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TITLE OF THESIS..... AUTOMOTIVE BRAKE MEASUREMENT
... CANADIAN COASHRS.....

UNIVERSITY..... OF ALBERTA.....

DEGREE FOR WHICH THESIS WAS PRESENTED..... M.A.....

YEAR THIS DEGREE GRANTED..... 1973.....

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by
ROBERT BRUCE BAIN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF PHYSICAL EDUCATION

EDMONTON, ALBERTA

FALL, 1973

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The undersigned certify that they have ready and presented to the Faculty of Graduate Studies material relevant for acceptance, in thesis entitled "Mathematical Methods in Canadian Geodesy", submitted by J. G. Grace, Jr., P.A., in partial fulfillment of the requirements for the degree of Doctor of Science.

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Date Aug 3, 1973

ABSTRACT

The purpose of the study was to examine specific measures of authoritarianism in forty-two coaches of football and basketball teams sponsored by the Public and Separate School Boards of Edmonton, Alberta, Canada. The authoritarian measures examined were the D Scale which the author accepted as a measure of general authoritarianism at the personality level, and the F Scale which the author accepted as a measure of right-wing authoritarianism at the personality level. Two sample groups were created in order to control the confounding variable of education. One group consisted of thirty-two educators employed in the secondary school system of Edmonton while the other sample group was a random sample of thirty-two males from the general population of Edmonton.

The results of the study indicate that the coaches' group sampled had the lowest scores of authoritarianism as measured by both scales when compared to the sample group of educators and the sample group of the male population of Edmonton. The author, on the basis of the significant evidence, concluded that coaches of major team sports in the secondary school systems of Edmonton, Alberta, Canada, are not highly authoritarian in specific measures of general and right-wing authoritarianism.

The secondary problem examined the relationship between personality measures of authoritarianism and a scale created by the author which purported to measure authoritarian coaching attitudes and behaviour. This was done in order to determine if coaching authoritarianism is a specific manifestation of either concept of authoritarianism advanced by personality theorists. The results of the study indicated that coaches who score highly in the personality measures of authoritarianism may also be predicted to score highly in a measure of coaching attitude and behaviour. The author concluded on the basis of the statistical evidence obtained, that coaching attitudes and behaviour expressed in the CAB Scale may be a manifestation of both general and right-wing authoritarianism. This conclusion was reached on the strength of the highly significant relationships between all scales utilized and in spite of the fact that the F Scale had slightly higher predictive value with respect to the specific coaching authoritarianism scale.

The final purpose of this study was to begin to examine and differentiate situational factors evident in the coaching role as it is evident in Canada as compared to previously discussed psychological factors. The measurable situational factors examined were: (i) age of the coach, (ii) years of coaching experience.

(iii) number of sports coached, and (iv) ratio of players to coach. Although measures of the number of sports coached and the ratio of players to coach did not correlate significantly with the authoritarian measures, the scores obtained in these measures were higher than expected. The author felt that coaches could be overburdened with respect to their coaching workload. This factor, it was hypothesized, could cause coaches to leave coaching after only a few years and the hypothesis was partially born out by results which indicated that only one coach was over the age of thirty-four.

Significant inverse relationships, or relationships approaching significance, were found between the factors of age and coaching experience, and the measures of authoritarianism. Speculative interpretation was advanced in order to offer possible explanations for the results obtained.

In light of the contrasting results of this study as compared to the limited literature (all of which originated in the United States), the author examined cultural factors and socialization process (as it affects coaches) in an effort to explain these differences.

The author concluded that the emphasis upon success as measured by winning, and the emphasis upon sport as big

business in the United States, could have a marked influence upon the socialization process and consequently personality variables, one of which might be authoritarianism.

ACKNOWLEDGEMENTS

The author wishes to express appreciation to his committee members Professor Harry Smith, Dr. John J. Mitchell and the chairman, Professor Harvey Beattie, whose assistance and guidance in preparing this thesis was greatly appreciated. To these three gentlemen, and unnamed others at the University of Alberta, the author extends deepest thanks for years of instruction and direction upon which a basis for understanding and interpretation was formed.

Sincere thanks is extended to the coaches and educators of the Edmonton Public and Edmonton Separate School Boards who co-operated with the writer and also the respective School Boards for their sanction of this study. Appreciation is also expressed to the subjects from the City of Edmonton, Alberta, Canada who participated in this study.

Finally, the author wishes to express thanks to his wife, Elizabeth, and sons, Christopher and Sandy for their encouragement, understanding and patience throughout this endeavour.

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Considerable social change has occurred in western society in recent years. Sport, purported to be one of the last bastions supporting the status quo, has received criticism from many sources including students, athletes, sport sociologists, school and public administrators as well as the general population at large. Scott (1), Schechter (2), Wolf (3), Barnes (4), Parrish (5), Hoch (6), and others have exposed the dehumanizing quality of some games, the fraud, racism, drug abuse, violence and the exploitation of sports by big business. Among other "problem areas" singled out by the protesters, one which is most crucial to the very basis of sport has emerged. Today, more than ever before, the authority of the coach is being challenged.

Much of the criticism concerning the authority of the coach is centered around a coaching style which has been referred to as authoritarian in nature. This style has been attributed, in many instances, to the general personality structure of the coach himself. Thus it is no longer an authoritarian style but is actually a personality syndrome known as authoritarianism. The concept of the authoritarian coach results

The use of the term "authoritarian coach" is one which has become most popular. Not such as Vince Lombardi, Paul "Bear" Bryant and George "Punch" Imlach are coaches who have been labelled "authoritarian". Although the word "authoritarian" does imply unquestionable control, many opponents do not really believe that "these are the people that the country needs." To enhance this belief, none of these coaches have become "winners" and most people have made the assumption that winning and authoritarianism in coaches are synonymous.

Upon closer examination, problems have recently begun to arise to fight which question the authoritarian coaching personality and techniques. As a result, a gap has begun to exist between the authoritarian coach and the "new breed" athlete (1)(3)(7)(8)(9).

In spite of all the references to authoritarian coaches very little actual research has been conducted in order to determine if, in fact, there is an authoritarian coaching personality and what the characteristics of this personality might be. The little research which has been done has its roots in the personality theorists' concept of authoritarianism (10). Although many of the characteristics of the "authoritarian personality" are purported to exist in the "authoritarian coach", there has been serious debate as to what exactly is meant by an authoritarian personality.

Adorno et al. (1) feel that authoritarianism is anti-democratic tendencies at the personality level. Rekerch (12) feels authoritarianism is the extent to which a person can effectively evaluate, and act on relevant information, especially one's intrinsic morality. From (13) explaining that "extreme inequality and unfairness go hand in hand with an 'authority', represented by logicistic character". Harlow (14) described the authoritarian concept as a dominant or the other's "world-view" held by any individual. Other researchers (15)(16)(17) have attempted to define authoritarianism with such measures as conformity, rigidity, intolerance to ambiguity and inflexibility.

With respect to this psychological or trait view of authoritarianism, the present study is an exploratory inquiry into the relationship between the concept of authoritarianism as defined by selected personality theorists and the concept of authoritarianism as it is projected by sport sociologists and the sporting milieu. The study will also attempt to discover with respect to personality theory, the relative degree of authoritarianism between coaches and representative samples of the general population at large.

The interpretation of "authoritarian" coaching personalities based upon psychological theory and measures suggests an additional problem. The very nature of the coaching role may involve situational factors which act

upon individuals and cause them to act or appear "authoritarian". Inherent situational factors may also be evident which permit the individual to function more effectively using authoritarian methods. Therefore to conclude that a coach is "authoritarian" by virtue of personality theory based measures alone, may not be entirely exclusive of the authoritarian concept.

Situational factors which may affect the coaching personality (or specific behavioural aspects of it) may include among others the type of sport which is being coached, the number of athletes involved, the pressure upon the coach to win, the level of competition, the age of the coach in comparison to the athlete or the experience of the coach.

With respect to situational factors (or factors inherent in sport which might affect the coach) this study will examine the age and experience of the selected coaches, the number of athletes coached and the actual sports coached in order to determine if any relationship is evident with respect to coaching authoritarian as it is judged by the behavioural-attitudinal dimension. In addition, a discussion of the socialization process as it might affect the coaching personality will be presented.

The Problem

The relationship between the personality theorists'

concept of authoritarianism, and the personality structure and behaviour of coaches has only been superficially explored. It has been implied that the authoritarian personality syndrome is quite pronounced in coaches. It is the author's purpose to explore the contention that the personality theorized authoritarian syndrome may be more pronounced in athletic coaches as a group when compared to the general population at large. To this end it is hypothesized that a sample of male athletic coaches of major team sports who are employed in the secondary school system in Edmonton, Alberta will measure significantly higher in general authoritarianism as measured by the D (Dogmatism) Scale and in right-wing authoritarianism as measured by the California F Scale when compared to:

1. a sample of educators in Edmonton, Alberta;
2. a sample of the male population of Edmonton, Alberta.

Secondary Problems

1. Coaches are judged to be authoritarian in nature from specific behaviour exhibited while in the act of coaching. This authoritarian coaching behaviour may be a manifestation of the more general authoritarian personality syndrome. Therefore, the relationship between personality measures of authoritarian and coaching authoritarianism will be explored. Coaching authoritarianism is

measured by a scale designed to measure relative amounts of authoritarian attitude and behaviour in coaches.

2. The construct "authoritarianism" evokes a wide range of often conflicting meanings and implications. These may be summarized in terms of psychological and situational factors. In an attempt to begin to differentiate between those influences on coaching behaviour various situational factors will be explored. Socialization, (as it relates to coaching) a dominant aspect of personality development, will be discussed in order to discover socio-cultural differences which may have an effect upon "authoritarianism".

Justification for the Study

Although the concept of the "authoritarian coach" has been utilized liberally in the past few years, there have been relatively few authors who have clearly defined their usage of the term "authoritarian". This study attempts to link the research which has been done by personality theorists in authoritarianism and the character of coaches in Edmonton, Alberta, in order to begin to determine if in fact there seems to be an entity known as authoritarianism in these coaches.

Although a dearth of information pertaining to the authoritarian coach exists, the little empirical evidence and speculation which does exist has originated in the

United States of America. There is very little substantial evidence to support the conjecture that the same type of personalities (however indefinite they might be) exist in Canada. Although Canadian and American societies are alike in many respects, the socialization and situational factors in sport in the United States may have a profoundly different effect upon the coaching position there, when compared with the Canadian coaching position. It may be that the emphasis upon competition and the need to achieve success in organized athletics in the United States could have a significant effect upon the coaching role and hence upon the personality and behaviour of the coaches. Since these emphases do not appear to be as pronounced in Canada, the personality of the Canadian coach could be entirely different. If authoritarianism varies with these emphases, authoritarianism in coaches may be a concept of limited usefulness in Canada.

Other situational factors linked to socialization are the surrounding conditions or variables which are present whenever a coach is actually involved in coaching. These situational factors again could have a significant influence upon the personality and behaviour of the coach.

Although the scope of this study does not empirically examine the situational and socio-cultural influences affecting American versus Canadian coaches, relevant literature and data will be presented in order to examine how

these factors may influence the coaching role and style.

Finally, this study is an attempt on the author's part to explore, with a view to bridging the "generation" or human relations gap that sometimes exists between player and coach over the question of authority. Today's athlete is as concerned with the question of "why?" as he is of "how?" and many coaches view this as an attempt to question authority. In an attempt to understand attitudes towards authority, the authoritarian personality as it purportedly exists in coaches needs to be explored. Once we as coaches have a better understanding of ourselves and our personalities, it might be easier to understand the wants, needs and personalities of those we coach.

Limitations of the Study

1. The prime limitation of the study was the rate of return of completed questionnaires from the sample groups. Always a factor in studies involving questionnaires sent through the mail, it was hoped that this problem could be partially overcome by the fact that the author was personally acquainted with most of the coaches involved insuring a high response from the group.
2. The validity of the scales measuring aspects of authoritarianism was noted and accepted.

3. The personalities of the subjects who returned the questionnaire may have differed somewhat from the personalities of those who did not return the questionnaire.
4. The questionnaire went to the coaches who ordered no the Coaches Attitude-Behaviour Scale was answered first. This may have had an effect upon the scores of the P and D Scales which followed.
5. The power of the Coaches Attitudes-Behavioural Scale to predict observable behaviour of coaches while in the actual act of coaching was limited to self-evaluation in replying to the questions in the questionnaire.

Delimitations of the Study

1. The study was restricted to male coaches of football and basketball teams in the secondary schools in the city of Edmonton, Alberta, Canada. The coaches were all employed by the public or separate school boards of Edmonton at the secondary school level.
2. Secondary school male educators employed by the public or separate school boards of Edmonton were compared to the coaches. These educators closely approximated the education level and the socio-economic status level of the coaches.
3. Male members of the population of Edmonton were compared

to the coaches and educators. Socio-economic status and education levels were partially controlled. This was done by randomly selecting subjects whose job did not require a university degree in a qualification.

Definition of Terms

Coach	An individual who instructs, trains and advises an athletic performer or team of athletic performers and is ultimately responsible for individual or team athletic strategies.
Coaching Behaviour	Behaviour occurring within or while in the role of coaching.
Coaching Personality	A personality held by a coach within or while in the role of coaching.
Coaching Situation Factors	Occurrences or inherent qualities within the nature of the coaching role, the athletic milieu or sporting events.
Educator	A sanctioned instructor actively involved in an institutionalized educational setting.
Fascism	Extreme right wing political ideological views or extreme right wing reaction which stands for autocratic government headed by a dictatorial leader and a definable hierarchy of power. Severe economic and social regimentation and forcible suppression of opposition.
Left Wing Political Ideology	Radicalism moving towards socialism and anarchy and exalting a preference for political democracy, civil liberties, humanitarian goals and social equality.

Major Team Sports

Sports sponsored by the secondary schools, having high spectator appeal, and involving more than thirty teams at the junior and senior level per season in the City of Edmonton. The sport must have some form of players interaction designed to achieve a goal or purpose. These sports are basketball and football.

Personality

An individual's attitudes, traits and habits which predispose the individual to behavioural and emotional tendencies.

Right Wing Political Ideology

Reactionary conservatism advocating the forced establishment of an authoritarian political order based upon autocratic government and a definite hierarchy of power.

Secondary School

An institutionalized educational setting housed in a separate building containing grades X, XI and XII.

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CHAPTER III

REVIEW OF LITERATURE

Introduction

Authoritarianism is an ambiguous term in personality theory and with respect to coaching attitudes and behaviour. This is in part due to the multitude of meanings and definitions commonly attributed to the term. The author will attempt to limit the meaning and definitions of various authoritarian measures by utilizing the D and F Scales as measures of general and right-wing authoritarianism respectively. In order to justify the inclusion of these authoritarian measures in this study, a review of the literature pertaining to authoritarian concepts and the F and D Scales is necessary.

The Authoritarian Personality

The rise of the Nazi ideology and the world war which followed was the origin of research and speculation concerning a personality structure termed authoritarian. Stagner (1) first touched upon the subject of authoritarianism when he explored Fascist attitudes in 1936. Fromm, (2) writing in 1941, claimed that authoritarianism was a mechanism of escape from the security resulting when

"the individual faces the world outside of himself as a completely separate entity (2:140)". The isolated individual's attempt to "escape from freedom" resulted in a "tendency to give up the independence of one's own individual self and to fuse one's self with somebody or something outside of oneself in order to acquire the strength which the individual self is lacking (2:141)".

According to Fromm, distinct forms of authoritarianism were found in sado-masochistic ~~striving~~ or rather the striving for submission and domination. The sado-masochistic character, was referred to as an "authoritarian character". Fromm employed this term because of the individual's attitude towards authority in which "he admires authority and tends to submit to it, but at the same time he wants to be an authority himself and have others submit to him (2:164)". This characteristic caused the authoritarian character to view the world in terms of "power" in which there were but two classifications: powerful and powerless.

An additional characteristic of the authoritarian personality as Fromm envisaged was the conviction that life was "determined by forces outside of man's own self, his interests, his wishes (2:171)". This characteristic manifested itself in an overwhelming belief in fate, the supernatural or even rationalizations of fate such as destiny or "the will of God".

Stimulated by Freud, Rank (1) believed that the characterization of the authoritarian personality needed a unified approach. He termed the basic philosophy "World View" or "Worldline." The "World View" was conceived as a system of thought in which the individual tends to be dependent, obedient, and obedient.

Characteristics of the "World View"

One characteristic of the "World View" is that it is a single-dimensional personality in the sense of its dimensions. In order that one may know the only dimension of the "World View" is power. In this respect, the "World View" is simple and often represented by the power of the commanding, the possible to the individual (340).

Once granted the "World View," Rank felt authoritarian behavior became more forced or at least more understandable. Concerned with the easiest dimension of authoritarianism, the "World view" helped explain Rank's authoritarian personality, as characterized by the following traits:

1. the tendency to hierarchy;
2. generalization of superiority-inferiority dimension;
3. strong drive for power;
4. hostility, hatred, prejudice;
5. judged others by external signs of power or status;
6. single-value scale;
7. identification of ~~strength~~ with weakness;
8. tendency to use people;

9. undemocratic tendencies;

10. undesirable possibility of infiltration;

11. right-wing and socialist.

The first six items represent anti-democratic authoritarian tendencies, however, they are not different with respect to basic theoretical aspects, particularly the underlying basic philosophy on "world view".

Adorno et al. (1950) published The Authoritarian Prejudice. In 1960 after years of research and study done by a host of theorists, using "bulletin" investigation, specific anti-Semitic ideology and prejudice, they discovered that these characteristics were only part of a larger personality syndrome. They devoted themselves to measure ethnocentrism and political-economic conservatism. In an attempt to identify the personality syndrome which fed specifically to prejudice, their work up until this point had resulted in three factors: the A-B Scale; a specific measure of anti-Semitic ideology; the Ethnocentric (E) Scale and the Political-Economic-Conservatism Scale (PEC).

Their final scale, the F scale, attempted to measure prejudice without appearing to have this aim. It also attempted to estimate a greater and deeper measure; anti-democratic tendencies at the personality level. It was felt that the E, and PEC scales measured surface

opinion, the concept was complicated so that it measured a person's identification with normen deep within the often unconscious forces of a person. Titled the F-scale (F) (a scale purporting to measure anti-democratic trends), the scale became commonly known as a measure of authoritarian personality conjecture. Another reason the scale began to be referred to in this manner was because it claimed to measure fascist tendencies (since the F-scale was called them by authoritarians (because of the dominant role of authority in the original and political structure) the connection was made and the popular title "authoritarian scale" arose).

The creators of the F-scale viewed the concept of authoritarianism as a composite of closely cohering subparts of one syndrome. The subparts, termed clusters, were hypothetical and not psychologically real, however, they did have a dynamic relationship to prejudice. These clusters, derived from questionnaire, interview and projective techniques were as follows:

1. Conventionalism;
2. Authoritarian Submission;
3. Authoritarian Aggression;
4. Anti-Intraception;
5. Superstition and Stereotype;
6. Power and Toughness;
7. Destructiveness and Cynicism;

8. Projectivity;

9. Box.

Rokeach (5), convinced that the Elendle measured right-wing, ideologified authoritarianism, developed the theory of dogmatism as a general authoritarian measure tied to specific ideology. Pertaining to individual cognitive structure, dogmatism existed not in specific beliefs themselves but in the tenacity with which beliefs existed.

According to Rokeach, there existed in all people belief-belief systems. These systems were organized along a central-peripheral dimension depending upon the nature of belief. The core or central region contained the person's "primitive" beliefs which referred to everything the person has acquired about "the nature of the physical world he lives in, the nature of 'self' and the 'generalized other' (5:40)". Attached to the core or central region are a variety of peripheral beliefs dealing with the nature of authority, the actual authority figures, and also the specific beliefs derived from authorities. Rokeach felt that dogmatism was concerned with specific content of core beliefs, but was only concerned with formal content of intermediate or peripheral regions. Consequently he felt similarities among persons in their orientation to authority should be examined and not the

specific content of the beliefs. Writing about the distinction between ideology and disbelief in peripheral beliefs, Rokeach stated that:

The specific content of peripheral beliefs and disbelief, will, of course, again vary from one person to another. But in precisely this specific content to which we look when we wish to ascertain and identify another's ideological position. But what is of major concern here is not so much ideological content as the structural interconnection among peripheral beliefs and, in turn, their structural relation with those beliefs... in the intermediate and central regions. (6:67).

The defining characteristics of the dogmatic, closed minded or general authoritarian individual, based upon these criteria are as follows:

1. A sharp distinction between beliefs and disbelief; Isolation of parts of belief-disbelief system resulting in contradictory beliefs; Little differentiation within the disbelief system;
2. A belief that the world one lives in is threatening;
3. Belief that authority is absolute and violators of this authority are not to be tolerated.

A fourth dimension, not based upon previously discussed theory dealt with a time perspective. Rokeach felt that the dogmatic individual would possess...

4. A relatively narrow, future orientated time perspective.

In order to support this theory, Rokeach developed

opinionation and dogmatism scales. The Dogmatism Scale or D Scale is now widely used as a measure of general authoritarianism.

There have been many attempts to amend measures of authoritarianism using variations of the scales proposed by Rokeach and Adorno *et al.* Many of these variations have been in the actual length of the scales themselves. Although there have been shortened versions of the scales created (6)(7)(8)(9) many investigators simply delete any number of items in order to arrive at a desired length.

Other variations of the F and D scales have occurred in order to rid the scales of acquiescent response set. Attempts have been made in order to word the items in both positive and negative directions instead of in a negative direction only as the scales presently exist (10)(11)(12). These attempts have met with mixed reactions among investigators and critics.

Although many questions and criticisms exist with respect to the theory underlying the F and D scales, two related concepts of authoritarianism are to be found. The original concept proposed by Adorno *et al.* still has great merit and utility in spite of controversy concerning the F scale. Dogmatism, the later and more general concept of authoritarianism has also been explored and utilized greatly in recent years and seems to be becoming more popular with investigators than the original concept.

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In more recent research, traits such as intolerance of ambiguity, rigidity, conformity and inflexibility have been explored as characteristics of authoritarianism. The relative degree of imagination and Eysenck's (13) tender-stough minded dimension have also been explored for possible links with the authoritarian personality; however, no definite conclusions have been reached at this writing.

The California Experiment

In 1950, Adorno, Frenkel-Brunswick, Levinson and Sanford published The Authoritarian Personality. The major emphasis of the research was concerned with identifying the potential fascist individual. Subsidized by the Department of Scientific Research of the American Jewish Committee, the work originally centered upon discovering the psychological roots of anti-Semitism. From this narrow perspective, the research mushroomed until the major hypothesis was reported to be:

...the political, economic, and social convictions of an individual often form a broad and coherent pattern, as if bound together by a "mentality" or "spirit" and that this pattern is an expression of deep lying trends in personality (4:1).

The research team devised three measurement scales concerned with explicit ideology. The Anti-Semitism Scale (A-S), the Ethnocentric Scale (E) and the Political

Economic Conservatism Scale (PEC) were successive scales which attempted to identify a personality syndrome which was characterized by an extreme susceptibility to Fascist propaganda. A fourth scale originally hoped to measure antidemocratic tendencies or prejudice without appearing to have this aim and without mentioning the name of any minority group. Called the Facism Scale (F), it attempted to measure by questionnaire, the personality trends that were also measured by interview and projective methods. As the scale was being erected another use for it was formulated. The scale would also be designed to measure the antidemocratic tendencies deep within the personality of the individual. These conscious or unconscious tendencies made up a syndrome which supposedly identified the personality type referred to by Adorno et al. as "authoritarian". Hence the F Scale became known as a measure of authoritarianism. Although the F Scale correlated moderately with the A-S, E, and PEC Scales it was felt that the F Scale also captured some of the deeper and unexpressed potential which was not evident when the individuals responded towards minority groups. Thus the two aims of the scale, (measure prejudice and antidemocratic trends without appearing so, and estimating these tendencies at the personality level) were realized together.

The scale itself was devised from clinical

material previously collected by the research team while creating the A-S, E and PEG Scales. Related studies done elsewhere were also utilized.

Hypothetical constructs, based upon the most significant central personality trends deemed to be evident in the authoritarian individual were derived and defined and made up the content of the F Scale. These construct or clusters are as follows:

1. Conventionalism	Rigid adherence to conventional middle-class values.
2. Authoritarian Submission	Submissive, meritless attitude toward idealized moral authorities of the in-group.
3. Authoritarian Aggression	Tendency to be on the look-out for, and to condemn, reject, and punish people who violate conventional values.
4. Anti-intellection	Opposition to the subjective, the imaginative, the tender minded.
5. Superstition and Stereotypy	The belief in mystical determinants of the individual's fate; the disposition to think in rigid categories.
6. Power and "Toughness"	Preoccupation with the dominance-submission, strong-weak, leader-follower, dimension; identification with power figures; overemphasis upon the conventionalized attributes of the ego; exaggerated assertion of strength and toughness.

7. Destructiveness and Criticism	Generalized hostility, vilification of the human.
8. Projectivity	The disposition to believe that wild and dangerous things go on in the world; the projection outwards of unconscious emotional impulses.
9. Sex	Exaggerated concern with sexual "going on" (4:228).

The constructs or clusters of the F Scale are all part of an overall syndrome. They are not psychologically "real" characterizations. Together these clusters distinguish the high scoring individual from a variety of low and moderate scorers.

There exists something like "the" potentially fascist character, which is by itself a "structural unit". In other words, traits such as conventionality, authoritarianism, destructiveness and aggressiveness, projectivity, manipulativeness, etc., regularly go together. Hence, the "fascisynonym" which we outline here are not intended to violate any of these traits. They are all to be understood within the general frame of reference of the high scorer (4:751).

Like the clusters of the scale, the individual scale items hold no real discriminatory powers. However, the items as a whole (like the clusters or constructs) had "some kind of psychological unity (14:489)". Melvin (15) found a very strong general factor running through all items.

The final form of the scale (Forms 45 and 40) has 29 items. The average of the reliability coefficient

based upon fourteen sample groups in 190(N 1518). The degree of reliability attained is within the range which characterizes acceptable intelligence tests. The average means (3.84) are fairly close to the neutral point (4.00) although they vary from one group to another. The discriminatory power of the scale items are such that "the items differentiate significantly between the high and low quartiles (4:290)."

Although the research team spent considerable man-hours on the development of the authoritarian concept and upon the creation of the F Scale, it was still the object of valid criticism.

Critique - California F Scale

Closely following the publication of The Authoritarian Personality and the California F Scale came a multitude of critiques and investigations into the scope, methods and theories underlying the entire concept. It has been said that "no work in social psychology has been given a more meticulous methodological and conceptual examination (14:509)." From these investigations four main areas of criticism arose.

Rokeach (5) examining the concept of general authoritarianism has concluded that the shift of emphasis from "Fascism in the personality" to "the authoritarian personality" has resulted in conceptual confusion because

there is an "unwitting leap from the particular to the general" (5:13). Rokeach feels that we cannot generalize from findings about high F scores. Those who obtain high F scores are authoritarian, but general authoritarianism is not a monopoly held by Fascists, anti-Semites or those viewed as being to the "right" on the political ideological continuum.

Supporting Rokeach, Brown (14) states that the authors of the F scale never referred to it as the Authoritarian Scale. Christie (16) also makes this observation. Brown feels that the many names given to the scale (Implicit Anti-democratic Trends, Potencyality for Fascism or Authoritarian Scale) indicated that the authors felt them to be equivalents. He argues that "Fascism" implies conservative right wing views while "antidemocratic" and "authoritarian" do not. Again this is a jump from the specific to the general. Brown concludes that it is a "serious dispute whether the F Scale assesses only Fascism (authoritarianism of the right) or assesses authoritarianism in general (14:487)" as it implies.

The leap from the particular to the general encompasses political ideology. From the Fascist tendencies to the general authoritarian personality a whole side of the political continuum is engulfed. This is the political left.

Shils (17) has concluded that the researchers responsible for the F Scale have studied only "right" authoritarianism and neglected to study "left" authoritarianism. Pointing to historical events, Shils outlines inadequacies in the explanation of these events within the concept of the right-left ideology. He feels that authoritarianism can be evident on both sides of the continuum, not just the right as was assumed by the California team. Examining the data Shils noted:

In conformity with the preconceived idea that authoritarianism is a characteristic of the Right and the corresponding notion that there is no authoritarianism of the "Left", there is no analysis of these deviant low Scorers. It would be presumptuous to assert that it was always the same low scoring individuals who repeatedly received the high ratings in the clinical interviews and that these deviant low scorers were in the main five "Leftists" among the Low Scorers. It was a reasonable interpretation which would justify a re-examination of the original data (17:32).

Coulter (13) has shown that the F Scale does indeed measure Fascistic trends, however a deeper examination into the research has shown that Communists were far below the scores obtained by the Fascists (18)(4).

All of the Communist samples have been extremely small, however the consistent low scores seem to illustrate that Communists in democratic countries do not produce high scores in the authoritarian scale. As Brown concludes:

This can mean either of two things:

1. The F Scale only measures authoritarianism of the right or fascism;
 2. The F Scale measures general authoritarianism in some sense, but communists in democratic countries are not authoritarian.
- In any event the Berkeley researchers seem to have been correct in their belief that the F Scale is a measure of fascism (14:529).

Barker (19) supports the contention that the F Scale is biased toward the political right and must be considered a rightist authoritarianism rather than of general authoritarianism.

The method of sampling has also received criticism. The authors of the study hypothesized that their findings could be generalized to the general population. They realized that the sample of persons upon whom the original research was conducted was not a representative sample since all of the subjects were members of at least one formal organization. Christie (10) states that people who belong to formal organizations are in very many respects different from people who do not. Although the authors feel that sampling techniques were coincidental to establishing relationships among attitudes, Hyman and Sheatsley (20) claim that perhaps certain attitudes held only by members of formal organizations cohere into what may be a concern with social issues and therefore may be called an antidemocratic ideology.

Other sampling problems were also evident. As

Salinity has been reported to have a significant influence on the growth and development of certain species of freshwater fish, particularly those which are (1) (2) (3) (4) (5) (6) (7) (8) (9) . The effect of the environment on the growth and development of the freshwater fish, (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) , and culture, especially in relation to diet, (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) , has been studied by many workers.

Perhaps the most serious methodological criticism of the Scale concerns the questionnaire items themselves. All the questions to which the subject must respond are worded in such a way that agreement with the items represents authoritarianism. The problem of acquiescence response set is therefore introduced. It has been shown that certain subjects may tend to consistently agree or disagree with varying assertions regardless of content (33). Thus if all the questions on a questionnaire

More research is needed to determine the effect of acquiescence on the F Scale.

Cohen (17) also found that the F Scale was more effective than the MMPI in predicting acquiescence. He found that the F Scale was more effective than the MMPI in predicting acquiescence, and that the F Scale was more effective than the MMPI in predicting the number of positive responses given by each subject. Cohen's results have also shown that the positive response pattern is not (. .)(. .).

Christie (18) reported the first evidence of the date hypothesis. He found that people who planned to write against the items were more "predisposed" to respond "true" to the positive statements on the F Scale, although he anticipated Cohen to find no significant relationship. Klein (19) supported Christie's hypothesis but rejected the reversed Christie model.

The finding that acquiescence response patterns actually improved the validity of the scale has also been advanced (29)(40). The researchers felt that a predisposition to repeatedly respond in a set pattern or a predisposition to respond to authoritarian items were actually characteristics of an authoritarian personality syndrome. Hence, acquiescence response would tap these traits in the syndrome enhancing the authoritarian measure of the F Scale.

Although it can be concluded that acquiescence

1960-1961

Rokeach's definition of dogmatism is as follows:

The term "dogmatism" refers to a set of personality characteristics which are associated with a rigid, inflexible, and uncompromising attitude towards one's own beliefs and values. It is characterized by a strong adherence to one's own opinions and by a lack of tolerance for other people's ideas and beliefs. The concept of "dogmatism" which he felt could also be referred to as "orthodoxy" or "orthodox thinking." This concept referred to varied individual characteristics which were:

...a closed way of thinking which could be associated with any ideology regardless of content, an authoritarian outlook on life, an intolerance towards those with opposing beliefs, and a indifference of those with similar beliefs (5:4).

Rokeach felt that the discriminating point between dogmatic,

response set needs to be a factor in the F-Beale, it cannot be a critical factor due to the fact that a relationship between the interview, TAP scoring and projective questions existed and these efficient techniques are free from the effects of response set.

Although the authors of the article in question realized the danger of acceptance response set, they originally defended their decision to use unidirectional items because they felt:

1. Negative items tend to be more discriminating.
2. Positive items can be phrased so that they "express ambivalence without necessitating the denial of the democratic values which most prejudiced people feel they must maintain" (4:50).
3. Few individuals show variance responses.
4. There is a tendency to avoid any extreme position.
5. Similar results were obtained when an all negative scale was inserted into a longer series including positive items.
6. The final test of the scale is the demonstration that high scorers are significantly different from low scorers in a variety of characteristics.

Although it is reported that the authors of the research "were not justified in generalizing their conclusions as widely as they did...they hit on a finding that is as highly reliable and highly general as they, on insufficient evidence, thought it was (14:510)".

closed-minded or authoritarian individual and the more
formative, open-minded or more authoritarian individual
varies in what is believed but ~~not~~ in what is believed. Specifically, the structure, ~~and not~~ the content of the belief,
is the critical variable.

Relating his theory to a framework, Rokeach felt that a given personality depended upon "an organization
of beliefs or expectancies having a definable and measurable structure" (5:77). The structure envisioned was
based upon organization of a belief-disbelief system
along three dimensions:

1. A belief-disbelief dimension
2. A central-peripheral dimension
3. An oblique-perspective dimension.

The belief-disbelief system was felt to include belief
systems and disbelief systems that were not necessarily
symmetrical in nature. Rokeach felt that an individual
holding a given system of beliefs could reject a series
of systems of alternatives or disbelief. Thus the conception
of the disbelief system was much more than just the mere
opposite of the belief system.

Defining the systems, the investigator stated:

The belief system is conceived to represent all the beliefs, sets, expectancies, or hypotheses, conscious and unconscious, that a person at a given time accepts as true of the world he lives in.

The disbelief system is composed of a series of subsystems rather than merely a single one, and contains all the disbeliefs, sets, expectancies, conscious and unconscious,

that, to one degree or another, a person's given line of reasoning is free (or not).

The individual beliefs are organized into the two interdependent parts - belief system and disbelief system (complement of each other's subsystems). The disbelief subsystem is more difficult to the belief system since "more acceptable than the belief dimension (or no)". Within this organization certain basic perceptual characteristics appear. These are: breadth, differentiation and breadth of the system.

Inclusion

1. Closest range of possibility - externalizing beliefs within the belief system.
2. The accentuation of difference and minimization of similarity between belief and disbelief systems.
3. Perception of irrelevance (that which may be relevant).
4. Denial of contradiction.

Differentiation

1. Relative amount of knowledge possessed.
2. The perception of similarity between adjacent disbelief subsystems.

Breadth of the System

1. Total number or range of disbelief subsystems.

In addition to the organization along the belief-disbelief dimension, the system is also organized along a central peripheral dimension.

- (1) A central region representing what will be called the person's "primitive" beliefs. These refer to all the beliefs a person has acquired about the nature of the physical world he lives in, the nature of "self", and of the "generalized other" (G.H. Mead).
- (2) An intermediate region representing the beliefs the person has in mind about the nature of parenthood, and the people who live up to it, authority, or who he depends on to help him form a picture of the world he lives in.
- (3) A peripheral region representing the beliefs derived from authority... (5:39).

The third dimension of the belief-disbelief systems is organization along a time perspective. This refers to belief about past, present and future and their interrelation. The time perspective may vary from narrow to broad.

Rokeach hypothesized that the dogmatic or authoritarian individual has specific characteristics within the organization of the belief-disbelief systems which identify him as authoritarian. Although comparing extremes (highly dogmatic or close minded versus lowly dogmatic or open minded) Rokeach cautions against construing that "people can be classified simply into one or another category (5:5)". Although many individuals are in the moderate category, an attempt to identify the characteristics which identify the close minded, highly dogmatic or the general authoritarian with respect to the moderate group has been made.

DEFINITION 1: The Defining Characterization of Open-Closed Systems

A Belief-Dissbelief System (a)

OPEN

CLOSED

- A. to the extent that, with respect to the organization along the belief-dissbelief continuum,
1. The magnitude of rejection of disbelief-subversion is relatively low at each point along the continuum;
 2. There is communication of parts within and between belief and disbelief systems;
 3. There is relatively little discrepancy in the degree of differentiation between belief and disbelief systems;
 4. There is relatively high differentiation within the disbelief system;
- B. to the extent that, with respect to the organization along the central peripheral dimension,
1. The specific content of primitive beliefs (central region) is to the effect that the world one lives in, or the situation one is in at a particular moment is a friendly one;
 1. The specific content of primitive beliefs (central region) is to the effect that the world one lives in, or the situation one is in at a particular moment is a threatening one;

2. The formal content of beliefs about authority and about people who hold to systems of authority (intermediate region) in to the effect that authority is not absolute and that people are not to be evaluated at all) according to their agreement or disagreement with such authority;
3. The structure of beliefs and disbelief perceived to emanate from authority (peripheral region) in such that its judgments are in relative consonation with each other, and finally;
- C. to the extent that, with respect to the time perspective dimension, there are,
1. relatively broad time perspective.
2. relatively narrow, future orientated time perspective.

Derived from Definition I, Rokeach formulated Definition II, a simpler and more basic explanation. He stated that:

...a basic characteristic that defines the extent to which a person's system is open or closed...[is] the extent to which a person can receive, evaluate, and act on relevant information received from outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside (5:57).

Therefore the more open one's belief system, the more able

one should be to evaluate and act on information based only upon the impact of a situation and the actual situation. Rokeach believes that one must not let outside external pressures, regardless of positive or negative evidence, "contaminate" the individual's "true belief." In the "true belief" should not be reflected the beliefs or information received about the world and the people experienced about the norm ("ideal"). It should therefore reflect the person's own personal needs and preferences that are not influenced by not internally related to the situation (true).

Using the theoretical concept of the belief's directed system, the dogmatism scale (Rokeach) was constructed to explore the nature, hierarchy and differences in opinions or beliefs of belief systems. Since the definition of closed and open mindedness is also that of general authoritarianism and general intolerance (holism), the scale should also serve as a measure of the general personality structure.

The scale was constructed so that strong agreement or disagreement would show one extreme of the characteristic being tapped. Statements appearing in the Dogmatism Scale express ideas familiar to the average person, and often were thought to be authoritarian. Rokeach emphasizes that above all,

...each statement in the scale had to be designed to transcend specific ideological positions in order to penetrate to the

formed and structured characterization of all positions... Thus, it was our hope that the Perfection Scale could be employed more comprehensively not only in the Western Countries but also in the Soviet Union and in other Eastern Countries (5:7).

The overall reliability of the First Dogmatism Scale based upon Gley's sample (1:403) was .76 with a range of .67 to .86. An Rokeach statement:

"The established items are considered to be quite satisfactory, especially when we remember that the Dogmatism Scale contains quite a number of statements which cover a lot of territory and appear on the surface to be unrelated to each other" (1:40).

The discriminatory power of the items "to become one with item and gain wisdom" typically show that high and low do not be subject to differ consistently and in a statistically significant manner on the great majority of the items (5:60).

Critique - The Dogmatism Scale

Very little criticism has been advanced with respect to the D (Dogmatism) Scale as created by Rokeach. Like the California F Scale, Rokeach also uses items which are all worded in the same direction. In the D Scale, all questions are stated so that high agreement with the items indicates a highly dogmatic (or closed mindedness) individual. Rokeach therefore is susceptible to the same criticisms with respect to acquiescence response set as

were the authors of the P Scale (41). Rokeach does conclude that "response set is present to at least some degree in the present scale (54%)." He rejects the position that response set accounts for the many findings of the D Scale on the ground that:

1. By far the differences occurred between the D and Opinionation Scales on one hand and the P and E Scales on the other.
2. Different but similar results were obtained on problem solving when a Rightly Scale (also worded in a negative direction) and the D Scale were compared.
3. A rich variety of differences between high and low scores on the D Scale cannot be accounted for by response set alone.

Rokeach also mentions the area of intelligence or education as a possible methodological issue. He does not control this factor by the observation that the correlation between scores on the Dogmatism Scale and Intelligence is typically zero and concludes that it would be hard to account for the findings on the basis of intelligence alone.

The greatest limitation suffered by the theory behind the Open and Closed Mind and the D Scale is the small number of subjects used in an attempt to verify the theory and the statistical levels of significance attained. Although none of the differences between the means of five political groups ever attains a conventional level of

statistical significance, Rokeach concluded that:

In evaluating the outcome of our research effort from a statistical standpoint, the trend of results is a more important consideration than the precise level of significance achieved by a particular set of differences (5:40).

The concept of general authoritarianism or close mindedness as proposed by Rokeach has been examined and supported (19)(42)(43)(44)(45)(46)(47). As a result, numerous investigators have used the D Scale in recent years as a valid measure of that which Rokeach termed dogmatism.

The Authoritarian Coach

The term "authoritarian coach" is based upon behaviour or attitudes exhibited by coaches while in the act of coaching. The term seems to have originated from use by sport psychologists and sport sociologists and spread to the entire sporting milieu. Literature now makes reference to the authoritarian coach and it implies that there is a common definition of syndrome expressed by the authoritarian coach terminology. Richards and Tutko (48) feel that "authoritarian coach" is synonymous with "hard nosed" and state that this type of coach is a hard driving and energetic man who demands a certain response from his players and who constantly compels the athlete to strive to achieve well formulated goals.

This man is best remembered for the form of "punishment" he devised to enforce his "hard nose" policies (48:17).

Richards and Tutko state that this coaching personality type "has the largest number of coaches within its descriptive boundaries (48:18)." They also note that most beginning coaches emulate this type of coach partly from the fact that the public typically equates success with this coaching style. The characterization of the authoritarian coach as discussed by the authors are:

- 1. a strong belief in discipline;
- 2. punitive measures to enforce rules;
- 3. rigid schedules and plans;
- 4. cruel and undiscerning;
- 5. not a warm personality;
- 6. organized and well planned;
- 7. not close interpersonally;
- 8. religious and moralistic;
- 9. bigoted and prejudiced;
- 10. prefers weaker people as assistant coaches;
- 11. uses threats to motivate.

Underwood (49) states that "The issue is authority and the response to authority (49:40)". Many of the coaches who were reported to have had problems with protests and criticisms in their respective schools had characteristics which were not unlike those termed "authoritarian" by Richards and Tutko. The most outstanding traits being criticized were:

- 1. prejudice and bigotry;
- 2. cruel, punitive and threatening;
- 3. a strong belief in sacrifice and discipline;
- 4. a failure to accept social change.

Scott (50), referring to research done by Olgilvie

the term "coach" to mean something like "dependent".
The word "coach" is used in the 1977 (1978) book
pointing to the effect of the coach's influence on the individual.
The fifth definition (c.) is an example of this interpretation.
Although Scott does not specifically state exactly what
he means by authoritarians, he points to some much of his
definition upon Gelfman and Tutko's (51) discussion
that coaches are not very sensitive to dependency needs
in others and that along with this they are "highly
success-driven men with an outstanding need to be on top
(51:22)". Scott interprets this as meaning:

Thus, we can write the following equation for the total energy of the system:

Consequently, the "moral" and "material" forms of punishment were gradually replaced by a much more effective and efficient system. Generally, while the Chinese "army" indeed was "equipped with the idea that it was the duty to do so (§1:74)" and often enforced this strict discipline and grueling practices with threats and a system of monetary fines,

Burnep writes that "the most successful coaches are the ones with the worst reputations for brutality or meanness (55:15). Discipline is a key word," Burney feels, and anyone who does not conform to the system such as the

parent and teacher, and the coach of the team, and the
player (s) ("A") "are to be considered the type of
coaches.

Do you () consider () coaches to be good
and bad? ~~What~~ ^{What} are the good qualities of a
good coach? ~~What~~ ^{What} are the bad qualities of a
bad coach? ~~What~~ ^{What} are the good qualities of a
good player? ~~What~~ ^{What} are the bad qualities of a
bad player? ~~What~~ ^{What} are the good qualities of a
good team? ~~What~~ ^{What} are the bad qualities of a
bad team?

Other examples of justifications for rules and regulations
exist in the area concerned with the coach and the other
field of the game coaches. These regulations attempt
to limit the coaching, influence, and a benefit to prevent
fairness of play. Often players are made to sign a pledge
(before they are allowed to participate) and if found
acceptance of the coach's regulation ("A"). Violations
of the pledge are a serious offence often ending up in
expulsion from the team, or in the American University,
loss of scholarship. Although many rules and regulations
are justified by claiming improved performance levels,
many coaches include regulations which do not allow for
individual variations. Often the system of regulations
attempts to rigidly control social, moral, and religious
matters not related to sport.

After such a brief history of authority it is evident that the concept of popularity has come to be associated with authority. The experience of Hitler's Germany, coupled with the failure of the Japanese authority system in their invasion of Korea, has exposed again the nature of authority, particularly concerning the nature of personal authority which may also be termed authoritarian with respect to personality theory. Leibnitz has said that "The individual has to have respect for authority regardless of what that authority is (59:95)". Of the nature of man's relationship to authority he continued "...we must regain respect for authority because to disavow it is contrary to our individual natures (58:181)".

With this in mind, it is easy to see that coaches with this opinion cannot tolerate anyone who does not

the concept of the coach as a person who is controlling, commanding, and influencing the approach of his students to the day-to-day tasks he has been given. The coach is seen to be a depositary of the knowledge and experience which the students in the class have (Adorno et al., 1950). The coach is seen to be the embodiment of the "ideal" in the students' minds.

Thus, if the coach is seen to be a person who will be able to tell the students what they should do, what they are able to do, and what they should not do, then the coach is seen to be the "ideal".

The popularity of the term "authoritarian coach" and the concept of the coach as a "dictator" and "boss" are not new, and have been present since the early days of football. Evidence of the coach being used to teach the game and to discipline. Consequently, coaches have been seen to be uncompromisingly difficult and to be capable of exerting a wide range of authority within the concept. As selected, defined and explained:

"...A re-examination of authoritarianism, might be directed by Adorno et al. (1950), the great utility in analysing the personality characteristics of coaches who are popularly held to be authoritarian. There are strong similarities between the personality traits which Adorno et al. feel are characteristic of authoritarians and those traits which are extremely evident in coaches who are judged authoritarian. If the popular conception of an authoritarian coach's behaviour (attitude and personality) is examined closely, two general areas are evident.

They are:

1. An emphasis upon power, control, and authority in relationships
 - a belief in the need for discipline
 - a preference for strict adherence to rules
 - attitudes of control and domination of others
 - a sense of threat from different cultures and groups
 - simple and uncomplicated political ideology
2. Interest in power, control, and authority in society
 - a desire for centralized control over economic life
 - a belief in the possibility of maintaining long-term stability
 - a concern with the future
 - a concern with the past

Countries whose élites exhibited these traits in their movement seem to have performed better which are more inclined to the Adorno et al. traits of anti-intellectualism, especially the extroversion:

1. Conventionalism
 - an attitude toward the normative and standardized behavior (middle class)
 - lack of extroversion
2. Belief in a hierarchy of Authority
 - unentitled attitude toward recognized authority
3. A Preoccupation with Violations of Conventional Values
 - a to be on the lookout to condemn, reject and punish those who violate conventional standards
 - belief that hostility and evil forces are undermining society and its institutions
4. Preoccupied with Power-Toughness
 - identification with power figures
 - concerned with dominant-submissive, strong-weak, leader-follower dimensions
 - a generalized intolerance towards

the word and behavior field
(subjective, objective).

Rokeach's (4) conception of just belief and unjust belief
is markedly different from the concept of hold by Adorno et al.
In his descriptive model (4), the conception is built upon
the knowledge that the certainty with which an individual
holds in mind a particular belief is related both to the
efficiency of the individual to make that belief fit with the
outlook of the individual. While he has delineated authoritarianism
as personality specimen (1)(2)(3) as similar with
respect to personalistic and authoritarian tendencies, he has also
referred implicitly to the situation described by Rokeach in a
uniquely negative manner.

Applying Rokeach's conception of just belief and unjust
belief to the popular conception of an authoritarian coach seems
on the surface to have little or no justification. However,
a closer examination of the degree to which popularly
classified authoritarian coaches hold their beliefs reveal
that these individuals reportedly claim to hold a
monopoly on the truth and stubbornly refuse to experiment
or accept anything except that which they themselves
adhere (4)(50)(51)(52)(54)(55)(57)(58)(59)(60)(62). It
is the author's belief that a measure of the personality
traits outlined by Adorno *et al.* in combination with a
measure of the tenacity with which they are held, may be
extremely useful in judging coaching authoritarianism at

the personality level.

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CHAPTER III

METHOD AND PROCEDURE

Instrumentation

A. The Dogmatism Scale

The Dogmatism Scale or D Scale was created by Rotter (1966) to measure the general authoritarianism within an individual, taking account of his political beliefs, General and specific religious or cultural indoctrination, by church, sect, tribe, or family. The "empty" received evidence and set on relevant information received from the outside, which can interfere with the individual's own needs, influenced by apprehensive factors, in the situation originating from within the person or from the outside (1:57). Unlike the California F Scale, the D Scale measures general authoritarianism which is free from ideological content. Therefore, general authoritarianism can best be thought of as a mode of thought, rather than a specific set of beliefs (1).

The reliability of the Dogmatism Scale ranges from .68 to .93 with an average of .79. These reliabilities were obtained from eleven groups with N=408.

The author, while acknowledging the fact that response set may be a minor factor influencing the ultimate validity of the scale, rejected the position that

On the other hand, the average values for the first and third moments of the F-Scale are given in Table I. It is evident that for the first moment the average value is slightly negative. The second moment is positive.

The reliability of the third term of the F-Scale is also within 10%. The average terms ($.34$) are near the mid-point ($.40$) and it has been shown that the

the following year. The first year was characterized by a general increase in the number of species and individuals, while the second year showed a marked decrease. This change in population density may be attributed to several factors, including changes in environmental conditions, predation, or competition. The data also indicate that the most abundant species in the community were the *Acacia* and *Bunya* trees, which contributed significantly to the overall diversity and abundance of the ecosystem.

The Sample Kit includes a copy of twenty-five items which can be divided into six sub-classifications. These sub-classifications are:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1. I am a good listener.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2. I am a good reader.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
3. I am a good writer.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4. I am a good speaker.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
5. I am a good reader and writer.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
6. I am a good reader and speaker.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
7. I am a good reader, writer and speaker.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
8. I am a good reader, writer and listener.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
9. I am a good reader, writer, speaker and listener.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
10. I am a good reader, writer, speaker and listener and a good teacher.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

As in the D and E Beakers, the items were scored by a Likert forced choice scaling technique which stated:

RESULTS

The study was conducted to make subjects in the City of Edmonton, Alberta, Canada, 16 which subject was pre-selected in order to create three sample groups. These groups were as follows:

(c) The sample size was determined by the following formula:

(d) The sample size was determined by the following formula:

(e) The sample size was determined by the following formula:

(f) The sample size was determined by the following formula:

(g) The sample size was determined by the following formula:

(h) The sample size was determined by the following formula:

(i) The sample size was determined by the following formula:

(j) The sample size was determined by the following formula:

(k) The sample size was determined by the following formula:

(l) The sample size was determined by the following formula:

(m) The sample size was determined by the following formula:

(n) The sample size was determined by the following formula:

(o) The sample size was determined by the following formula:

THE CLOTHES

1. The following is a list of the names of the members of the Board of Education.

¹⁰ See also the discussion of the concept of "cultural capital" in Bourdieu, *Distinction*, pp. 11–12.

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¹ See also the discussion of the relationship between the two concepts in the introduction.

¹ The following section is based on the report of the Royal Commission on the Status of Women.

¹ Kopp, 1994, p. 14; see also Kopp, 1994, p. 14, and Kopp, 1994, p. 14.

and no single polarizing filter can do it.

The Quantitative Line

The questionnaire was a combination of both D and F Scales. The questionnaire contained fifty-eight items, of which the first forty were the D Scale and the last twenty-eight the F Scale. The D Scale remained exactly as Rokeach had designed it while one item was omitted from the F Scale due to its antiquity. The actual items in the questionnaire were preceded by detailed instructions and

and the mean of the D Scale was 10.0 ($\sigma = 1.7$, $N = 10$).

The mean of the E Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the F Scale was 10.0 ($\sigma = 1.7$, $N = 10$).

The mean of the G Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the H Scale was 10.0 ($\sigma = 1.7$, $N = 10$).

The mean of the I Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the J Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the K Scale was 10.0 ($\sigma = 1.7$, $N = 10$).

The mean of the L Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the M Scale was 10.0 ($\sigma = 1.7$, $N = 10$).

The mean of the N Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the O Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the P Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the Q Scale was 10.0 ($\sigma = 1.7$, $N = 10$).
The mean of the R Scale was 10.0 ($\sigma = 1.7$, $N = 10$).

Statistical Treatment

The Entropy

Kappa statistics and deviates were calculated for each of three sample groups (the members of the E and D Scales). A one-way analysis of variance was computed between sample groups in many of the F Scale and the D Scale. A Newman-Keul's comparison matrix was utilized. Significance was accepted at the .05 level of confidence.

1. *Leucosia* *leucostoma* (Fabricius) *leucostoma* (Fabricius)

¹ See also the discussion of the relationship between the two in the introduction.

¹ See, e.g., *United States v. Ladd*, 100 F.2d 700, 703 (5th Cir. 1938) (holding that a conviction for mail fraud was not collaterally estopped from being used as an element of proof in a subsequent trial for mail fraud).

1. *What is the relationship between the two main characters?*

Figure 1. The effect of the number of hidden nodes on the prediction error.

¹ Although the term "postcolonial" has been used in a variety of ways, it is often understood as referring to the period since the end of European colonial rule.

For more information, contact www.fcc.gov, or call 1-800-FCC-INFO.

With the exception of the first two, these documents were written by the author.

Results were evaluated over the non-deployed configuration.

teacher-to-teacher and reported to the head of the physical

education and teacher education.

Means were also computed for the conclusions.

experienced educators and compared to the means of the non-experienced group.

each experienced educator.

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the following year. M. B. T. and I spent the winter months at the
University of Michigan, where we were able to study the
Frigatebird colony at the University of Michigan.

The Frigates of the University of Michigan were kept in the
Frigatebird colony (1912).

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CHAPTER IV

QUESTIONNAIRE RESULTS

EDUCATORS

The population used in this study was the adult male population of Edmonton, Alberta, Canada. This population was selected because it was felt that the average teacher would be representative of the average man in the community. The population consisted of 1,011 males between the ages of twenty-one and forty-four years. The sample size was determined by the use of a random number table. The results of the completed questionnaires were analyzed statistically, following the methods outlined in the "Statistical Methods for Business Research" by W. H. Hasselblad.

The sample group of educators returned thirty-five questionnaires. Thirty of these returns were eliminated due to errors or incorrect marking procedure, leaving a return number of thirty-two. This represented fifty percent of the questionnaires sent.

A third sample group comprised of members of the male population of Edmonton, Alberta, Canada, showed a similar return rate as compared to the "educator" group sampled. Sixty-five questionnaires were sent and thirty-six were returned. Two of these returns were unanswered, one was returned with an incorrect marking technique and

It is found that questionnaires are most effective by the method of direct questioning. This method utilizes the memory in this complete process of apprehension, directly percepting the environment through the sense organs.

The λ -min problem was solved using a scheme similar to the one used for the μ -min problem. The initial point for the λ -min problem was taken to be the solution of the μ -min problem. The initial value of λ was set to zero. The following iteration scheme was adopted: (i) Compute $\lambda^{(k)}$ and $\mu^{(k)}$ by solving the equations (10) and (11); (ii) Compute $\lambda^{(k+1)}$ by solving the equation (12). This was repeated until the condition $\| \lambda^{(k+1)} - \lambda^{(k)} \| < \epsilon_1$ was satisfied. The final value of λ was denoted by λ_{opt} . The mean value of the objective function (10) was denoted by μ_{opt} . The mean values of the objective functions (10) and (11) were denoted by μ_{opt}^{μ} and $\mu_{\text{opt}}^{\lambda}$ respectively. The μ_{opt}^{μ} and $\mu_{\text{opt}}^{\lambda}$ values obtained by the P-S method (denoted by μ_{opt}^{μ} and $\mu_{\text{opt}}^{\lambda}$) were substituted into (10) from (11). The numerical points in the μ_{opt}^{μ} and $\mu_{\text{opt}}^{\lambda}$ curves ranged from a high of $\mu_{\text{opt}}^{\mu} = 1.0$ to a low of $\mu_{\text{opt}}^{\lambda} = 0.0$.

TABLE I
Number of Great-Grandchildren Respondents

	F. Bedside	D. Bedside	CAB's Bedside
Coaches Sample Group	40	40	42
Educators Sample Group	32	32	-
General Population Sample Group	32	32	-

The majority of the coaches do not support the literature which claims membership groups have more, and just the same, potential for leadership than non-members (TABLE 11). The mean scores of the coaches' sample group are lower than the mean scores of the coaching sample group (TABLE 11). The mean scores of the educators' sample group are also lower than the mean scores of the coaching sample group (TABLE 11). This suggests that the coaches' sample group are less inclined to leadership than the coaching sample group.

TABLE 11

Age, Educational Level, Sex, and Work Experience		Leadership Scores			
Sample Group	Coaching Sample Group	EDUCATION	EXPERIENCE	SEX	WORK
Coaching Group	15.10	15.10	15.10	15.10	15.10
Sample Group	15.10	15.10	15.10	15.10	15.10
EDUCATION	15.10	15.10	15.10	15.10	15.10
EXPERIENCE	15.10	15.10	15.10	15.10	15.10
SEX	15.10	15.10	15.10	15.10	15.10
WORK	15.10	15.10	15.10	15.10	15.10
EDUCATION	15.10	15.10	15.10	15.10	15.10
EXPERIENCE	15.10	15.10	15.10	15.10	15.10
SEX	15.10	15.10	15.10	15.10	15.10
WORK	15.10	15.10	15.10	15.10	15.10

For each variable, the mean scores of the sample group are significantly higher than the mean scores of the coaching sample group.

An analysis of variance indicated that the difference in means between the coaches' sample group and the sample group of members of the male population of Edmonton is significant at the .05 level of confidence (TABLE 11). The scores of the educators' sample group are extremely close to the coaching group and the difference in means is not significant for the F Scale.

Group I
Group II
Group III

Group IV Group V Group VI

Group VII Group VIII Group IX

Consequently, the effect of the magnetic field on the
current density is small. This is in agreement with the
theoretical prediction of the magnetic field effect on the
conductance of the normal metal. The magnetic field
significantly effects the conductance of the superconductor
in particular when the value of the field is small.

the profile of the group that had been exposed to the drug (TABLE IV). A further finding is the significant positive relationship revealed by the data that could be expected. Although the mean number of the control and placebo groups showed a direct relationship between age and patient load (TABLE I), the individuals within the groups actually show a significant inverse relationship or an insignificant

the effect of the competition on the heart rate of the participants. It was found that the average heart rate of the competition group increased under the condition (at the time of writing) in which the competition took place, there was no way of contrasting the effect an individual's involvement with sport may have had upon the scores.

Although it is safe to assume that most of the individuals involved in the sample groups were exposed to participation in, and observation of sporting events, there was no method

The author has made an attempt to study the relationship between physical education and non-physical education in schools in India. The author has also tried to find out the relationship between physical education and non-physical education in schools in India. The author has also tried to find out the relationship between physical education and non-physical education in schools in India.

the author concluded that the results were significant. The author also stated that the results were significant for the following reasons: (1) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (2) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (3) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (4) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (5) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (6) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (7) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects; (8) the mean scores of the eight subjects were significantly higher than the mean scores of the other subjects.

1

— 1 —

¹ See also the discussion of the relationship between the two in the introduction to this volume.

10. The following table shows the number of hours worked by each employee.

10. The following table shows the number of hours worked by each employee.

10. The following table gives the number of hours per week spent by students in various activities.

¹ See also the discussion of the relationship between the two concepts in the introduction.

80% of the patients with the most severe forms of the disease.

⁸ Cf. supra, *complaint*, and the discussion of the conduct's role

will be explored more fully at a later point in this study.

Secondary Problems

A. Secondary Problem

Coaches have been judged as "authoritarian".

based upon behaviour and/or attitude expressed while in

The following table gives the results of the experiments.

10. The following table shows the number of hours worked by 1000 workers in a certain industry.

10. The following table shows the number of hours worked by each employee.

For more information about the study, contact Dr. Michael J. Hough at (510) 601-5200 or via e-mail at mjh@berkeley.edu.

10. The following table shows the number of hours worked by each employee.

Figure 1. Pesticide Concentration

W. G. L. —

—
—
—
—
—

10. The following table gives the number of hours worked by each of the 1000 workers.

3

For more information about the study, contact Dr. Michael J. Koenig at (314) 747-2100 or via e-mail at koenig@dfci.harvard.edu.

10. *Leucosia* *leucostoma* (Fabricius) *leucostoma* (Fabricius)

— 1 —

10. The following table shows the number of hours worked by 1000 workers in a certain industry.

—
—
—

16. *Urtica dioica* L. (Nettle) (Fig. 16)

10. The following table shows the number of hours worked by each employee in a company.

19. *Leucosia* *leucostoma* *leucostoma* *leucostoma* *leucostoma*

1. *Streptomyces* *luteus* (Berk.) Link var. *luteus*

10. The following table shows the number of hours worked by each employee in a company.

Journal of Health Politics, Policy and Law, Vol. 35, No. 4, December 2010
DOI 10.1215/03616878-35-4 © 2010 by The University of Chicago

10. The following table shows the number of hours worked by each employee.

the relationship between the two scales is significant.

Relationships among the scales

The relationships among the three scales were examined by means of factor analysis.

Table VI shows the results of a factor analysis of the three scales.

The first factor accounts for 51.1% of the variance in the three scales.

The second factor accounts for 19.1% of the variance in the three scales.

The third factor accounts for 10.1% of the variance in the three scales.

The fourth factor accounts for 7.1% of the variance in the three scales.

The fifth factor accounts for 4.1% of the variance in the three scales.

The sixth factor accounts for 2.1% of the variance in the three scales.

The seventh factor accounts for 1.1% of the variance in the three scales.

The eighth factor accounts for 0.1% of the variance in the three scales.

The ninth factor accounts for 0.1% of the variance in the three scales.

The tenth factor accounts for 0.1% of the variance in the three scales.

The eleventh factor accounts for 0.1% of the variance in the three scales.

The twelfth factor accounts for 0.1% of the variance in the three scales.

The thirteenth factor accounts for 0.1% of the variance in the three scales.

The fourteenth factor accounts for 0.1% of the variance in the three scales.

The fifteenth factor accounts for 0.1% of the variance in the three scales.

The sixteenth factor accounts for 0.1% of the variance in the three scales.

The seventeenth factor accounts for 0.1% of the variance in the three scales.

The eighteenth factor accounts for 0.1% of the variance in the three scales.

The nineteenth factor accounts for 0.1% of the variance in the three scales.

This hypothesis is supported in part by the high

degree of relationship between F and D Scale scores as

measured in all three sample groups (TABLE VI).

RESULTS

The results of the study will be discussed under the following heads:

A. Relationship between the coach's personality and his coaching style.

For this purpose, the following variables were analyzed:

(i) Age of coach, (ii) years of coaching experience,

(iii) number of sports coached, (iv) ratio of wins to losses,

(v) general authoritarianism as measured by the D Scale, (vi) right-wing authoritarianism as measured by the F Scale.

The situational factors analyzed were:

(i) age of child, (ii) sex of child, (iii) type of sport,

B. Relationship between the coach's personality and his coaching style.

In analyzing the relationship between the coach's personality and coaching style, the following variables were analyzed:

(i) age of coach, (ii) years of coaching experience,

(iii) number of sports coached, (iv) ratio of wins to losses,

(v) general authoritarianism as measured by the D Scale, (vi) right-wing authoritarianism as measured by the F Scale.

The situational factors analyzed were:

(i) age of child, (ii) sex of child, (iii) type of sport,

(iv) general authoritarianism as measured by the D Scale, (v) right-wing authoritarianism as measured by the F Scale.

The results of the analysis are presented in the following tables:

The following table about forged victories, evidently in major team sports in the City of Edmonton, are easily observed (TABLE VIII). It is noted that the mean age of the sample of coaches was 29.07 years. The range was from 24 to 43 years. Only one coach was above age 34. In comparison, it was noted that the age range for the educators sample group was from 26 to 62. In addition,

and the other is that of the "marginal" or "local" variable. The former is often called the "global" variable because it is the average of all the variables. The latter is called the "marginal" variable because it is the average of all the variables except one. The global variable is the average of all the variables, while the marginal variable is the average of all the variables except one. The global variable is the average of all the variables, while the marginal variable is the average of all the variables except one.

¹ See also the discussion of the "moral economy" in the work of E.P. Thompson.

10. The following table shows the number of hours worked by each employee.

卷之三十一

Consequently, the author's claim that the results of the study are generalizable to all women in the United States is not supported by the data.

10. The following table gives the number of hours worked by each of the 100 workers.

10. The following table gives the number of hours worked by each of the 100 workers in the factory.

1. *Chlorophytum* (L.) L. (1753) 1. *Chlorophytum* (L.) L. (1753)

¹⁰ See also the discussion of the relationship between the two in the section on "The Nature of the State," above.

The right-hand page of this volume also contains

of our joint paper (P., T., and G.H. Geissler) is given in

TABLE VI (Continued).—Although the ratio of players to coaches was 10 to 1, the number of coaches per team was 1.5.

(part-time condition before leaving one's old job) catching time.

compared to full time students) and the number of sports

coached by any individual coach had no relationship upon

any measure of authoritarianism; the age of the coach and

The following table gives the results of the experiments.

¹⁰ See also the discussion of the relationship between the concept of "cultural capital" and the concept of "cultural value" in the section "Cultural Capital and Cultural Value."

THE PRACTICAL USE OF THE COMPUTER IN THE FIELD OF POLYMER PHYSICS

1. The first step in the process of creating a new product is to identify a market need.

Figure 1. The effect of the number of nodes on the performance of the proposed algorithm.

10. The following table shows the number of hours worked by each employee.

10. The following table shows the number of hours worked by each employee in a company.

10. The following table shows the number of hours worked by each employee in a company.

19. The following table gives the number of hours worked by each of the 1000 workers.

卷之三十一

10. The following table shows the number of hours worked by each employee in a company.

Journal of Oral Rehabilitation 2003; 30: 103–109 © 2003 Blackwell Publishing Ltd

10. The following table gives the number of hours worked by each of the 100 workers.

10. The following table shows the number of hours worked by each employee.

"Anhänger der

CA) Seedling 2471 03-11-148

10. The following table shows the number of hours worked by each employee.

*Close to significance at .05 level of confidence.

the following year (1860) he was appointed

Superintendent of the State Normal School at the

conclusion of which he was promoted to the rank of

head. This was his first position outside of the

university, and it was one of the most difficult to

the β -series (β^+).

With regard to the problem of the nature of the β -radiation,

the experiments of Rutherford, Moseley, and others have shown

that it consists of a series of discrete energy levels, and that the

transition from one level to another is accompanied by the emis-

sion of a photon of definite energy, which is proportional to the

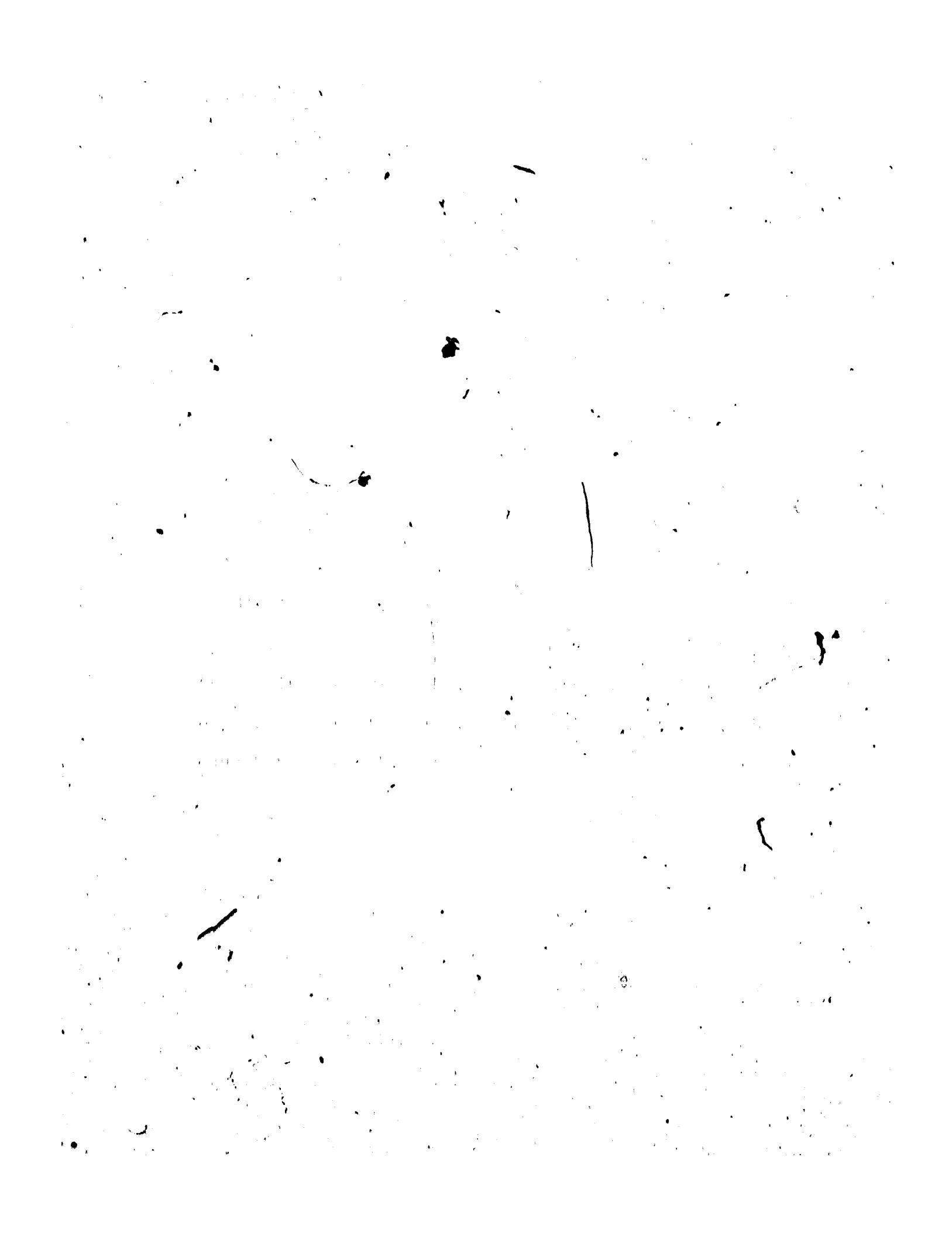
the same time, the U.S. Supreme Court has held that the Constitutional right to bear arms applies to the states through the Second Amendment. This is the case even though the Second Amendment does not mention the word "state". The Supreme Court has ruled that the Second Amendment applies to the states through the Fourteenth Amendment, which protects individual rights from infringement by state governments.

and the most important factor in the development of the game is the financial support of the public. The amount of money spent on the amateur player is infinitesimal compared to the professional, yet the amateur player is thought to be not nearly as highly developed financially. With the amount of money involved in the United States, it is easy to see that the collects position is an important focal point around which the sporting life can revolve.

and the coach's personal style of coaching. In addition, the coach's own personal attitudes and beliefs about the coach's role in coaching athletes may be especially important if the nature of authority and of the ~~the~~ ^{the} relationship of authority and client have become highly ritualistic. Although purely speculative in nature, it is widely believed in many

the "volunteer" coach. In addition, the "volunteer" coach is often the coach of the school's best team. In fact, of the 1000 coaches in the study, 75% were the coaches of the "A" teams. This means that the "volunteer" coach is often the coach of the best team in the school system. This is a significant finding, as it suggests that the "volunteer" coach is often the coach of the best team in the school system.

the Canadian coach has little time to develop expertise in any given sport. Perhaps this partially accounts for Canada's relative lack of expert coaches and high



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the following sections describe the sampling procedure used.

Three groups of subjects were recruited from the general population of Edenton, North Carolina. The first group consisted of 100 randomly selected adults who had been registered to vote in the last election. The second group consisted of 100 randomly selected adults who had been registered to vote in the last election and had been employed by the City of Edenton for at least one year. The third group consisted of 100 randomly selected adults who had been registered to vote in the last election and had been employed by the City of Edenton for at least one year.

Random samples were drawn from the three groups. The first sample group consisted of 100 randomly selected adults from the general population of Edenton. All sample groups were asked to complete a questionnaire which included a P Scale measuring general authoritarianism and an F Scale measuring right-wing authoritarianism. In addition to the F and D Scales, all groups were asked to complete a

The participants were asked to evaluate the importance of different aspects of their personal development. The following questions were included in the questionnaire, which were considered to be the most important in general. The participants were asked directly about their own individual cultural features and needs. This may be related to coaching in an effort to explain the findings in light of previous contradictory results in the United States.

After the first two days of the experiment, the mean weight gain of the control group was significantly higher than that of the experimental group. The difference between the two groups was statistically significant at the 0.05 level.

the α and β variables. The α variable is the primary variable of interest, although the β variable is also important. The α variable is highly correlated with the β variable, which is also highly correlated.

to the new country, and the new country to the old. The
colonists, if they could, would have preferred to remain
in their old homes; but the new country was too good,
and the "new country" people were too good, to be
left alone.

1. A study to evaluate the effectiveness of
coaching and self-coaching in the development
of effective and efficient problem-solving skills.
2. A study to evaluate the effectiveness of
coaching and self-coaching in the development
of effective and efficient problem-solving skills.
3. A study to evaluate the effectiveness of
alternative authority-driven problem-solving techniques

- ~~9. A survey flight over the area suggested by the author
be conducted in other sections of the Cibola in order
to determine whether or not the geographic setting has an
effect upon all aspects of the birdbander.~~

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APPENDIX A
INTRODUCTORY LETTER TO COACHES

division of athletics

FACULTY of PHYSICAL EDUCATION
the university of alberta • edmonton, canada

111.

May 28, 1973

Dear

I am presently involved in a research project at the University of Alberta, designed to explore the general personality of coaches here in Edmonton. I would like to solicit your time and cooperation in this research.

In a few days I will send you a packet containing two questionnaires. When you find time within the next week or so, I would ask you to complete the questionnaire and return it to me in the stamped self-addressed envelope. The total time involved should be less than one-half hour.

I would like to thank you in advance for helping me with a project which I feel may be extremely valuable and could tell us more about ourselves.

Yours in coaching,



Bob Bain
Head Basketball Coach

BB/ap

APPENDIX B
QUESTIONNAIRE COVERING LETTER TO COACHES

division of athletics

113.

FACULTY of PHYSICAL EDUCATION
the university of alberta • edmonton, canada

May 31, 1973

Dear Coach:

Please find enclosed a questionnaire concerning beliefs with which you may agree or disagree. As I mentioned in my previous letter, I would greatly appreciate it if you can take time out from your schedule and aid me in a research project which may have important ramifications.

A short information sheet is included as are complete instructions to the questionnaire.

Yours sincerely,



Bob Barr

BB/ap
Enclosure

APPENDIX C
GENERAL INFORMATION SHEET FOR COACHES

INFORMATION

1. Sport Coached _____ level _____
2. Number of players on team _____ Average Age of Players _____
3. Number of full-time assistants _____ Part-time assistants _____
4. Do you have an academic degree? Yes No
5. Did you receive the majority of your education in Canada
Yes No
If no, please state country education occurred _____
6. Number of years involved in any type of coaching _____
7. State sport other than listed in #1 above that you have coached.

SPORTYEARS COACHED

8. Age in years _____

APPENDIX D
THE COACHES ATTITUDE-BEHAVIOUR SCALE

INSTRUCTIONS

The following statements are based upon situations and specific problems with which coaches sometimes must concern themselves. The best answer to each statement is your personal choice. I have tried to cover a wide variety of coaching questions. You may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many coaches feel the same as you do. Please base your opinions upon your feelings and your actual behavior with respect to your coaching experiences.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1 I agree a little	-1 I disagree a little
+2 I agree on the whole	-2 I disagree on the whole
+3 I agree very much	-3 I disagree very much

1. It is best to maintain a large social distance from the players in order to maintain a high level of authority.
2. Coaches should be concerned with discovering the individual athletes who violate team or social rules.
3. The players should always realize that coaches are the boss whether or not they are right and their decisions or regulations should never be questioned.
4. The coach has the right to set all rules and regulations and anyone who violates these rules must be disciplined.
5. The coach has enough problems trying to achieve a high performance level from his athletes and should not overly concern himself with an individual athlete's problems.
6. Players should report all grievances to the captain of the team in order that he may report them to the coach.
7. The best way to eliminate mistakes is to make the players do pushups, laps or any form of physical exercise so that he will remember his mistakes and won't make them again.
8. Most players are motivated by threats of punishment such as laps, push-ups, etc.
9. Players are motivated by threats of demotion or of expulsion from the team.
10. Disciplinary action taken by the coach is easier and handled better if the players involved are not personally close to the coach.
11. Coaches should get to know their players slightly, but should not become friendly or warm with them.
12. Players should realize that the coach knows more than they do in the particular sport and should never ask "why?"
13. A well disciplined team on and off the playing field or court usually has better performance record.
14. A well disciplined team makes the coach look better to the community at large.
15. A rigid formal relationship with an athlete on and off the court should be one of the methods used by coaches to maintain respect and jurisdiction a coach deserves and needs in order to best perform his duties as coach.
16. A coach who is too friendly with his players and does not remain somewhat detached from them is apt to lose his position of influence over the athletes.
17. A coach should always keep his over all won-lost record in mind in order to see if his athletes view him as successful or not.
18. Coaches and Athletic administrators should continually be aware of those who are attempting to undermine the system of athletics whether they are athletes or not.

19. Those individual athletes who attempt to disrupt the athletic system must be punished or "put down" by any acceptable method if available.
20. A coach should refrain from taking extreme positions in any aspect of social or professional behavior because he must set a conservative example to his players and to other coaches.
21. A coach should organize himself to the point that there can be absolutely no question in his mind or his athletes' minds about what is occurring whether it be during a game, during practice, or during a road trip.
22. Athletes recognize the position of authority of the coach and respond to forceful and direct criticism or threat of criticism in a desired direction.
23. Discipline in athletics helps create model citizens or at the least helps develop individuals to take meaningful and worthwhile positions in society.
24. If more people would participate in athletics, they would be better able to discipline themselves in everyday life because of discipline they receive in sport.
25. Players should not be encouraged to come and talk to the coach about problems in the offense or defense because this is the coaches concern. The athlete should be concerned with perfecting his techniques within the system.

APPENDIX E
THE QUESTIONNAIRE INCLUDING F AND D SCALES

120.

INSTRUCTIONS

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your PERSONAL OPINION. I have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3 or -1, -2, -3, depending on how you feel in each case.

+1: I agree a little
+2: I agree on the whole
+3: I agree very much

-1 I disagree a little
-2 I disagree on the whole
-3 I disagree very much

1. The United States and Russia have just about nothing in common.
2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
3. Even though freedom of speech, for all groups is a worthwhile goal, it is unfortunately necessary to restrict freedom of certain political groups.
4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
5. Man on his own is a helpless and miserable creature.
6. Fundamentally, the world we live in is a pretty lonesome place.
7. Most people just don't give a "damn" for others.
8. I'd like it if I could find someone who would tell me now to solve my personal problems.
9. It is only natural for a person to be rather fearful of the future.
10. There is so much to be done and so little time to do it in.
11. Once I get wound up in a heated discussion, I just can't stop.
12. In a discussion, I often find it necessary to repeat myself several times to make sure I am being understood.
13. In a heated discussion, I generally become so absorbed in what I am going to say, I forget to listen to what the others are saying.
14. It is better to be a dead hero than a live coward.
15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
16. The main thing in life is for a person to want to do something important.
17. If given the chance, I would do something of great benefit to the world.
18. In the history of mankind, there have probably been just a handful of really great thinkers.
19. There are a number of people I have come to hate because of the things they stand for.
20. A man who does not believe in some great cause has not really lived.
21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
22. Of all the different philosophies which exist in this world, there is probably only one which is correct.
23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.

24. To compromise with our political opponents is dangerous because it usually leads to betrayal of our side.
25. When it comes to differences of opinion in religion, we must be careful not to compromise with those who believe differently from the way we do.
26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
28. In times like these, it is often necessary to be more on guard against ideas put out by people in one's own camp than by those in the opposing camp.
29. A group which tolerates too much differences of opinion among its own members cannot exist for long.
30. There are two kinds of people in the world: those who are for the truth and those who are against the truth.
31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
32. A person who thinks primarily of his own happiness is beneath contempt.
33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
34. In this complicated world of ours, the only way we can know what's going on is to rely on leaders or experts who can be trusted.
35. It is often desirable to reserve judgment about what's going on until one has a chance to hear the opinions of those one respects.
36. In the long run, the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
37. The present is all too often full of unhappiness. It is only the future that counts.
38. If a man is to accomplish his mission in life, it is sometimes necessary to gamble "all or nothing at all."
39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what is going on.
40. Most people don't know what is good for them.
41. Obedience and respect for authority are the most important virtues children should learn.
42. A person who has bad manners, habits and breeding can hardly expect to get along with decent people.
43. If people would talk less and work more, everybody would be better off.

44. The businessman and the manufacturer are much more important to society than the artist and the professor.
45. Science has its place, but there are many more important things that can never possibly be understood by the human mind.
46. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
47. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.
48. No sane, normal, decent person could ever think of hurting a close friend or relative.
49. Nobody ever learned anything really important except through suffering.
50. What the youth needs is strict discipline, rugged determination and the will to work and fight for family and country.
51. An insult to our honor should always be punished.
52. Sex crimes, such as rape and attacks on children deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.
53. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.
54. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feeble-minded people.
55. Homosexuals are hardly better than criminals and ought to be severely punished.
56. When a person has a problem to worry, it is best for him not to think about it, but to keep busy with more cheerful things.
57. Every person should have complete faith in some supernatural power whose decisions he obeys without question.
58. Some people are born with an urge to jump from high places.
59. Some day it will probably be shown that astrology can explain a lot of things.
60. People can be divided into two distinct classes: the weak and the strong.
61. Wars and social trouble may someday be ended by an earthquake or flood that will destroy the whole world.
62. No weakness or difficulty can hold us back if we have enough will power.
63. Most people don't realize how much our lives are controlled by plots hatched in secret places.

64. Human nature being what it is, there will always be war and conflict.
65. Familiarity breeds contempt.
66. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.
67. Nowadays more and more people are prying into matters that should remain personal and private.
68. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.

APPENDIX F
FOLLOW UP LETTER TO COACHES AND EDUCATORS.

division of athletics

FACULTY of PHYSICAL EDUCATION
the university of alberta • edmonton, canada

127.

June 20, 1973

Dear Coach:

Some time has elapsed since I first sent you a questionnaire designed to answer some important questions with respect to coaching personalities.

If you have completed the questionnaire and have returned it to me, I extend my thanks. If you have still to complete the questionnaire, I would ask you to do so when you are able to find time out from your schedule.

Thanks once again.



Bob Bain
Head Basketball Coach

BB/sp

APPENDIX G
THANK YOU LETTER TO COACHES AND EDUCATORS

129.

August 1, 1973

Dear

I would like to take this opportunity to thank you for your cooperation in aiding me complete research here at the University of Alberta.

You may be interested to know that the research project was concerned with measures of authoritarianism, specifically as it relates to coaches in Edmonton. I have included a brief abstract of the study for your interest. The completed study is available in thesis form at the Physical Education Library on the University of Alberta campus if you should wish to read further.

Thank you once again,

Bob Bain

RB/sp

APPENDIX H
INTRODUCTORY LETTER SENT TO EDUCATORS

130.

FACULTY OF PHYSICAL EDUCATION
THE UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA, CANADA T6G 2H9

131.

DEPARTMENT OF PHYSICAL EDUCATION

June 1, 1973

Dear Sir:

I am presently involved in a research project at the University of Alberta. This project is designed to explore the thoughts and beliefs of the men who live in Edmonton. I would like to solicit your time and cooperation in this project.

In a few days, I will send you a packet containing a questionnaire. When you find time within the following week, I would ask that you complete the questionnaire as instructed and return it to me in the stamped, self addressed envelope. The total time involved should be less than one-half hour.

I would like to thank you in advance for helping me with my project. I feel it could be extremely valuable research and may help to tell us something about our beliefs.

Yours truly,



R. B. Bain

APPENDIX I
QUESTIONNAIRE COVERING LETTER TO EDUCATORS

FACULTY OF PHYSICAL EDUCATION
THE UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA, CANADA T6G 2H9

133.

DEPARTMENT OF PHYSICAL EDUCATION

Dear Sir:

Please find enclosed a questionnaire concerning beliefs with which you may agree or disagree. As I mentioned in my previous letter, I would greatly appreciate it if you can take time out from your schedule and aid me in a research project which may have important ramifications.

A short information sheet is included as are complete instructions to the questionnaire.

Yours sincerely,



Bob Bain

cc/ep

APPENDIX J

**INTRODUCTORY LETTER SENT TO THE SELECTED
MEMBERS OF THE POPULATION**

FACULTY OF PHYSICAL EDUCATION



135.

THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA

June 4, 1973

Dear Sir:

I am presently involved in a research project at the University of Alberta. This project is designed to explore the thoughts and beliefs of the men who live in Edmonton. I would like to solicit your time and cooperation in this project.

Please find enclosed a questionnaire concerning beliefs with which you may agree or disagree. I would greatly appreciate if you could take time out from your schedule in order to complete the questionnaire as instructed and return it to me in the stamped, self-addressed envelope. The total time involved should be less than fifteen minutes.

I would like to thank you in advance for helping me with my project. I feel it could be extremely valuable research and may help to tell us something about our beliefs.

Yours truly,

R. B. Bain

RBB/sp

APPENDIX K
GENERAL INFORMATION SHEET SENT TO EDUCATOR
AND GENERAL POPULATION SAMPLE GROUPS

GENERAL INFORMATION

137.

1. Age in years _____

2. Have you ever coached an athletic team of any sort?

YES

NO

3. Please state sport and years involved if YES

3. Have you ever taught school at any level?

YES

NO