leaders. People who get a high score on this composite tend to have the traits that are expected of leaders.

Creativity -- People who score low on this scale are tough-minded and practical. People who score high on this scale are imaginative and experimenting.

For a fuller description of the second-order factors and the composite scores please refer to Appendix A.
The 16 PF Questionnaire is based on more than forty (40) years of research and development and documented in over two thousand (2,000) books and journal articles. It has been revised, updated, and improved several times since it first appeared in 1949. More than 15,000 normal adults were tested during the most recent research standardizations. Yates (1970) stated "research with the 16 PF has generated an enormous number of empirical validity coefficients, both of the simple and multiple regression type, as well as a great deal of normative data for assessing profiles."

Interview with Staff Psychologist Mark Rieke, Institute For Personality and Ability Testing, Inc. revealed the 16 PF’s constructs can be "re-rotated" for regression comparison measurements with the personality factors described in the hypotheses of this study.

The responses to the leisure time questionnaire and the 16 PF single page reports were coded numerically and enter into a Dbase III plus file and then transported to SPSS and transformed into a system file.

DEFINITIONS

The sample was sorted into a number of dummy variables that characterized occupational status and leisure time
activities.

The responses to questions "Current Assignment" and "History of Special Assignment" were evaluated taking into consideration number of years in law enforcement and number of sworn officers in an attempt to classify the subjects in one of the following categories: Bomb=1, Hostage=2, SWAT (Special Weapons And Tactics)=3, Motorcycle=4, Investigator=5, Forensic Technician=6, Traffic Enforcement=7, Patrol=8, or Other=9.

Although one could argue that in general all law enforcement is dangerous, there are specific assignments within law enforcement that are considered the "most dangerous". After a close examination one will also discover that there are many non-dangerous assignments within the law enforcement profession.

This investigator made specific attempts to test significant numbers of both Bomb Technicians and Hostage Negotiators because the occupational philosophies of these two specialties are directly opposite. Hostage Negotiators are never to place themselves in physical risk or danger because that will compromise their ability to negotiate and may quickly change their status from negotiator to hostage; while bomb technicians are required to approach suspected explosive devices placing themselves in voluntary danger. These two
specialties appear to be classical examples of a "Non-Dangerous Specialty" and a "Dangerous Specialty".

Specialists (Specialt = 1)

This variable was created by combining the categories: Bomb, Hostage, SWAT, Motorcycle, Investigator, Forensic Technician, and Other. (N = 241)

Generalists (Specialt = 0)

This variable was created by combining the categories: Traffic Enforcement and Patrol. (N = 173)

Dangerous Specialties (SpecDan = 1)

This variable was created by combining the categories: Bomb, SWAT, and Motorcycle. (N = 136)

Non-Dangerous Specialties (SpecDan = 0)

This variable was created by combining the categories: Hostage, Investigator, Forensic Technician, and Other. (N = 105)
Dangerous Leisure Time Activities (Riskman=1)

This variable was created by combining positive responses to any of the following leisure time activities which were deemed risky:

Non-Dangerous Leisure Time Activities (Riskman = 0)

This variable was created by combining negative responses to the above listed leisure time activities. (N = 85)

Noxpense (Leisure Time Fantasy)

This variable was created to test the argument Lyng (1990) offered stating:

that it appears that lower-income edgeworkers tend to gravitate toward more financially accessible activities such as high-risk subcultures ("biker" groups, "survivalists," etc.) or they completely reject highly alienating factory or service work in favor of high-risk occupations such as police work, fire fighting, or combat soldiering.

In order to illicit responses that are not dependent on the availability of free time or money this last question on the Leisure Time Questionnaire was constructed:

****IF TIME AND MONEY WERE OF NO CONCERN TO YOU****
WHAT ACTIVITY WOULD YOU LIKE TO PARTICIPATE IN?
The responses to this question were categorized into Macho (N = 104) or No Macho (N = 260).

**Group 1 -- Dangerous Specialists/Non-Dangerous Leisure Time**

This variable was created by combining the following dummy variables:
Specialt = 1 and SpecDan = 1 and Riskman = 0.

**Group 2 -- Dangerous Specialists/Dangerous Leisure Time**

This variable was created by combining the following dummy variables:
Specialt = 1 and SpecDan = 1 and Riskman = 1.

**Group 3 -- Non-Dangerous Specialists/Dangerous Leisure Time**

This variable was created by combining the following dummy variables:
Specialt = 1 and SpecDan = 0 and Riskman = 1.

**Group 4 -- Non-Dangerous Specialists/Non-Dangerous Leisure Time**

This variable was created by combining the following dummy variables:
Specialt = 1 and SpecDan = 0 and Riskman = 0.
Group 5 — Generalists/Non-Dangerous Leisure Time

This variable was created by combining the following dummy variables:
Specialt = 0 and Riskman = 0.

Group 6 — Generalists/Dangerous Leisure Time

This variable was created by combining the following dummy variables:
Specialt = 0 and Riskman = 1.

Job Type 1 — Dangerous Specialists

This variable was created by combining the following dummy variables:
Group = 1 or Group = 2.

Job Type 2 — Non-Dangerous Specialists

This variable was created by combining the following dummy variables:
Group = 3 or Group = 4.

Job Type 3 — Generalists

This variable was created by combining the following dummy variables:
Group = 5 or Group = 6.
DATA ANALYSIS

Data from this study is analyzed by using a variety of multivariate procedures which will be explained in the Results section.

The following figures are offered as an investigative "road map" which assist in following the procedural route of the statistical data analysis.
Data Analysis Flow Chart I

Figure 4-1
Data Analysis Flow Chart II

Figure 4-2
Data Analysis Flow Chart III

Figure 4-3
Data Analysis Flow Chart IV

Generalists

Dangerous Leisure Time

Fantasy Non-Risk Taking

Fantasy Risk Taking

Non-Dangerous Leisure Time

Fantasy Non-Risk Taking

Fantasy Risk Taking

Figure 4-4
Data Analysis Flow Chart V

Dangerous Leisure Time

Law Enforcement Officers

Dangerous Leisure Time

Figure 4-5
Data Analysis Flow Chart VI

Three Group Manova

Job Types 1, 2, 3

Dangerous Specialists

Non-Dangerous Specialists

Generalists

Figure 4-6
Data Analysis Flow Chart VII
Six Group Manova
Groups 1 thru 6

Group 1
Dangerous Specialists
Safe Leisure
Time

Group 2
Dangerous Specialists
Dangerous Leisure
Time

Group 3
Non-Dangerous Specialists
Dangerous Leisure
Time

Group 4
Non-Dangerous Specialists
Safe Leisure
Time

Group 5
Generalists
Safe Leisure
Time

Group 6
Generalists
Dangerous Leisure
Time

Figure 4-7
The primary aim of this study is to identify and statistically examine the psychological and contextual determinants of risk-taking among law enforcement officers. This dissertation is conceptualized and predicated on a rather simple premise that risk-taking in one's leisure would have a dramatic and predominant influence on the grouping of subjects into definable personality trait categories. The suspicion regarding these categories was that subjects who engaged in risk-taking in their leisure time would be distinctively different from all other emerging groups with regard to the 16 PF Cattell factors. It was also suspected that this leisure time risk-taking group's personality profile would be split between a well adjusted group who would be high on control and independence traits and a less well adjusted group who would have a pathological or marginal personality trait profile.

This study was predominantly a psychological investigation not a study about the sociology of occupations but yet when a HIERARCHICAL CLUSTER ANALYSIS of six (6) subgroups mean scores on the 16 PF Cattell traits was performed the groups clustered not with regard to their leisure time activities as suspected but rather they clustered
with regard to the occupational specialties.

Group 1 = Dangerous Specialists/Non-Dangerous Leisure Time
Group 2 = Dangerous Specialists/Dangerous Leisure Time
Group 3 = Non-Dangerous Specialists/Dangerous Leisure Time
Group 4 = Non-Dangerous Specialists/Non-Dangerous Leisure Time
Group 5 = Generalists/Non-Dangerous Leisure Time

Table 5-1
Vertical Icicle Plot Using Average Linkage (Between Groups)

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</table>

(GROUPS ACROSS)

3 +XXXXXXXXX X X (CLUSTERS DOWN)
2 +XXXX XXXX X X
1 +XXXX X X X X
   X X X X X X

The first cluster (65-4-3-2-1) clustered the two generalist groups and left four specialty groups separate.

The second cluster (65-43-2-1) clustered the two generalist groups and the two non-dangerous specialty groups and left the two dangerous specialty groups separate.

The third cluster (6543-2-1) clustered the two generalist groups with the two non-dangerous specialty groups and left the two dangerous specialty groups separate.
The mystery that remains is why didn't the groups cluster (236) which would have been all of the leisure time risk-taking groups together?

FINDINGS AND DISCUSSION

The "Leisure Time Questionnaire" designed for this study provided the contextual variables and the "Cattell 16 PF Personality Test" provided the personality factor variables. Respondents' perceptions about occupational autonomy and discretion, occupational danger, and "fantasy activities" were solicited in the "Leisure Time Questionnaire". The use of dummy variables (RISKMAN, SPECIALT, SPECDAN, NOXPENSE, GROUP 1 to 6, and JOBSITE 1 to 3) constructed by grouping primary variables and dummy variables provided the comparative opportunity to examine statistically significant risk-taking influences.

General Characteristics of the Sample

In total, four hundred and fourteen (414) law enforcement officers' "Leisure Time Questionnaires" and "Cattell 16 PF Questionnaires" were analyzed. These subjects were from a total of one hundred and forty five (145) different law enforcement agencies from thirty three (33) different States
in the United States. Their ages ranged from twenty two (22) years old to sixty two (62) years old with a mean age of thirty nine (39) years old. Seventy nine per cent (79%) of the sample were currently married and involved in their first marriage with a mean score of 1.8 children. There were 399 males and 15 females with an educational range of "years completed" between ten (10) years and twenty two (22) years with a mean of 14.6 years completed. The size of the agencies (number of sworn officers) ranged from two (2) to thirty thousand (30,000) with a mean of 5,939; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,247. The number of years in law enforcement range between one (1) and thirty nine (39) years with a mean of 14.8 years. The number of work related injuries ranged between zero (0) and twenty (20) with a mean of 2.1. The number of agency medals or commendations ranged from zero (0) to ninety nine (99) with a mean of 6.6. Seventy seven per cent (77%) of the subjects did not smoke tobacco. For a similar breakdown of all the occupational groups and the risk-taking groups see Appendix B.

Two hundred and forty one (241) of the subjects occupational roles were categorized as a specialty and one hundred and seventy three (173) of the subjects were in general law enforcement roles or non-specialties. The specialists were further differentiated into Dangerous
Specialties, one hundred and thirty-six (136), and Non Dangerous Specialties, one hundred and five (105). Three hundred and thirty five (335) engaged in some risky leisure time activity, one hundred and ninety eight (198) were specialists and one hundred and twenty nine (129) of the specialists were in dangerous specialty assignments.

LAW ENFORCEMENT OFFICERS VERSUS THE GENERAL POPULATION

Before we examine our six subgroups of law enforcement officers we need to know more about law enforcement officers in general and how they compare against the general public with regard to the 16 PF Cattell personality factors. There is a common psychological consensus that a person's personality profile is well established by late adolescence. The academic debate between the sociologists and the psychologists about whether the individual's personality influences his or her occupational choice or the occupational choice influences the formation of an individual's personality has been well documented but unfortunately without conclusive opinion. Table (5-2) provides the results of a comparison of the general population group norm against the total law enforcement officer sample group norms of this study and the significance of their differences. This investigator was very strict when calculating the P values of this table, using only
the significant Tchebeschev (using $Z$ because of multiple variables, and $P$ values of less than .05, and $1$ over $Z$ squared as my measure of difference).

Table 5-2

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=} =Predict by Polish Study & |=Predict by McCarthy
} | =Predict by Both & BOLDFACE=Significant

The law enforcement officer sample differed significantly from the general population in fifteen of the twenty-six Cattell scores. The law enforcement officer sample fake bad less, are cooler, more abstract, more dominant, more
conscientious, more practical, more shrewd, more conservative, more self-sufficient, more self-disciplined, more poised, more independent, more controlled, higher in leadership, and higher in creativity than the general adult population.

Zbigniew Zaleski (Polish Psychological Bulletin, 1980) found that male high risk-takers, in comparison with male low risk-takers, obtained significantly higher results on factors E—Not Assertive/Dominant, H—Shy/Venturesome, and almost significantly higher results on factors A—Cool/Warm and B—Concrete/Abstract Thinking. All of these personality factors except factor H—Shy/Venturesome were significantly different in the law enforcement sample as compared to the general population, which would support the belief that law enforcement officers are higher in the risk-takers factors than the general population.

It is a widely held belief in the field of psychology that an individual's personality is well developed by adolescence, it would appear from the results of Table 5-2, that the law enforcement profession attracts a certain personality type for employment. Super's (1963) vocational self-concept theory would support this belief, which assumes that basic development on the self-concept occurs in childhood, and that occupational choice makes possible the
playing of a role appropriate to the self-concept. Holland (1966) has argued that job satisfaction is most likely to be found in work situations in which the personality characteristics of the individual are congruent with the characteristics of the occupational environment.

Sterling (1972) would argue that Table 5-2 confirms the establishment of a "working personality" type which has developed as a result of a social-psychological occupational process. Becker (1964) would agree with Sterling, insisting that if an individual has a strong desire to continue in an occupational situation, he will assess accurately what is required, and then turn himself into the kind of person the situation demands. The more committed an individual is to an occupational identity, the more consistent his behavior will be to the accepted occupational role. Niederhoffer (1967) would explain Table 5-2 as the product of the police system of "stripping" and "mortification", the reduction of individual influences by a total institution.

Since the Cattell personality factors are well established in individuals by adolescence, it would appear to me, that a certain personality type is attracted to the law enforcement profession, which allows and influences the manifestation of that self-concept, in acceptable occupational roles. Terry (1985) would further argue that the dovetailing of this risk-
taking personality with the notions of police dangerousness and personal dedication and service to others, combines the occupational personality and occupational role into a cohesive professional identity.

This dissertation hypothesized that the law enforcement sample would be different in factors H—Shy/Venturesome, O—Self-Assured/Self-Doubting, Second-Order Factors Independence and Control. All of these were significantly different in the law enforcement sample as compared to the general population except factor H—Shy/Venturesome, which was also cited in the Polish study.

It is important to note that this table 5-2 has distinguished the law enforcement sample uniquely (although all of the mean scores were within the normal range 3 to 7) from the general population in the personality factors that identify risk-takers and makes the further sorting of this highly homogeneous group, technically more difficult to identify variance. Any additional significant results found in the further sorting and analysis of this law enforcement sample, should be considered noteworthy.
The next inquiry, now that we know the personality traits that characterize a law enforcement officer, is what distinguishes a law enforcement officer generalist from a law enforcement officer specialist? Unfortunately, nothing in the stepwise regression procedure predicted specialization, but when forcing group relationship in the vivicle cluster plot procedure was performed, it did pick up a relationship right away. This cluster procedure does not measure significance and this 65 group cluster is not strong enough to be significant at the .05 level in the stepwise regression.

Three Group Manova

The next question to be considered is what explains the differences between dangerous specialties, non-dangerous specialties, and the generalists purely in the occupational sense? A three way group manova (Jobtype 1-2-3) provided the following significant findings displayed in Figure 5-1.

Dangerous specialists are calmer (a person who scores on this factor tends to be emotionally mature, stable, realistic about life, possessing ego strength) and tougher (a person who scores on this factor tends to be tough, realistic,
Data Analysis Flow Chart VI
Three Group Manova
Job Types 1, 2, 3

Dangerous Specialists

Calmer and tougher than both other groups. Higher than Non-Dangerous Specialists in tough poise. Lower in anxiety, more assured and fake good better than Generalists.

Non-Dangerous Specialists

Are warmer than the other two groups and more venturesome than the Generalists.

Generalists

Figure 5-1
independent, responsible) than the other two groups and are higher than the non-dangerous specialists in tough poise (a person who scores on this factor is more influenced by facts than by feelings). The dangerous specialists are lower in anxiety, more assured and fake good higher than the generalists. The fake good score indicates a person with higher social desirability, who handles an interview setting better than the generalists. The non-dangerous specialists are warmer (a person who scores on this factor tends to be good-natured, easy-going, emotionally expressive, and ready to cooperate) than the other two groups and more venturesome (a person who scores on this factor is sociable, bold, ready to try new things) than the generalists.

NON-DANGEROUS SPECIALISTS VERSUS THE GENERAL POPULATION

When the non-dangerous specialist group means, presented in Table 5-3, are compared to the Cattell general population norms using the same very strict Tchebeschev calculation of significance, a very interesting finding emerges; the non-dangerous specialists are found to have "re-civilianized" themselves having only one of the twenty-six personality factors (dominance) significantly different from the general population.

This non-dangerous specialists group presents unique
challenges, to the arguments that I have just presented, regarding the psychological and sociological theories of occupations discussed after Table 5-2.

Why was this "re-civilianized" group attracted to law enforcement in the first place, if they don't possess the predetermined general law enforcement working personality? Does job security, good welfare benefits, and early retirement attract lower-middle class people regardless of their personality characteristics? How were they able to withstand the stripping and mortification of the police system, argued by Niederhoffer?

Becker (1964) would argue that situational context, rather than the inherent personality characteristics of the individual, is the stronger determinant of behavior and attitudes. The important factor in situational adjustment is that the individual wants to continue in the occupation. If this group of individuals was denied an assignment, to a non-dangerous specialty, would they leave law enforcement?

Another interesting consideration, do these non-dangerous specialists differ from general population of law enforcement officers, with regard to the implementation of operational policies? Can we expect that this group would be subject to
fewer complaints of abuse of authority, brutality, or corruption? This non-dangerous specialties group deserves additional attention in future research.

Table 5-3

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<th>VARIABLES</th>
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**BOLDFACE=Significant**

**HYPOTHESIS NUMBER ONE**

Hypothesis number one which stated that law enforcement officers as a group will be high on certain personality traits
when compared to the general population has certainly been demonstrated. However when examining the specific personality traits listed in hypothesis number one (control, thrill-seeking, gambling, and learned helplessness) only learned helplessness is supported by these findings. Learned helplessness is the low end of the continuum of independence which was significant at a .02 level.

If the non-dangerous specialists are examined separate from the total sample hypothesis number one would fail totally.

HYPOTHESIS NUMBER THREE

Hypothesis number three which stated the law enforcement officers in specialized functions (hostage negotiation, bomb disposal, emergency services, crime scene technician, etc.) would demonstrate elevated needs for autonomy, control, and task discretion relative to non-specialists has been completely unsupported by these findings and requires no further discussion.

At this point, we now know what 16 PF Cattell variables directly impact on risk-taking on the job for the dangerous specialists, the results of the regression analysis are displayed in Table 5-4.
Table 5-4

Dependent Variable = Dangerous Specialty

Selection = Select if Specialty = 1

Population = 241

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<td>.024</td>
<td>.181</td>
</tr>
<tr>
<td>Tough Minded</td>
<td>-2.85</td>
<td>.005</td>
<td>.019</td>
<td>.206</td>
</tr>
</tbody>
</table>

Dangerous specialists as compared to non-dangerous specialists are cooler (a person who has this trait tends to be stiff, cool, skeptical and aloof), more assured (a person who has this trait tends to be unruffled and to have unshakable nerve), conservative (a person who has this trait tends to be confident in what he/she is taught to believe, and accept the "tried and true", even when something else might be better) and tougher (a person who has this trait tends to be tough, realistic, down to earth, independent, responsible, but skeptical of subjective, cultural elaborations).

Before we begin to examine leisure time risk-taking, Figure 5-2 is presented as a summary of the data analysis findings presented so far.
Data Analysis Flow Chart 1

General Population

Law Enforcement Officers

Law Enforcement Specialists

Law Enforcement Generalists

Dangerous Specialists

Non-Dangerous Specialists

Table 5-2

Table 5-3

Cooler
Self Assured
Conservative
Tough Minded

Figure 5-2
LEISURE TIME RISK-TAKING

We are now ready to consider what factors impact on risk-taking in leisure time activities, which is the central question of the hypotheses in this dissertation. Every dependent variable and every possible cross-break of Jobtype, Group, Riskman, and Noxpense was computed by crosstabulation with the following significant results.

Table 5-5

Jobtype by Leisure Time Risk Taking

<table>
<thead>
<tr>
<th>Jobtype</th>
<th>Leisure Time Risk Taking</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Dangerous Specialists</td>
<td>15/11.6%</td>
<td>114/88.4%</td>
</tr>
<tr>
<td>Non-Dangerous Specialists</td>
<td>27/25.7%</td>
<td>78/74.3%</td>
</tr>
<tr>
<td>Generalists</td>
<td>36/20.8%</td>
<td>137/79.2%</td>
</tr>
</tbody>
</table>

Chi-Square 7.94—D.F.2—Significance .0189—Cramer .138

The first observation that stands out in this crosstabulation of leisure time risk-taking is that 75% to 80% of all three job types risk take in their leisure. These results are contrary to Lyng's contention that "lower-income edgeworkers tend to gravitate toward more financially
accessible activities such as high-risk subcultures ("biker" groups, "survivalists," etc.) or they completely reject highly alienating factory or service work in favor of high-risk occupations such as police work, fire fighting, or combat soldiering". If Lyng was correct, then the law enforcement officers should have satisfied their risk-taking needs at work, and since more then 75% of law enforcement officers risk take in their leisure time, it appears they also can afford it financially. Another consideration that contradicts Lyng's opinion is if law enforcement officers risk take in their leisure time --- why did they become law enforcement officers in the first place?

The next observation that is apparent in table 5-5 is that dangerous specialists take more risks in their leisure time then the other two job types. The generalists take less leisure time risks then the dangerous specialists but more then the non-dangerous specialists, who take the least. It appears that the more risk an individual takes, the more risks an individual is likely to take. One thing that I suspect, as a result of the findings presented in Table 5-2, is that all three of these law enforcement groups are higher then the general population with regard to risk-taking in their leisure time. This suspicion is another interesting consideration to investigate in future research.
Table 5-6

**Jobtype by Fantasy Risk Taking**

<table>
<thead>
<tr>
<th>Jobtype</th>
<th>Fantasy Risk Taking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Dangerous Specialists</td>
<td>70/62.5%</td>
</tr>
<tr>
<td>Non-Dangerous Specialists</td>
<td>72/78.3%</td>
</tr>
<tr>
<td>Generalists</td>
<td>112/73.2%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Dangerous Specialists</td>
<td>42/37.5%</td>
</tr>
<tr>
<td>Non-Dangerous Specialists</td>
<td>20/21.7%</td>
</tr>
<tr>
<td>Generalists</td>
<td>41/26.8%</td>
</tr>
</tbody>
</table>

Chi-Square 6.67--D.F.2--Significance .0357--Cramer .137

An examination of table 5-6 (If time and money were of no concern to you--What activity would you like to participate in?) discloses that dangerous specialists fantasize more about risk-taking then the other two job type groups which means the more leisure time risk you actually take the more likely you are to fantasize about more risk-taking. Generalists fantasize about risk-taking less then the dangerous specialists but more then the non-dangerous specialists. The non-dangerous specialists who risk take the least of these three job type groups, also fantasize the least about risk-taking. Therefore, once again, the more risks a person takes, the more likely the person is to fantasize about risk-taking.

Tables 5-5 and 5-6 were the only two crosstabulations which revealed significant results. We have now exhausted
risk from the occupational point of view and have established that it has nothing to do with being a generalist or a specialist but it does have to do with being in a dangerous specialty and a safe specialty.

Sample Split Into Six Groups

The law enforcement sample was then split into six discreet groups:

Group 1 = Dangerous Specialists/Non-Dangerous Leisure Time
Group 2 = Dangerous Specialists/Dangerous Leisure Time
Group 3 = Non-Dangerous Specialists/Dangerous Leisure Time
Group 4 = Non-Dangerous Specialists/Non-Dangerous Leisure Time
Group 5 = Generalists/Non-Dangerous Leisure Time

A six group manova was performed at the .01 LSD with the following significant results:

Group 2 = 2.23, Group 5 = 2.36, Group 3 = 2.37,
Group 6 = 2.39, Group 1 = 2.40. Group 4 = 2.74.

The Non-Dangerous Specialists/Safe Leisure Time Group 4 experienced more freedom and job discretion (mean 2.74) than
the Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 2.24).

Group 2 = 4.24, Group 1 = 4.60, Group 5 = 4.61,
Group 6 = 4.74, Group 3 = 5.17, Group 4 = 5.63.

The Non-Dangerous Specialists/Dangerous Leisure Time Group 3 (mean 5.17) and the Non-Dangerous Specialists/Safe Leisure Time Group 4 (mean 5.63) were warmer than the Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 4.24). People with this trait tend to be goodnatured, easygoing, emotionally expressive, ready to cooperate, attentive to people, softhearted, kindly, and adaptable.

Group 1 = 4.20, Group 5 = 5.44, Group 6 = 5.63,
Group 2 = 6.04, Group 4 = 6.26, Group 3 = 6.33.

Generalists/Dangerous Leisure Time Group 6 (mean 5.63), Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 6.04), Non-Dangerous Specialists/Safe Leisure Time Group 4 (mean 6.26) and the Non-Dangerous Specialists/Dangerous Leisure Time Group 3 (mean 6.33) are more venturesome than the Dangerous Specialists/Safe Leisure Time Group 1 (mean 4.2). People with this trait tend to be sociable, bold, ready to try new things, spontaneous, and abundant in emotional response.
Their "thick-skinnedness" enables them to face wear and tear in dealing with people and grueling emotional situations, without fatigue. However, they can be careless of detail, ignore danger signals, and consume much time talking. They tend to be "pushy" and actively interested in the opposite sex, according to the 16 PF administrator's manual.

Group 2 = 4.44, Group 1 = 5.13, Group 5 = 5.14,
Group 6 = 5.31, Group 3 = 5.43, Group 4 = 5.70.

Generalists/Dangerous Leisure Time Group 6 (mean 5.31), Non-Dangerous Specialists/Dangerous Leisure Time Group 3 (mean 5.43) and Non-Dangerous Specialists/Safe Leisure Time Group 4 (mean 5.70) were more sensitive than the Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 4.44). People with this trait tend to be emotionally sensitive, daydreaming, artistically fastidious, and fanciful. People low in this trait are tough-minded, self-reliant, no-nonsense, rough and realistic, according to the 16 PF administrator's manual.

Group 1 = 4.00, Group 2 = 5.65, Group 6 = 6.01,
Group 3 = 6.03, Group 4 = 6.07, Group 5 = 6.22.

Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 5.65), the Generalists/Dangerous Leisure Time Group 6
(mean 6.01), Non-Dangerous Specialists/Dangerous Leisure Time Group 3 (mean 6.03), the Non-Dangerous Specialists/Safe Leisure Time Group 4 (mean 6.07) and the Generalists/Safe Leisure Time Group 5 (mean 6.22) are all less trusting than the Dangerous Specialists/Safe Leisure Time Group 1 (mean 4.00). People who are trusting tend to be free of jealous tendencies, adaptable, cheerful, uncompetitive, concerned about others, good team workers. They are also open, tolerant, and usually willing to take a chance with people, according to the 16 PF administrator’s manual.

**Doubting**

Group 2 = 4.89, Group 1 = 5.07, Group 4 = 5.29, Group 5 = 5.39, Group 3 = 5.49, Group 6 = 5.58.

**Anxious**

Group 2 = 5.16, Group 1 = 5.36, Group 3 = 5.58, Group 4 = 5.65, Group 5 = 5.85, Group 6 = 5.87.

The Generalists/Dangerous Leisure Time Group 6 (mean 5.58, 5.87) is more doubting and more anxious than the Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 4.89, 5.16). People with this doubting trait tend to worry and feel anxious and guilt-stricken over difficulties. Often they do not feel accepted in groups or free to participate. High apprehension is very common in clinical groups of all
types. People with this anxiety trait tend to be dissatisfied with the degree to which they are able to meet the demands of life and to achieve what they desire. Very high anxiety is generally disruptive of performance and productive of physical disturbances, according to the 16 PF administrator's manual.

Group 1 = 4.27, Group 6 = 5.95, Group 2 = 6.13,
Group 4 = 6.13, Group 5 = 6.14, Group 3 = 6.34.

Generalists/Dangerous Leisure Time Group 6 (mean 5.95), the Dangerous Specialists/Dangerous Leisure Time Group 2 (mean 6.13), the Non-Dangerous Specialists/Safe Leisure Time Group 4 (6.13), the Generalists/Safe Leisure Time Group 5 (mean 6.14) and the Non-Dangerous/Dangerous Leisure Time Group 3 (mean 6.34) are all more independent than the Dangerous Specialists/Safe Leisure Time Group 1 (mean 4.27). People who score high on this factor tend to be aggressive, independent, daring, incisive people. They will seek those situations where such behavior is at least tolerated and possibly rewarded, and are likely to exhibit considerable initiative. People low in this factor are group dependent, chastened, passive personalities. They are likely to desire and need support from other persons, and likely to orient their behavior toward persons who give such support, according to the 16 PF administrator's manual.
Figure 5-3 provides a summary of the results of this six group manova procedure. It also displays Group 1 (dangerous specialists/non-dangerous leisure time group) to be more dependent and trusting than any other group in this study. It appears that this group's risk-taking can only occur if occupationally necessary, and with group support, because they don't risk take in their leisure time. Basowitz et al. (1955) provides support for this belief in a study of stress in airborne training. He found that the amount of anxiety is related to the group bonds and their effectiveness. That as long as the group was cohesive, not only was little anxiety expressed but the locus of the anxiety was found not in the impending physical danger but in the possibility of not measuring up to internalized ideals or external expectations. This personality profile is more representative of the occupational reality of a firefighter, who always works in groups.

Unfortunately even though the manova procedure is very sensitive it only provides the mean scores and does not give an indication of the contribution to the variance, it doesn't always pick up what is there when the sample is split into dichotomous groups. In order to measure the contribution of the variance the data analysis will proceed by examining the results of the multiple regression procedures.
Data Analysis Flow Chart VII
Six Group Manova
Groups 1 thru 6

Group 1
Dangerous Specialists
Safe Leisure
Time

Group 2
Dangerous Specialists
Dangerous Leisure
Time
More venturesome, more independent and
less trusting than Group 1.

Group 3
Non-Dangerous Specialists
Dangerous Leisure
Time
More venturesome, more independent and
less trusting than Group 1. They are
warmer and more sensitive than Group 2.

Group 4
Non-Dangerous Specialists
Safe Leisure
Time
More venturesome, more independent, more
freedom and job discretion, and less
trusting than Group 1. They are warmer
and more sensitive than Group 2.

Group 5
Generalists
Safe Leisure
Time
They are more independent and less trusting
than Group 1.

Group 6
Generalists
Dangerous Leisure
Time
They are more venturesome and more independent
than Group 1. They have more anxiety and are more
self doubting than Group 2.

Figure 5-3
Table 5-7

Dependent Variable = Dangerous Leisure Time

Selection = All

Population = 414

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freedom</td>
<td>-2.89</td>
<td>.004</td>
<td>.044</td>
<td>.044</td>
</tr>
<tr>
<td>Independence</td>
<td>2.52</td>
<td>.012</td>
<td>.020</td>
<td>.064</td>
</tr>
<tr>
<td>Cool</td>
<td>-2.32</td>
<td>.021</td>
<td>.023</td>
<td>.087</td>
</tr>
</tbody>
</table>

Law Enforcement Officers who engage in dangerous leisure time activities have more perceived freedom and job discretion, more independence and are more cool, reserved, impersonal, detached, formal and aloof. Freedom also suggests time management and that the participation in dangerous leisure time activities may well be a function of the availability of free time. The key determinant of risk-taking in general, may not be money (as Lyng has argued), but the issue of free time. Unless money can buy a person free time, it may not be related to risk taking. If a person has to work long hours to make money, it will have a negative effect on risk taking because there will be little free time available to do anything. If an individual has free time, leisure time risk taking may well be a function of a boredom/thrill-seeking scale. More free time also dismisses Lyng's argument about
A Function of Free Time

Figure 5-4
Data Analysis Flow Chart V

Dangerous Leisure Time

Figure 5-5
the lack of control and being oversocialized or socially reified. Figure 5-4 displays the function of free time and figure 5-5 displays the dangerous leisure time results.

Hypothesis Number Two

The results in table 5-7 indicate that Hypothesis number two is only partially supported in the finding of independence which is the opposite of learned helplessness. The traits of control and thrill seeking failed to appear as significant in this stepwise regression. Dangerous specialists are more likely to engage in dangerous leisure time activities than non-dangerous specialists. It is not control and thrill seeking traits but it is the 16 PF traits of cool, tough, assured and confident.

Table 5-8

Dependent Variable = Dangerous Leisure Time

Selection = Select if Specialists

Population = 241

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freedom</td>
<td>-2.86</td>
<td>.005</td>
<td>.048</td>
<td>.048</td>
</tr>
<tr>
<td>Independence</td>
<td>2.81</td>
<td>.006</td>
<td>.028</td>
<td>.076</td>
</tr>
<tr>
<td>Cool</td>
<td>-2.14</td>
<td>.034</td>
<td>.021</td>
<td>.097</td>
</tr>
</tbody>
</table>
Specialists who engage in dangerous leisure time activities are also high in perceived freedom and job discretion, more independent and cooler.

Table 5-9
Dependent Variable = Dangerous Leisure Time
Selection = Generalists
Population = 173

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upset</td>
<td>-2.74</td>
<td>.016</td>
<td>.349</td>
<td>.349</td>
</tr>
</tbody>
</table>

Generalists who engage in dangerous leisure time activities are affected by feelings, emotionally less stable, easily annoyed and have a low frustration tolerance for unsatisfactory conditions. A low score in this factor is common to almost all forms of neurotic and some psychotic disorders according to the 16 PF administrator's manual. This is the only potentially pathological occupational group found in this study. It is this result that also has the highest correlation.

The Generalists who engage in dangerous leisure time activities are the most different from the dangerous specialists who engage in dangerous leisure time activities.
The Generalists tend to be anxious, doubting and upset while the dangerous specialists are cool, tough, assured, confident, and independent.

Lyng's theory is true only for the better adjusted non risk-taker, but that is a very small group within this total sample -- less then 20 per cent. General compensation theories by and large do not explain human dynamics and risk-taking is emerging to be far more complicated then originally hypothesized by this investigator. The Generalist who risk takes in his leisure time may very well be attempting to over compensate for his self-doubting.

Bruce Ogilvie's (1973) study offered a number of psychological and psychiatric hypotheses positing a negative or pathological basis for risk-taking behavior which may apply to this generalist group.

1. Counter-phobic reactions in which the individual continually exposes himself to situations that provoke, at an unconscious level, the greatest psychological or physical fears.

2. Fear displacement, in which the fear-provoking object or situation is denied by redirecting behavior toward less threatening objects or situations.

3. Dangerous behavior which is manifestation of unconscious feelings of inadequacy, disguised or blocked from awareness by acting at a conscious level in some super-masculine overt form.

4. The psychopathic personality acting out a dangerous activity. This is seen as a reflection of basically immature,
shallow contact with reality.

5. Trying to prove omnipotence, superiority, sexual adequacy, or masculinity.

6. The unconscious death wish, perhaps the most frequently reported causal factor, in which a constant flirtation with danger is interpreted as a means of seeking temporary relief from unconscious impulses.

Psychological compensation theories describe defensive reactions against feelings of inferiority and inadequacy growing out of real or imagined personal defects or weaknesses, as well as out of real life failures and setbacks. These reactions may take different forms and may be deliberate task oriented behaviors. Compensatory reactions are greatly stimulated by our highly competitive society. We constantly compare ourselves with others and too often measure our worth and that of others largely by status, achievements, and possessions. How do the generalists deal with this stress?

With this in mind, I would like to recall Anthony Bouza’s quote from *Police Mystique* (1990):

Cops either possess or develop, as a result of role assignment (a not-to-be-underrated force), the courage to risk physical harm. They learn how to cope with moments of sheer terror that create urges in the rest of us to flee for our lives. Cops are physically brave and live with the absolute certainty that this is the prime value of their existence. Coward is such a powerful epithet that, even in a profession accustomed to the rawest language, it is a word that is used very sparingly.
Physical bravery is the prime value of their existence. A healthy personality would have a great deal of difficulty dealing with the stress of this obligation. The pathogenic trait results of the risk-taking generalists provide additional concern to this investigator, against the occupational stress imposed by this bravery obligation. There are obvious personal physical risks for the law enforcement generalists and unfortunately a great deal of risk for the general public, that may become victimized by inappropriate police responses by one of these leisure time risk-taking generalists. How do these risk-taking generalists interpret police operational policies?

Life style theories of psychology have developed, which characterize an individual's way of perceiving, thinking, and acting as a modus operandi. An essential element, in these consistent life style theories, is that the individual's preferred pattern of motives, needs, goal objects, and means are consistent and integrated into the personality. In effect, one's life is a canvas, which is continually being added to. This life style theory may very well explain the risk-taking behavior of the dangerous specialists, who are cooler, more independent and experience more freedom and job discretion. They appear to be the most psychologically healthy risk-takers.
Table 5-10
Dependent Variable = Dangerous Leisure Time
Selection = Non-Dangerous Specialists
Population = 105

Independent Variable | T of B | Sig T | R   | Cum R
---------------------|-------|------|-----|------
Freedom              | -2.59 | .011 | .069| .069 |

Non-Dangerous Specialists who engage in dangerous leisure time activities are high in perceived freedom and job discretion. This is not a Cattell 16 PF trait. What about this mystery group? Why do these non-dangerous specialists take risks in their leisure time? Is it once again a function of free time? Perhaps these are the closest group to the general population.

Table 5-11
Dependent Variable = Dangerous Leisure Time
Selection = Dangerous Specialists
Population = 136

Independent Variable | T of B | Sig T | R   | Cum R
---------------------|-------|------|-----|------
Independence         | 3.43  | .001 | .086| .086 |

Dangerous Specialists who engage in dangerous leisure time activities are high in independence. This is a 16 PF
factor and people with this trait tend to be aggressive, daring, incisive people. They will seek those situations where such behavior is at least tolerated and possibly rewarded, and are likely to exhibit considerable initiative, according to the 16 PF administrator's manual. When you realize that the traits that identify dangerous specialists are cool, tough, assured, confident and additionally independence, if they engage in dangerous leisure time activities, the personality profile emerges that collectively describe a strong confident person who displays characteristics of self efficacy which Bandura (1977) defines as a person's ability to believe he or she can do a particular behavior. Knowing one has the ability to response competently in dangerous circumstances is critical for optimal performance. Competent response requires not only skills but the ability to trust one's self. People who have a strong sense of efficacy focus their attentions and efforts more easily on the demands of the situations, and meet obstacles with greater effort than people with low self-efficacy (Bandura, 1986). The stronger one's sense of efficacy, the less disabling the perceived danger will be, therefore the person's response will be more competent.

Leisure-time risk-taking may be a "safe" way for law enforcement officers, in general, to practice their self-
Self-Efficacy

Figure 5-6
efficacy and provide themselves with the reassurance and confidence they need, through these leisure time tests, that will prepare them for their potential occupational risk-taking situations. Figure 5-6 displays the interactions of self-efficacy and risk-taking.

Hypotheses Number Four and Five

Hypotheses number four and five, which are a large set of hypotheses, can now be dismissed based on the stepwise regression analysis results, which demonstrates that the hypotheses have failed. These results foreshadow the fact that risk-taking is not risk-taking for all people. For the generalists it is pathological and for the dangerous specialists it is appropriate behavior. For the non-dangerous specialists we don’t know psychologically why they risk take in their leisure time, but certainly this considerations should also be the subject of future research.

Sociology and Psychology of Occupations

Before we proceed to the world of fantasy risk-taking, let us pause for a moment and reflect once again on the contributions of both the sociological and psychological theories of occupations. Occupations are truly an area of study that requires significant collaboration between
sociology and psychology. In the present study, explanations for the findings are drawn from both fields. Specifically, the results of the hierarchical cluster analysis of the six groups clustered the groups around occupational specialty, not risk-taking. This demonstrates the sociological influence on group membership. Once attempts were made to evaluate interactions within the occupational specialties, the Cattell 16 PF factors emerged as significant, providing support for the psychological influences to interpret human dynamics. This study has certainly confirmed the value of continuing the collaboration between the fields of sociology and psychology to explain the theories of occupation. No single field can totally explain this phenomenon of work.

**Fantasy Risk-Taking**

It is important to be reminded that this variable (fantasy risk-taking) was constructed and presented on the leisure time questionnaire in an attempt to test the argument Lyng (1990) offered stating:

that it appears that lower-income edgeworkers tend to gravitate toward more financially accessible activities such as high-risk subcultures ("biker" groups, "survivalists," etc.) or they completely reject highly alienating factory or service work in favor of high-risk occupations such as police work, fire fighting, or combat soldiering.

In order to illicit responses that are not dependent on the availability of free time or money this last question on the Leisure Time Questionnaire was constructed:
****IF TIME AND MONEY WERE OF NO CONCERN TO YOU****

WHAT ACTIVITY WOULD YOU LIKE TO PARTICIPATE IN?

The responses to this question were categorized into Macho (N = 104) or No Macho (N = 260). There were fifty (50) no responses.

Table 5-12
Dependent Variable = Fantasy Risk Taking
Selection = All
Population = 414

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poise</td>
<td>3.32</td>
<td>.001</td>
<td>.053</td>
<td>.053</td>
</tr>
<tr>
<td>Dominance</td>
<td>2.27</td>
<td>.025</td>
<td>.022</td>
<td>.074</td>
</tr>
</tbody>
</table>

Individuals who fantasize about dangerous leisure time activities are more poised, tend to be bold, hard people, decisive and enterprising. Individuals who are also dominant are more assertive, aggressive, stubborn, competitive and bossy.

Table 5-13
Dependent Variable = Fantasy Risk Taking
Selection = Specialists
Population = 241
Specialists who fantasize about dangerous leisure time activities are tougher, more dominant and perceive freedom and discretion on their jobs.

Table 5-14
Dependent Variable = Fantasy Risk Taking
Selection = Non-Dangerous Specialists
Population = 105

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tough</td>
<td>-3.18</td>
<td>-3.18</td>
<td>.002</td>
<td>.057</td>
</tr>
<tr>
<td>Dominance</td>
<td>2.08</td>
<td>2.08</td>
<td>.038</td>
<td>.082</td>
</tr>
<tr>
<td>Freedom</td>
<td>-2.00</td>
<td>.047</td>
<td>.018</td>
<td>.099</td>
</tr>
</tbody>
</table>

Non-Dangerous Specialists who fantasize about dangerous leisure time activities tend to lack the attributes typically found in good leaders. Low scorers usually are not good at asserting themselves. They tend to shy away from conflict, and may also lack the self-control needed to meet deadlines and group productivity goals, according to the Cattell 16 PF administrator's manual.
Table 5-15

Dependent Variable = Fantasy Risk Taking
Selection = Dangerous Specialists
Population = 136

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>$T$ of $B$</th>
<th>Sig $T$</th>
<th>$R$</th>
<th>Cum $R$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominance</td>
<td>3.01</td>
<td>.003</td>
<td>.087</td>
<td>.087</td>
</tr>
<tr>
<td>Tough Poise</td>
<td>2.78</td>
<td>.006</td>
<td>.055</td>
<td>.142</td>
</tr>
<tr>
<td>Freedom</td>
<td>-2.53</td>
<td>.013</td>
<td>.042</td>
<td>.184</td>
</tr>
</tbody>
</table>

Dangerous Specialists that fantasize about risk taking are more dominant, more tough and perceive more freedom and occupational discretion than the other occupational groups.

Table 5-16

Dependent Variable = Fantasy Risk Taking
Selection = Dangerous Leisure Time
Population = 335

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>$T$ of $B$</th>
<th>Sig $T$</th>
<th>$R$</th>
<th>Cum $R$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tough Poise</td>
<td>3.32</td>
<td>.001</td>
<td>.057</td>
<td>.057</td>
</tr>
</tbody>
</table>

Individuals who engage in dangerous leisure time activities and who fantasize about more risk taking are more tough on the Cattell 16 PF score.
Table 5-17
Dependent Variable = Fantasy Risk Taking
Selection = Non-Dangerous Leisure Time
Population = 79

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>3.06</td>
<td>.004</td>
<td>.216</td>
<td>.216</td>
</tr>
</tbody>
</table>

Individuals who engage in only non-dangerous leisure time activities and who fantasize about risk taking are higher in the number of years completed in education.

Table 5-18
Dependent Variable = Fantasy Risk Taking
Selection = Non-Dangerous Specialists/Non-Dangerous Leisure Time
Population = 27

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imaginative</td>
<td>2.64</td>
<td>.016</td>
<td>.269</td>
<td>.269</td>
</tr>
<tr>
<td>Danger</td>
<td>2.20</td>
<td>.041</td>
<td>.155</td>
<td>.424</td>
</tr>
</tbody>
</table>

The Non-Dangerous Specialists who only engage in non-dangerous leisure time activities who fantasize about risk taking are more imaginative on the Cattell scale and perceive their occupations as less dangerous. According to the Cattell administrator's manual people who score high on this trait tend to be unconventional, unconcerned over everyday matters,
self-motivated, imaginatively creative, concerned with "essentials," often absorbed in thought, and oblivious of particular people and physical realities. Their inner-directed interests sometimes lead to unrealistic situations accompanied by expressive outbursts. Their individuality can cause them to be rejected in group activities.

Table 5-19

Dependent Variable = **Fantasy Risk Taking**

Selection = Dangerous Specialists/Dangerous Leisure Time

Population = 129

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominant</td>
<td>2.40</td>
<td>.018</td>
<td>.066</td>
<td>.066</td>
</tr>
<tr>
<td>Tough Poise</td>
<td>2.28</td>
<td>.025</td>
<td>.047</td>
<td>.113</td>
</tr>
<tr>
<td>Freedom</td>
<td>-2.46</td>
<td>.016</td>
<td>.040</td>
<td>.153</td>
</tr>
<tr>
<td>Age</td>
<td>-2.09</td>
<td>.039</td>
<td>.033</td>
<td>.186</td>
</tr>
</tbody>
</table>

Dangerous Specialists who engage in dangerous leisure time activities, who fantasize about risk taking are more dominant, tougher, have more perceived freedom and job discretion and are younger. It is interesting to note that this is the first time that the variable age has appeared significantly in the stepwise regression analysis.
Table 5-20

Dependent Variable = **Fantasy Risk Taking**
Selection = Dangerous Specialists/Non-Dangerous Leisure Time
Population = 16

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>T of B</th>
<th>Sig T</th>
<th>R</th>
<th>Cum R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>3.33</td>
<td>.006</td>
<td>.526</td>
<td>.526</td>
</tr>
<tr>
<td>Casino Gambling</td>
<td>2.87</td>
<td>.014</td>
<td>.045</td>
<td>.571</td>
</tr>
</tbody>
</table>

Dangerous Specialists who engage only in non-dangerous leisure time activities, who fantasize about risk taking are higher in number of years of education completed and gamble at a casino.

Figures 5-7, 5-8, 5-9, provide a summary of the results of three occupational groups: dangerous specialists, non-dangerous specialists, and generalists.
Data Analysis Flow Chart II

Figure 5-7
Data Analysis Flow Chart III

More Freedom and Job Discretion

Non-Dangerous Specialists

Dangerous Leisure Time

Fantasy Risk Taking

Fantasy Non-Risk Taking

Non-Dangerous Leisure Time

Fantasy Risk Taking

Fantasy Non-Risk Taking

More Imagination Perceive Job Safer

Figure 5-8
Data Analysis Flow Chart IV

Figure 5-9
SUMMARY AND CONCLUSIONS

This is a study about voluntary risk-taking among law enforcement officers in their occupation and their leisure time. The investigator suspected that subjects who engaged in leisure-time risk-taking would be uniquely different in their personality profiles from the rest of the sample. Leisure-time risk-taking would be the single variable to predict group membership and that they would have high scores in the personality trait areas of control, autonomy, task discretion, thrill-seeking and independence. The only trait area that was substantiated by this study that was hypothesized, was independence (which is the opposite of learned helplessness).

Once the hierarchical cluster analysis of the six groups was completed all the hypotheses in this study were in jeopardy. What was apparent, was that the strongest influence for group membership was not leisure-time risk-taking but occupational selection or assignment. This finding foreshadowed the fact that a risk-taking act is not risk-taking for all people. The prediction of disastrous outcome is dependent on the individual participant's abilities and
confidence. We now know that if you hear someone say to a law enforcement officer: "You got to be crazy to do that!"; well that response may be right or it may be wrong. The question I would want answered now, as a result of the findings of this study, to decide that is, if the individual is a law enforcement officer: then what is his or her occupational assignment? Is he or she a specialist or a generalist?

An examination of Table 5-2 provides overwhelming evidence of the unique differences that exist between the general population personality profile group norms and the law enforcement personality group norms. The law enforcement officers are very different people and they are cooler (reserved, impersonal, detached, formal and aloof), think more abstractly (more intelligent and bright), more dominant (assertive, aggressive, stubborn, competitive and bossy), more conscientious (conforming, moralistic, staid and rule-bound), more practical (concerned with "down to earth" issues and steady), more shrewd (polished, socially aware, diplomatic and calculating), more conservative (respecting traditional ideas), more self-sufficient (resourceful, prefers own decisions), more self-disciplined (socially precise and compulsive), more poised (influenced by facts not emotion), more independent (aggressive, daring and incisive), more controlled (strong superego controls and have internalized the rules of the milieu), higher in leadership (usually sociable,
relaxed, assertive and self-assured), and higher in creativity (self-sufficient).

Law enforcement officers also compare favorably to the results of the Polish study's 16 PF Cattell scores for high risk-takers; which would support the crosstabulation findings which revealed that more than seventy-five percent of all law enforcement officers engage in leisure-time risk-taking. This evidence strongly challenges Lyng's contention that individuals enter the law enforcement profession, in order to risk take, which they can not afford to do in their leisure time.

Where this investigation attempted to identify what would predict the split between the law enforcement specialist and the law enforcement generalist, it failed. There was no significant variable found in this study to predict this split. From the cluster analysis, we know it is occupational assignment or specialty, but unfortunately cluster analysis does not measure significance.

The next question that was examined was what explains the differences between dangerous specialists, non-dangerous specialists and generalists. A three group manova revealed that: dangerous specialists are calmer (a person who scores on this factor tends to be emotionally mature, stable, realistic
about life, possessing ego strength) and **tougher** (a person who scores on this factor tend to be tough, realistic, independent, responsible) than the other two groups and are higher than the non-dangerous specialists in **tough poise** (a person who scores on this factor are more influenced by facts than by feelings). The dangerous specialists are **lower in anxiety**, **more assured** and **fake good** higher than the generalists. The fake good score indicates a person with higher social desirability, who handles an interview setting better than the generalists. The non-dangerous specialists are **warmer** (a person who scores on this factor tend to be goodnatured, easy-going, emotionally expressive, and ready to cooperate) than the other two groups and **more venturesome** (a person who scores on this factor are sociable, bold, ready to try new things) than the generalists.

A very interesting finding emerged when the personality group norms of the non-dangerous specialists were compared to the general population group norms; this group appears to have "re-civilianized" themselves, having a personality profile similar to the general population in twenty-five of the twenty-six personality factor scores. The only significantly different score was the factor of **dominance**, which is obviously an occupational necessity to be a law enforcement officer. A question this investigator is left with; what would these non-dangerous specialists do, if they
were deprived of their opportunity to "re-civilianize?" Would they leave law enforcement?

When this study examined a six group split of the population using the manova procedure, the following variables emerged: the generalists were more anxious and self-doubting than the dangerous specialists; the dangerous specialists who engaged only in non-dangerous leisure activities were more dependent and more trusting then any of the other groups; and the non-dangerous specialists were warmer than any of the other groups.

When the six groups were examined by regression analysis the following findings were revealed:

Dangerous specialists were cooler, tougher, more self assured and more confident than the rest.

Dangerous specialists/dangerous leisure time were in addition more independent.

Dangerous specialists/dangerous leisure time/who fantasized about risk-taking are in addition more tough, more dominant, younger and perceive more freedom and job discretion.

Dangerous specialists/non-dangerous leisure time/who
fantasized about risk-taking are better educated and casino gamble.

Non-dangerous specialists/dangerous leisure time are higher in perceived freedom or job discretion.

Non-dangerous specialists/non-dangerous leisure time/who fantasize about risk-taking are higher in imagination and believe their jobs are safer.

Generalists/dangerous leisure time are easily upset. When you combine this finding with the manova findings of very anxious and self-doubting, what emerges is the group which is the most pathological and with the highest probability of disastrous consequences if they engage in risk-taking activities.

It is important to recall figures 5-6 and 5-4, self efficacy (which described by Bandura (1977) is an individual's ability to believe that he or she can do a particular behavior) and the function of free time (which is a obvious prerequisite, for leisure-time risk-taking) in order to complete the perspective of risk-taking that has emerged in this study.

If a person does not have free time, there can not
possible be any leisure time activities, of any kind. If a person has money, and as a result, can buy free time, then this can impact on leisure time activities. If a person must work many hours to earn the money, even though he has the money, he has no time to spend it on leisure time activities.

If a person has self-efficacy, he believes that he can do a particular behavior, and perceives that the danger is minor. This not only affects the fact that he will participate in the behavior, but it also increases the ability to competently respond and therefore it increases the likelihood that he will successfully accomplish the task. The negative consequence of self-efficacy is the fact that it encourages a person to attempt the behavior. If a person has no self-efficacy, and therefore refused to attempt to perform the behavior, there can be no disastrous outcome. If a person has no self-efficacy and he attempts the behavior, the likelihood of a disastrous outcome is extremely high.

In this study, the generalists, who engage in dangerous leisure-time activities, would certainly be the group which could be predicted to have disastrous outcomes. The dangerous specialists, who engage in dangerous leisure-time activities appears to be the group with self-efficacy and therefore the group least likely to suffer disastrous consequences, as a
result of participating in dangerous leisure time activities.

Recommendations for Future Research

It is recommended that future research be directed in the following areas. First, a study to determine traits that influence the selection of specialists from generalists. This study failed to identify any variable that predicted the sorting of specialists from the generalists. Second, a similar sampling of a population of female law enforcement officers with the same leisure time questionnaire and the Cattell 16 personality factor questionnaire, to identify the personality characteristics of the female occupational and leisure-time risk-taking groups. Third, a comparative analysis study of the male-female occupational/risk-taking groups. Fourth, a study to evaluate whether age and occupational experience, influence continued participation in leisure-time risk-taking. Fifth, future research regarding the public policy implications of the different occupational/risk-taking groups. Sixth, the non-dangerous specialists who were found to "re-civilianized" themselves should be the subject of detailed comparative analysis between the other law enforcement categories and the general population. Seventh, future research should be conducted to evaluated leisure time risk-taking behavior between the law enforcement officers and the general population. Eighth, the
dangerous specialists/non-dangerous leisure time group, who were the most group dependent and trusting of the entire sample, and possess the occupational working personality of a firefighter, should be the subject of future research.

It is important to mention at the conclusion of this study, that physical risk-taking can be examined from many different perspectives to included historical, cultural, socio-economic, class, and gender. This study was specifically limited to the evaluation of physical risk-taking among law enforcement officers.
APPENDIX A

PROCTOR INSTRUCTIONS AND LEISURE TIME QUESTIONNAIRE

16 PF QUESTIONNAIRE FRONT COVER AND THE SINGLE PAGE REPORT

SECOND-ORDER FACTORS AND COMPOSITE SCORES
PROCTOR INSTRUCTIONS

1. Law Enforcement Officers attending "in-service" training will be requested to voluntarily participate in the study. They will be advised that the process will take less than 1 hour.

2. They are to be informed that this study is being undertaken by a doctoral student in criminal justice (with 21 years law enforcement experience) who is examining the relationship between personality factors and leisure-time activities.

3. The officers will be informed that their participation is anonymous and that administrative controls have been designed to ensure that their identities will remain anonymous.

4. The officers will be requested to answer the questions on the personality test and the leisure time questionnaire; honestly and as accurately as they possibly can. First, they are requested to use a number 2 pencil only to indicate their responses directly on the "Questionnaire" and then use the "machine scorables answer sheet" provided for their responses to the 16 PF test. PLEASE DO NOT WRITE OR MARK THE 16 PF GREEN TEST BOOKLETS IN ANY WAY BECAUSE THEY ARE TO BE REUSED.
5. The officers will be requested to examine the "leisure
time" questionnaire to ensure that it consists of 5 pages
each, with the same control number on each page.

6. The officers will be requested to write the control
number which is on their "leisure time" questionnaire and
record it accurately on the "machine scorable answer
sheet" under ID/Special Codes for the 16 PF test. Also
include their sex and age.

7. It should be explained that this is only necessary in
order to compare the questionnaire and test results and
that there is no record of which control number was used
by which participant.

8. All participants will be instructed to fill in the 16 PF
circle under TEST, the GP circle under NORMS, and the A
circle under FORM on the "machine scorable answer sheet".

9. The officers will be advised that the results of this
study will be made available to them through their "in-
service" training program coordinator.
AGE________ SEX________
CURRENT MARITAL STATUS:
MARRIED______DIVORCED____SEPARATED____
WIDOWED_____NEVER MARRIED____LIVING TOGETHER____
NUMBER OF TIMES MARRIED__________
NUMBER OF CHILDREN__________________
DO YOU SMOKE TOBACCO? ---- YES____ NO____
NUMBER OF YEARS OF EDUCATION COMPLETED____________________
NAME OF POLICE DEPARTMENT_________________________________
NUMBER OF SWORN OFFICERS___________________________________
NUMBER OF YEARS IN LAW ENFORCEMENT_________________________
CURRENT ASSIGNMENT & LENGTH OF TIME_________________________
HISTORY OF SPECIAL ASSIGNMENTS & LENGTH OF TIME______________

HOW DANGEROUS IS YOUR PRESENT ASSIGNMENT? (Please circle one)
EXTREMELY DANGEROUS VERY DANGEROUS DANGEROUS
LITTLE DANGER NO DANGER
NUMBER OF LAW ENFORCEMENT WORK RELATED INJURIES___________
NUMBER OF AUTO ACCIDENTS -- ON DUTY____ OFF DUTY___________
NUMBER OF TIMES YOU HAVE RUN OUT OF GAS____________________
CONTROL NUMBER__________

NUMBER OF POLICE MEDALS OR COMMENDATIONS_____________________

HOW MUCH DISCRETION OR FREEDOM DO YOU HAVE IN YOUR PRESENT
ASSIGNMENT?

TOTAL_____ALMOST TOTAL_____SOME_____LITTLE_____NONE_____

IF YOU WERE TO LEAVE YOUR LAW ENFORCEMENT OCCUPATION WHAT
OTHER OCCUPATION WOULD YOU BE

INTERESTED IN DOING?__________________________________________

HOW OFTEN DO YOU DO THE FOLLOWING ACTIVITIES?

(Please circle the appropriate response.)

ACTING

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY

ALL-TERRAIN VEHICLE DRIVING

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY

ATTEND THEATER OR OPERA

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY

AIRPLANE PILOTING

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY

BACK PACKING

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY

BASKETBALL

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY

BIKING

NEVER OCCASIONALLY TWICE A MONTH WEEKLY ALMOST DAILY
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<th>ACTIVITY</th>
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<th>CONTROL NUMBER</th>
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</thead>
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<tr>
<td>Boating</td>
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</tr>
<tr>
<td>Bowling</td>
<td>occasionally</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Boxing</td>
<td>occasionally</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Car Racing</td>
<td>occasionally</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Casino Gambling</td>
<td>occasionally</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Drink Alcohol</td>
<td>occasionally</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Exercise</td>
<td>occasionally</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Fishing</td>
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<td>Football</td>
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<tr>
<td>Kayaking</td>
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<td>Twice a month</td>
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<tr>
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<td>Twice a month</td>
</tr>
<tr>
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<tr>
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<td>Twice a month</td>
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<td>Listening To Other Types of Other Newsletters</td>
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**IF TIME AND MONEY WERE OF NO CONCERN TO YOU ******

**WHAT ACTIVITY WOULD YOU LIKE TO PARTICIPATE IN?**

(Underlining added to indicate dangerous leisure time activities.)
WHAT TO DO: Inside this booklet are some questions to see what interests you have and how you feel about things. On most items there are no "right" or "wrong" answers because people have the right to their own views. All you have to do is answer what is true for you.

If a separate answer sheet has not been given to you, turn this booklet over and tear off the answer sheet on the back page. Write your name and the other information asked for on the answer sheet.

If a separate, machine-scorable answer sheet has been given to you, turn to Side 1 and print your name in the boxes provided, then blacken the corresponding letter box below your name with a No. 2 pencil only. Do NOT use ink or felt tip markers. If you must erase, do so thoroughly and avoid stray pencil marks.

IMPORTANT: Besides your name and sex, you must code in the boxes for "TEST," "NORMS," and "FORM." Your test administrator will inform you of the correct codes for these boxes and whether you should complete the "AGE" and/or "ID/SPECIAL CODES" boxes.

Now, read the four EXAMPLES below and think about how you would answer them.

EXAMPLES:

1. I like to watch team games.
   a. yes (often),
   b. sometimes,
   c. no (never).

2. People say I'm impatient.
   a. true,
   b. uncertain,
   c. false.

3. I prefer friends who are:
   a. quiet,
   b. in between,
   c. lively.

4. Adult is to child as cat is to:
   a. kitten,
   b. dog,
   c. baby.

In the last example there is a right answer—kitten. But there are very few such reasoning items.

Ask now if something isn't clear.

When the examiner tells you, start with number 1 and answer the questions. Keep these four things in mind:

1. Give only answers that are true for you. It is best to say what you really think.

2. Don't spend too much time thinking over each question. Give the first, natural answer as it comes to you. Of course, the questions are too short to give you all the information you might like, but give the best answer you can under the circumstances.

3. Answer every question one way or the other. Don't skip any.

4. You should use the a or c answer most of the time. Use the b answer only when you feel you have to, because neither a nor c seems to be right for you.
This report is intended to be used in conjunction with professional judgment. The statements it contains should be viewed as hypotheses to be validated against other sources of data. All information in this report should be treated confidentially and responsibly.

**NAME:** Jane Sample  
**ID NUMBER:**  
**AGE:** 30; **SEX:** F  
**DATE:** March 14, 1989

### VALIDITY SCALES

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### 16 PF PROFILE

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**Note:** *U* indicates uncorrected sten scores. *C* indicates sten scores corrected for distortion (if appropriate). The scores below were calculated using corrected scores. This report was processed using female adult (OP) norms for Form A.

### SECOND-ORDER FACTORS

- **Extraversion:** average (5.5)  
- **Anxiety:** average (6.0)  
- **Tough Poise:** above average (7.0)  
- **Independence:** very high (9.1)  
- **Control:** extremely low (1.4)

**COMPOSITE SCORES**

- **Adjustment:** average (6.2)  
- **Leadership:** average (4.6)  
- **Creativity:** high (8.2)  
- **Profile Pattern Code = 2223**

**Items:** Item responses have not been provided.

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Second-Order Factors Taken from the Administrator’s Manual for the 16 Personality Factor Questionnaire. Copyright (C) 1972, 1979, 1986 by the Institute for Personality and Ability Testing, Inc. Reproduced by permission.

Extraversion -- The person who scores low tends to be shy, self-sufficient, and inhibited in interpersonal contacts. This can be either a favorable or unfavorable situation in which the person is expected to function; e.g., introversion is a favorable predictor of precision workmanship. The person who scores high on this factor is a socially outgoing, uninhibited person, good at making and maintaining interpersonal contacts. This can be very favorable in situations that call for this type of temperament, e.g., salesmanship, but should not be considered necessarily favorable as a general predictor, e.g., of scholastic achievement.

Anxiety -- People who score low on this factor tend to be those whose lives are generally satisfying, and those who are able to achieve those things that seem to them to be important. However, an extremely low score can mean lack of motivation for difficult tasks, as is generally shown in studies relating anxiety to achievement. The people who score high on this factor are high on anxiety as it is commonly understood. They need not be neurotic, since anxiety could be situational, but it is probable that there are some maladjustments, i.e., they are dissatisfied with the degree to which they are able to meet the demands of life and to achieve what they desire. Very high anxiety is generally disruptive of performance and productive of physical disturbances.

Tough Poise -- People who score low on this factor tend to be strongly influenced by their emotions. They are likely to be gentle people (as in gentlemen), with artistic or cultured interests. Low scorers are sensitive to their own feelings, as well as to the feelings of others. They may, however, be slow to take decisive action, preferring to give a problem much consideration. People who score high on this factor are more influenced by facts than by feelings. They tend to be bold, hard people, decisive and enterprising, but often insensitive to other people. High scorers orient their behavior toward the obvious, rather than to the subtleties of life. Hence, even though they are able to make decisions
quickly, they may take action without sufficient thought or consideration.

Independence -- People who score low on this factor are group dependent, chastened, passive personalities. They are likely to desire and need support from other persons, and likely to orient their behavior toward persons who give such support. People who score high on this factor tend to be aggressive, independent, daring, incisive people. They will seek those situations where such behavior is at least tolerated and possibly rewarded, and are likely to exhibit considerable initiative.

Control -- People who score low on this factor typically do not act according to others' values or out of a sense of duty. They tend to be nonconformists who do not hesitate to bend rules, or who develop their own set of rules whenever it is expedient to do so. These are flexible people, yet because they tend to follow their own impulses, they may not be as self-disciplined as some situations may require. Further, they may be perceived as unreliable at times because the rules by which they operate may not be clear to others. People who score high on this factor typically have strong superego controls; that is, they have internalized the rules of the milieu in which they function. Hence, they tend to conform to expectations that others have of them or to expectations that they have of themselves. They are quite reliable because they do not "bend the rules"; however, they may be so controlled as to be perceived by others as rigid or moralistic.
Adjustment -- People who score low on this composite have traits that indicate the possibility of neurotic maladjustment. They tend to be apprehensive and emotionally reactive. Beyond these anxiety-related traits, however, low scorers are typically self-effacing and sensitive. This combination of attributes makes it likely that a person who gets a low score would find it difficult to cope with daily life. People who score high on this composite tend to be well adjusted. They are typically self-confident and assertive; they are relaxed, adaptive, and flexible. Thus, they would be expected to have little difficulty in coping with daily life.

Leadership -- People who get a low score on this composite tend to lack the attributes typically found in good leaders. Low scorers usually are not good at asserting themselves. They tend to shy away from conflict, and may also lack the self-control needed to meet deadlines and group productivity goals. People who get a high score on this composite tend to have the traits that are expected of leaders. These people are usually sociable, relaxed, assertive, and self-assured. Overall, they would have the emotional maturity needed to resolve conflicts while maintaining an emphasis on getting things done.

Creativity -- People who score low on this scale are tough-minded and practical. They tend to stick to tried-and-true ways of doing things rather than trying new ways. They would not spend time generating ideas, but would want workable, practical solutions. These people would be better at implementing a solution than coming up with one. People who score high on this scale are imaginative and experimenting. Creative people are usually self-sufficient; often, though not necessarily, they are rather serious and not very outgoing, preferring to spend time in thought rather than with people. Sometimes high scorers are so imaginative that they cannot see the practical limitations on implementing a creative idea.
APPENDIX B

GENERAL CHARACTERISTICS
In total, one hundred and twenty-nine (136) dangerous specialists, from a total of eighty (80) different law enforcement agencies from twenty-six (26) different States in the United States. Their ages ranged from twenty-seven (27) years old to fifty-nine (59) years old with a mean age of 40.3 years old. Sixty-nine per cent (69%) of the sample were currently married and involved in their first marriage with a mean score of 1.9 children. There were one hundred and thirty-five males (135) and one (1) female with an educational range of "years completed" between eleven (11) years and twenty (20) years with a mean of 14.5 years completed. The size of the agencies (number of sworn officers) ranged from two (2) to twenty-eight thousand (28,000) with a mean of 2,924; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,316. The number of years in law enforcement range between one (1) and thirty (30) years with a mean of 15.5 years. The number of work related injuries ranged between zero (0) and twelve (12) with a mean of 1.6. The number of agency medals or commendations ranged from zero (0) to thirty-two (32) with a mean of 6.2. Seventy-seven per cent (77%) of the subjects did not smoke tobacco.
General Characteristics of Job Type II — Non-Dangerous Specialists

In total, one hundred and five (105) non-dangerous specialists, from a total of sixteen (16) different law enforcement agencies from five (5) different States in the United States. Their ages ranged from twenty-six (26) years old to sixty-two (62) years old with a mean age of forty-two (42) years old. Sixty-nine per cent (69%) of the sample were currently married and involved in their first marriage with a mean score of 1.8 children. There were ninety-six (96) males and nine (9) females with an educational range of "years completed" between ten (10) years and eighteen (18) years with a mean of 14.7 years completed. The size of the agencies (number of sworn officers) ranged from five (5) to thirty thousand (30,000) with a mean of 16,700; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,107. The number of years in law enforcement range between one (1) and thirty-nine (39) years with a mean of 17.7 years. The number of work related injuries ranged between zero (0) and fifteen (15) with a mean of 2.6. The number of agency medals or commendations ranged from zero (0) to fifty-four (54) with a mean of 11.5. Seventy-six per cent (76%) of the subjects did not smoke tobacco.
General Characteristics of Job Type III — Generalists

In total, one hundred and seventy three (173) generalists, from a total of fifty-three (53) different law enforcement agencies from ten (10) different States in the United States. Their ages ranged from twenty-two (22) years old to sixty (60) years old with a mean age of thirty-seven (37) years old. Seventy-one per cent (71%) of the sample were currently married and involved in their first marriage with a mean score of 1.7 children. There were one hundred and sixty-eight (168) males and five (5) females with an educational range of "years completed" between ten (10) years and twenty-two (22) years with a mean of 14.7 years completed. The size of the agencies (number of sworn officers) ranged from two (2) to twenty-eight thousand (28,000) with a mean of 1,820; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,206. The number of years in law enforcement range between one (1) and thirty-five (35) years with a mean of 12.4 years. The number of work related injuries ranged between zero (0) and twenty (20) with a mean of 2.2. The number of agency medals or commendations ranged from zero (0) to sixty (60) with a mean of 3.9. Seventy-six per cent (76%) of the subjects did not smoke tobacco.
General Characteristics of Group I -- Dangerous Specialists/Non-Dangerous Leisure Time

In total, fifteen (15) dangerous specialists/non-dangerous leisure time, from a total of twelve (12) different law enforcement agencies from eight (8) different States in the United States. Their ages ranged from thirty (30) years old to fifty-three (53) years old with a mean age of forty (40) years old. Eighty per cent (80%) of the sample were currently married and involved in their first marriage with a mean score of 1.6 children. There were fifteen (15) males with an educational range of "years completed" between twelve (12) years and seventeen (17) years with a mean of 14.1 years completed. The size of the agencies (number of sworn officers) ranged from four (4) to twenty-eight thousand (28,000) with a mean of 6,614; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,435. The number of years in law enforcement range between two (2) and twenty-eight (28) years with a mean of 14.1 years. The number of work related injuries ranged between zero (0) and three (3) with a mean of 1.1. The number of agency medals or commendations ranged from zero (0) to thirty-two (32) with a mean of 5.7. Eighty-seven per cent (87%) of the subjects did not smoke tobacco.
General Characteristics of Group II — Dangerous Specialists/Dangerous Leisure Time

In total, one hundred and fourteen (114) dangerous specialists/dangerous leisure time, from a total of seventy-two (72) different law enforcement agencies from twenty-four (24) different States in the United States. Their ages ranged from twenty-seven (27) years old to fifty-nine (59) years old with a mean age of forty (40) years old. Six-eight per cent (68 %) of the sample were currently married and involved in their first marriage with a mean score of 1.9 children. There were 113 males and 1 female with an educational range of "years completed" between eleven (11) years and twenty (20) years with a mean of 14.5 years completed. The size of the agencies (number of sworn officers) ranged from one (1) to twenty-eight thousand (28,000) with a mean of 2,439; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,303. The number of years in law enforcement range between one (1) and thirty (30) years with a mean of 15.7 years. The number of work related injuries ranged between zero (0) and twelve (12) with a mean of 1.7. The number of agency medals or commendations ranged from zero (0) to fifty (50) with a mean of 6.3. Seventy-six per cent (76%) of the subjects did not smoke tobacco.
General Characteristics of Group III — Non-Dangerous Specialists/Dangerous Leisure Time

In total, seventy-eight (78) non-dangerous specialists/dangerous leisure time, from a total of twenty-three (23) different law enforcement agencies from five (5) different States in the United States. Their ages ranged from twenty-six (26) years old to sixty-two (62) years old with a mean age of 41.3 years old. Sixty-eight per cent (68%) of the sample were currently married and involved in their first marriage with a mean score of 1.7 children. There were seventy-two (72) males and six (6) females with an educational range of "years completed" between ten (10) years and eighteen (18) years with a mean of 14.7 years completed. The size of the agencies (number of sworn officers) ranged from five (5) to thirty thousand (30,000) with a mean of 16,054; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,036. The number of years in law enforcement range between one (1) and thirty-nine (39) years with a mean of 17.1 years. The number of work related injuries ranged between zero (0) and twelve (12) with a mean of 2.7. The number of agency medals or commendations ranged from zero (0) to twenty-four (24) with a mean of 11.3. Seventy-seven per cent (77%) of the subjects did not smoke tobacco.
General Characteristics of Group IV -- Non-Dangerous Specialists/Safe Leisure

In total, twenty-seven (27) non-dangerous specialists/safe leisure, from a total of eight (8) different law enforcement agencies from three (3) different States in the United States. Their ages ranged from thirty (30) years old to fifty-six (56) years old with a mean age of 43.3 years old. Seventy-four per cent (74%) of the sample were currently married and involved in their first marriage with a mean score of 2.0 children. There were twenty-four (24) males and three (3) females with an educational range of "years completed" between twelve (12) years and seventeen (17) years with a mean of 14.9 years completed. The size of the agencies (number of sworn officers) ranged from thirty (30) to twenty-eight thousand (28,000) with a mean of 18,565; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,362. The number of years in law enforcement range between two (2) and thirty-three (33) years with a mean of 19.4 years. The number of work related injuries ranged between zero (0) and fifteen (15) with a mean of 2.1. The number of agency medals or commendations ranged from zero (0) to forty (40) with a mean of 12.3. Seventy-eight per cent (78%) of the subjects did not smoke tobacco.
General Characteristics of Group V -- Generalists/Non-Dangerous Leisure Time

In total, thirty-six (36) generalists/non-dangerous leisure time, from a total of fifteen (15) different law enforcement agencies from two (2) different States in the United States. Their ages ranged from twenty-five (25) years old to fifty-seven (57) years old with a mean age of 37.4 years old. Seventy-two per cent (72%) of the sample were currently married and involved in their first marriage with a mean score of 2.0 children. There were thirty-five (35) males and one (1) females with an educational range of "years completed" between twelve (12) years and twenty-two (22) years with a mean of 15.2 years completed. The size of the agencies (number of sworn officers) ranged from five (5) to twenty-eight thousand (28,000) with a mean of 2,442; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,713. The number of years in law enforcement range between one (1) and thirty-five (35) years with a mean of 13.4 years. The number of work related injuries ranged between zero (0) and fifteen (15) with a mean of 2.0. The number of agency medals or commendations ranged from zero (0) to fourteen with a mean of 2.9. Seventy-eight per cent (78%) of the subjects did not smoke tobacco.
General Characteristics of Group VI -- Generalists/Dangerous Leisure Time

In total, One hundred and thirty-seven (137) generalists/dangerous leisure time, from a total of fifty (50) different law enforcement agencies from ten (10) different States in the United States. Their ages ranged from twenty-two (22) years old to sixty (60) years old with a mean age of 37.1 years old. Seventy per cent (70%) of the sample were currently married and involved in their first marriage with a mean score of 1.6 children. There were one hundred and thirty-three (133) males and four (4) females with an educational range of "years completed" between ten (10) years and eighteen (18) years with a mean of 14.5 years completed. The size of the agencies (number of sworn officers) ranged from two (2) to twenty-eight thousand (28,000) with a mean of 1,656; if the New York City Police Department is removed the sample mean of the number of sworn becomes 1,073. The number of years in law enforcement range between one (1) and thirty-one (31) years with a mean of 12.2 years. The number of work related injuries ranged between zero (0) and twenty (20) with a mean of 2.2. The number of agency medals or commendations ranged from zero (0) to sixty (60) with a mean of 4.2. Seventy-five per cent (75%) of the subjects did not smoke tobacco.
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