1972

Authoritarianism in the United States Navy

Barbara Hannon D'Eugenio
College of William & Mary - Arts & Sciences

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AUTHORITARIANISM IN THE UNITED STATES NAVY

A Thesis
Presented to
The Faculty of the Department of Sociology
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree of
Master of Arts

by

Barbara Hannon D'Eugenio
1972
APPROVAL SHEET

This thesis is submitted in partial fulfillment of
the requirements for the degree of

Master of Arts

Barbara Hannon D'Eugenio

Approved, August, 1972

Lawrence S. Beckhouse
Vernon H. Edmonds
Satoshi Ito
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ABSTRACT

The purposes of the present study are two: to determine how authoritarian Navy personnel are and to ascertain whether the Navy attracts into it persons who are relatively authoritarian, socializes people into accepting authoritarian attitudes, or whether both or neither of these processes is operating.

Two random samples of Navy personnel were selected. One is composed of enlisted men, the other of officers. The F-Scale and modifications of it were administered to these samples. Data concerning demographic characteristics, voluntary or involuntary entrance, and career or non-career status were also solicited.

The Navy samples were compared with other samples in the literature to determine the relative authoritarianism of the Navy group. The Navy sample as a whole was found to be relatively low in authoritarian predispositions. Various subgroups, such as volunteers, career men, and the enlisted sample were found to rate moderately high on the authoritarianism measures.

The socialization and attraction hypotheses were found to operate in conjunction in the volunteer and career subgroups. The involuntary entrants evidenced support for the socialization hypothesis since they were, by definition, not attracted into the Navy, and their F-Scale means increased with increased length of service.

The results suggest that those who are attracted into the Navy are also socialized by it into more authoritarian attitudes. Those who are not attracted into the service are also socialized by it, but to a lesser extent.
AUTHORITARIANISM IN THE UNITED STATES NAVY
INTRODUCTION

Although authoritarianism had received some attention (Lewin et al., 1939; Fromm, 1941) before Adorno et al. (1950) published The Authoritarian Personality, it was only with this publication that the concept began receiving a great deal of study and scrutiny from social scientists. Sociologists and psychologists have debated ever since whether there is such a thing as an authoritarian personality, what the component parts are, and how best to measure it and them. One example of the amount of research carried out in this area is illustrated by the fact that Christie and Cook (1958) list two-hundred and thirty sources, published before 1957, that deal with the topic. Since then, a considerable amount of additional research has been done.

Much of the above mentioned research has been concerned with several major controversial issues, substantive and methodological, relating to The Authoritarian Personality (Adorno, et al., 1950). Substantively, one problem has arisen because the authors' approach was basically psychoanalytic. They located the cause of authoritarian tendencies in the psychoanalytic nature of childhood experiences. Sociologists and social psychologists, while not dismissing the influence of childhood, though not necessarily psychoanalytic, experiences in molding this particular type of personality, have emphasized the salience of other social
factors in modifying attitudes and behavior. Brim (1960) for example, writing in the general area of personality development, argues that personality is more determined by situational characteristics than by early childhood experiences, although he does not discount these completely. Stewart and Hoult (1959) posit that the degree of authoritarianism manifested by an individual is inversely related to the number of social roles he has mastered. Kelman and Barclay (1963) argue that the F-scale measures an individual's breadth of perspective or range of tolerance rather than a purely psychological phenomenon. Breadth of perspective is operationalized by these authors in terms of an individual's capacity and opportunity for enjoying a wide variety of learning experiences. Gabennesch (1972) also argues that authoritarianism should be conceived of as in the sociological realm rather than as "belonging" to Freudian psychology. He agrees with Kelman and Barclay and Stewart and Hoult that breadth of perspective is a major variable in explaining authoritarianism and equalitarianism.

A major methodological issue concerning the F-scale is that of response set. All the items in the scale are worded so that agreement indicates authoritarian personality characteristics. Numerous attempts have been made to reconstruct the scale to include reversed items (Bass, 1955; Christie, et al., 1958; Leavitt, et al., 1955) or to force respondents
to make choices between contradictory items (Berkowitz and Wolkon, 1964). Neither type of construction has been entirely successful, the first because reversal of items both logically and psychologically is extremely difficult, the second because respondents are compelled to make logical choices about irrational or emotional feelings. The response set issue has not been satisfactorily resolved and at present, numerous forms of the F-scale are in use.

Military organizations have similarly been the focus of considerable study. Until fairly recently, most investigators were primarily interested in the formal organizational aspects of military bureaucracy. Rose (1946), Freeman (1948), and Brotz and Wilson (1946) analyze social structural features of the military. Some little attention has also been paid to informal structure and interpersonal relations in military organizations. Shils and Janowitz (1948: 280-315) found that solidarity of the primary group was the crucial factor in maintaining the cohesion of the German Army during World War II, and particularly in the later days of that war. Homans (1946) briefly relates some problems encountered by him as the commanding officer of a small Naval vessel during World War II. Keeping open the informal lines of communication with the crew, he found, was the most important factor in maintaining high crew morale.
The present research investigates the relationship of authoritarian personality traits and variables related to military service. More specifically, the purpose of the research is to determine if participation in a military organization, the U. S. Navy, is related to an individual's authoritarian predispositions. The central issue in this research is whether military organizations attract into them persons with authoritarian tendencies, whether the organizations socialize their members into adopting authoritarian attitudes and behavior, or a combination of both processes.

Assumed in this last statement is that military personnel are in fact authoritarian. An attempt will be made to compare authoritarianism of Naval personnel with that of other salient groups. There is some debate on the degree of military authoritarianism. Janowitz (1965: 23-24) argues that the authority structure of military organization, with the exception of the Marine Corps, has shifted somewhat in the last fifty years from authoritarian control to reliance on manipulation and group consensus. The military has become so complex and technically specialized that authoritarian control, by itself, would not operate efficiently. Like other large bureaucratic organizations, Janowitz argues, the military is increasingly relying on group coordination and interdependence to effect its technical goals. Janowitz admits, however, that authoritarian features
are nonetheless still quite apparent. Rank and skill structures, although not perfectly articulated with one another or with the authority structure, remain intact (Janowitz, 1965: 29-40). Remnants of the aristocratic military of the past persist in the form of promotion due to seniority and reservation of the highest positions for persons from the privileged classes and for those who were graduated from one of the service academies. The latter phenomenon is diminishing, particularly in the Air Force (Janowitz, 1959: 89-97, 127-139).

Some empirical support for the position that the military is more authoritarian than some other groups is given by Campbell and McCormack (1956) who found the Air Force cadets to be more authoritarian than the college males they studied.

It thus seems possible to conclude that although military organizations are perhaps becoming less dependent on authoritarian control, this type of control still seems to be employed to a considerable extent, enough so to lend credence to the possibility that it may invite enlistment of authoritarians or may socialize its members into adopting authoritarian personality traits. Both of these processes may of course operate simultaneously. Another possibility is that expectations of those enlisting in the Navy could be at odds with the socialization processes encountered when actually in the service. For example, a person may volunteer for service in the Navy expecting to find a highly authoritarian structure and find, instead, that the service demands
egalitarian cooperation of him so that he can better complete the technical tasks assigned him.

At any rate, this research intends to investigate these questions and hopes to provide, at least, clarification of the issues involved.
CHAPTER I

SELECTIVE REVIEW OF THE LITERATURE

Several variables and theories pertinent to the present research will be discussed in this chapter. Those of major interest are, of course, authoritarianism, characteristics of military organizations, and the attraction-socialization theories. The purposes of the F-scale will be examined and explained. The theory underlying that measure will be evaluated and criticized and alternative sociological and social-psychological theories will be discussed.

The authoritarian and equalitarian characteristics of military organizations will also be examined to see if there has been a shift in emphasis from one to the other over time.

The previous literature concerned with attraction into and socialization by the military will be discussed to determine the extent of support that exists for either or both of these hypotheses.

Other, possibly intervening, variables will be examined to see what effects they might have on the relationship between authoritarianism and military service. Specifically discussed will be religion, region of origin, race, social class, education, and age.
**Authoritarianism**

The history of the concept of authoritarianism has been, at best, uneven. When Adorno, *et al.* (1950) first introduced the concept in systematic form, the most usual reaction was uncritical acceptance. At last, here was a well developed theory to explain why some persons have anti-democratic ideologies. Criticisms became more and more frequent until it seemed that the concept was useless. Now, perhaps, it is possible to evaluate the authoritarian personality with some objectivity.

The chief concern of Adorno, *et al.* (1950: 1) was that of developing a method for diagnosing potentially fascistic individuals. They hypothesize that an individual's political, economic and social beliefs form a coherent pattern which is an expression of his personality, which in turn is primarily derived from early childhood experiences. According to the authors (1950: 337-385), the childhood experiences of potential fascists, as reported by the latter, are characterized by harsh, threatening and arbitrary discipline, clearly defined roles of dominance and submission, suppression of desires unacceptable to the parents, conformity of children's attitudes and behavior to suit parental demands, lack of mutual affection, and paternal dominance in the home. Upbringing in such surroundings, the theory argues, produces an individual who is hostile to figures of authority yet who
also identifies with these figures. In order to defend himself from this conflict, the individual becomes submissive toward authority and displaces his hostility onto those who are more or less socially acceptable targets. He further defends himself by projecting his suppressed feelings onto others and by seldom engaging in questioning his own beliefs and problems. The authoritarian individual admires power and toughness; he is an extremely conventional adherent of middle class values.

One major criticism of this theory is that it is psychodynamically based. Early childhood experiences are the primary determinant. The authors recognize the importance of other, situational, factors (Adorno, et al., 1950: 9-10) but chose to emphasize personality variables for two reasons: (1) social variables had already been thoroughly studied and (2), since fascism benefits the few at the expense of the masses, to succeed it must appeal to peoples' irrational and emotional needs, which are located in the personality structure. The first reason certainly seems to be an inadequate one. Because something has been studied in the past obviously does not preclude its theoretical usefulness. In addition, a comprehensive sociological theory of fascism had not, in fact, been advanced and empirically demonstrated. The second reason is surely the more important explanation of why the researchers emphasized the personality variable: they believed that that was where the reasons for susceptibility
to fascist propaganda could be found. The authors admit that both situational and personality factors operate to produce this susceptibility, yet they failed to deal in their theory with the situational ones, other than psycho-dynamic childhood experiences.

The authors conceive of personality formation as a one-way process from parents to child, other influences being minimal. They do not acknowledge the potential influence of other relatives, peer groups, siblings, the mass media, non-parental authority figures, or the child's own desires.

Adorno et al. also imply that personality is relatively immutable after early childhood. There is a considerable body of literature which argues that attitudes and ideologies are, in fact, alterable, and that psychosexual development in childhood is not necessarily the most important variable. Christie and Garcia (1951) found college examples in Berkeley, California and a city in the southwest to differ significantly with respect to F-scale scores.¹ They found no reason to believe that the two groups had had differing child rearing experiences since both samples were composed, primarily, of urban, middle-class individuals. They hypothesize that the discrepancy on the F-scale measure is more probably attributable to the social climate of the two areas. A further example of this discrepancy is provided by Adorno, et al. themselves. According to Davis and

¹The F-scale mean for the California samples was 3.33, with a standard deviation of .83. The southwest sample was 4.10, with a standard deviation of .77.
Havighurst (1948: 252-264), middle-class parents, at the time of the Adorno study, were considerably stricter and more demanding than were working-class parents. Consequently, middle-class samples of people reared before the end of World War II should have higher F-scale means than comparable samples of the working class since they more closely fit Adorno, et al.'s description of child-rearing traits associated with producing authoritarian offspring. Adorno, et al. (1950: 266) provide a class comparison which is at odds with what would be predicted by their theory. Their samples of working-class men and women had higher F-scale scores than did the middle-class samples.\(^2\)

Fensterheim and Birch (1950) also emphasize the primacy of situational factors over personality variables in determining ideology. They noted few initial differences in personalities in a displaced persons camp in Italy. When people became involved in various fascistic or communistic groups, however, intergroup personality differences became apparent. It is possible, however, that initial differences did exist but were submerged until individuals were able to locate like-minded others and felt freer to express their personalities.

\(^2\) Middle-class men had a mean of 3.69, standard deviation 1.22. Working-class men had a mean of 4.19, with a standard deviation of 1.18. Middle-class women had a mean of 3.62, with a standard deviation of 1.26. Working-class women had a mean of 3.86, with a standard deviation of 1.67.
Role-playing has been found to be one method of effecting attitude changes. Janis and King (1958), in a study of experimentally encouraged role-playing, found that persons who are forced to defend an opinion opposite their own alter their attitudes in the direction of the position advanced when role-playing. It should be noted that the issues involved were impersonal and rather unimportant. More personally important values would surely be more difficult to alter. Harvey and Beverly (1961) also found that role-players altered their attitudes in the direction of the role they played.

In a study of attitude changes of college women, Newcomb (1958) argues that attitudes are acquired or altered because of positive or negative identification with different reference and membership groups. Most of the females studied were from conservative, upper-middle and upper-class families. Depending on how they related to the liberal membership group of which they were a part and to conservative or liberal reference groups, their attitudes remained essentially conservative or shifted toward liberalism.

As a consequence of these studies, it seems possible to conclude that attitudes and values are not permanently fixed during childhood. Situations in adolescence and adulthood can effect measurable changes.

Adorno, et al. argue that during their early formative years, children acquire authoritarian characteristics because of their parents' strict, punitive child-rearing techniques,
Several social scientists have developed other non-Freudian, social-psychological explanations of the authoritarian personality. Stewart and Hoult (1959) propose that "the degree of so-called authoritarianism is, on the average, negatively correlated with the number of social roles he has mastered or is able to use" (p. 274). They argue that the F-scale has regularly located authoritarians in groups where opportunity for social role mastery has been very limited: poorly educated, the aged, rural dwellers, disadvantaged minority group members, persons belonging to exclusive and dogmatic religious groups, the economically and socially underprivileged, social isolates, and those reared in authoritarian families. The authors correctly point out that while all these subcultural groups evidence relatively high degrees of authoritarianism, they do not all consistently evidence the authoritarianism-producing child-rearing techniques deemed essential by the Adorno group of researchers.

Kelman and Barclay (1963) also attempt to account for both personality and situational valuables as determinants of authoritarianism. They argue that the F-scale actually measures an individual's breadth of perspective, that is, the extent of his tolerance limits. Breadth of perspective is derived from an individual's capacity for tolerating changes (a psychological variable) and his opportunity for widening his experiences (a situational variable). The
authors ascribe limited opportunity to those groups that Stewart and Hoult described as providing few possibilities to master roles.

Gabennesch (1972) basically supports the two above-mentioned theories but contends that a gap exists between expecting differences in outgroups and tolerating these differences. He argues that a reified world view is the intervening variable. A person's limited perspective causes him to perceive the world as static, absolute and superhuman. He fatalistically believes he can and should do nothing to interfere with such a world.

These authors all provide non-Freudian explanations of authoritarianism. They stress the importance of situational factors but indicate that personality variables are involved as well. It seems to this writer that the major flaw of the Adorno, et al. theory is that it deals only with the influence of psychological factors and relies on Freudian theory to do so.

In this study, the operational definition of authoritarianism will be the F-scale devised by Adorno, et al. (1950: 222-279). Its use reflects confidence in neither its theoretical origin nor its perfection as an instrument. Rather, in order to compare this study's sample with other samples, it is necessary to utilize the most commonly used measure of authoritarianism. This, of course, is the F-scale.
This scale has been criticized for numerous methodological faults: contamination by response set, lack of unidimensionality, failure to measure general authoritarianism rather than just rightist authoritarianism, and the confounding influence of its two-pronged goal. These problems will be discussed at length in CHAPTER III, RESEARCH DESIGN: Measurement of Key Variables. For comparison purposes, short F-scales used in other studies will also be employed here. Janowitz and Marvick (1953) and Campbell and McCormack (1956), for example, shortened the original F-scale and scored it differently from the usual method. These and other modifications will be used for comparison with the scores of the present sample.

Military Organizations

The nature of military organizations has been the focus of a great deal of social research. While no one doubts that the military possesses some authoritarian characteristics, there is considerable discussion about the importance of these characteristics relative to non-authoritarian ones and about whether they are becoming less important.

There is little doubt that members of the military during and immediately after World War II perceived that institution as predominantly authoritarian. Brotz and Wilson (1946) describe the Army in the following terms: it is a command society in which procedures are uniform and ordered
and one must do exactly what he is told. It is a self-contained and atomizing society in which all services are provided and whose members are cut off from past membership groups. (See also Davis, 1948: 1949.) Hollingshead's (1946) description of adjustment to military life is similar in some respects. He writes,

The first thing, he (the recruit) learns is that there is a time for everything. . . . The second thing he must learn is that how this time is to be used is defined by the institution. Third, the institution defines how the task allotted to a given time is to be accomplished. Fourth, the recruit learns that he does everything in formation, that is, with his group (p. 441).

The perfectly trained soldier is one who has had his civilian initiative reduced to zero. In the process the self becomes identified with the institution and dependent upon it for direction and stimulation (p. 441).

Dornbusch's (1955) study of the socialization techniques used to indoctrinate civilians into the Coast Guard Academy indicates that authoritarian control is employed during that phase of a military career. The author describes how cadets are cut off from identification with previous statuses and their military cadet status has primacy. Cadets are taught to accept domination by those of higher rank, but also to feel that they, because they are cadets, are superior to non-military persons and to members of the military who are not graduates of the Academy. They are taught to obey orders without doubting their legality or merit. They are, however, also taught that the informal codes are in some cases, more important than the written regulations.
Bureaucratic elements of military structure have also been noted. Page (1946) describes a conflict between the goals of the organization and the means to accomplish these goals. He also describes the informal structure of the Navy, which arises, in part, as a response to that organization's formal, bureaucratic structure. (See also Anonymous a, 1946.) Davis (1948) deals with some problems common to many bureaucracies but which are particularly evident in the military: avoiding responsibility, legalism, insulation, and ceremonialism. He conceptualizes the Navy as a military variant of bureaucracy which places special emphasis on authority and tradition which in turn lead to the development of the aforementioned problems.

In more recent years, some attention has been given to whether military organizations are becoming more equalitarian or are remaining essentially authoritarian.

Janowitz (1959) and Janowitz and Little (1965) argue that there has been a shift in the last fifty years from emphasis on authoritarian control in the military to reliance on group consensus and manipulation. They contend that in addition, this latter form of control may shift to reliance on fraternal authority in which the formal authority structure is recognized by all but in which "technical and interpersonal skills plus group loyalty would qualify subordinate personnel for effective but circumscribed participation in the decision making process" (Janowitz, 1959: 488).
Most of the previously mentioned researchers and several others (Rose, 1946; Freeman, 1948; and Spindler, 1948), ignored this process and focused on the stable, more enduring aspects of military organization.

One major reason for this shift in the type of authority prevailing in the military is that with increasing technical specialization, coordination of activities is not best achieved by the arbitrary use of power (Janowitz and Little, 1965: 45-46). As they and others, (Feld, 1959; Borgatta, 1954; Janowitz, 1960: 21-75; Janowitz, 1959: 473-493) note, there is sometimes a discrepancy between authority and skill structures. Persons with higher rank and less technical knowledge are in command of those with lower rank and more knowledge, resulting in a weakening of the traditional authority structure.

Another reason mentioned for the change in type of control is that in close combat situations, soldiers are often free to make their own decisions. Maintenance of initiative becomes more important than maintenance of discipline (Janowitz and Little, 1965: 41).

These authors note, however, that this shift is retarded by other influences. Some conservative members of the military elite are concerned lest the techniques of group consensus and manipulation undermine the authority structure (Janowitz and Little, 1965: 47). They have attempted to separate technical specialists from the chain of
command. This has resulted in a lack of adequate communication between these two groups, and so has produced a number of new problems. (See also Feld, 1959; and Borgatta, 1954.)

As can be seen from the foregoing, the authoritarian structure of the military seems to be shifting in the direction of more indirect, equalitarian control. Authoritarian techniques are, nevertheless, still much in evidence.

Authoritarianism in Military Organizations: Attraction and/or Socialization

A few investigators have empirically researched the level of authoritarianism present in military groups and whether authoritarians are attracted into military service, whether they are socialized into authoritarian attitudes by the military, or some configuration of both.

Christie (1952) studied a group of one hundred and eighty-two Army inductees who were in basic training. The F-scale was administered twice: before and after six weeks of infantry training. He divided his sample into four subgroups, on the basis of acceptance or rejection by the other recruits in the sample and by the noncommissioned training personnel. In the second test, he found an insignificant increase in agreement with the items on the scale, with the exception of one subgroup. The draftees more accepted than rejected by both groups were found to be significantly more authoritarian after the six-week training period. 3

Despite repeated attempts to communicate with Dr. Christie about actual scores of his sample, this writer was unable to obtain this information.
One criticism that may be leveled at Christie's study is that basic training is not reflective of military experience in general. In addition, a lapse of only six weeks between tests enhances the possibility of reactive effects. The relatively short duration of exposure to military life may not have been long enough for the characteristics of military organizations to have made themselves felt. Because Christie dealt only with Army draftees, his findings are of limited generalizability. At any rate, he concludes that the primary determinant of the shift toward authoritarianism is the degree to which an individual's behavior is favorably viewed by peers and superiors.

Adams (1954) in a study of B-29 bomber crews, devised and tested a sentence-completion form to measure egalitarian-authoritarian attitudes. Of thirty-seven crews (each with eleven men), twenty-two were recalled Reservists who had been back in active duty for about three months. The other fifteen crews were composed of continuous-service personnel who had been in the same crew for one or two years. The author hypothesized that the latter group of crews, being better adjusted to the authoritarian military structure would score less egalitarian on the sentence-completion test than the newer crews. His hypothesis was confirmed by the data. The major objection to this study is that the author computed the mean scores for the two groups on the basis of officer responses; he did not include
the responses of the enlisted men. This may have resulted in some distortion of the results. He also did not control for possible intervening variables such as age or education.

Other researchers report results somewhat in conflict with these two previous studies.

Hollander (1954) found that although Naval Aviation Cadets ascribed authoritarian traits to military leaders, they nominated as best qualified for the position of "student commander," Cadets who themselves rated low on the F-scale (1954: 365-370). Although the author does not acknowledge the possibility, his results probably reflected a difference in the Cadets' perception of actual and ideal military roles.

The major hypothesis tested by Campbell and McCormack was that military experience produces authoritarian attitudes (1956). They administered the F-scale (among other measures) to Air Force pilot cadets in their first week of preflight training and again one year later. Their hypothesis was disconfirmed. The scores on the F-scale decreased significantly. The authors do not clearly state that the same sample was used in both tests, although this seems to be the case. They do not report subject mortality rates but it is almost certain that some of the cadets left the

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4 This researcher attempted to obtain all the items used by Drs. Campbell and McCormack but was unable to do so. Consequently one item not used by them was added to the scale utilized in this study.
program. They conclude that, since the scores of the cadets were consistently above those reported for college students of comparable age and experience in the military did not raise the scores, then the more authoritarian persons in the population must select themselves into the Air Force.

It may be noted that the preceding researchers have investigated unrepresentative segments of the military population. One studied new draftees; the other three investigations dealt with highly technical, highly specialized groups that rely heavily on cooperation and coordination. In addition, Air Force and Naval Air flight crews seem to enjoy more flexibility in terms of hierarchical rigidity than do groups which demand less coordination.

A study supporting the attraction hypothesis, although not dealing with a military sample, is that of Randall (1968). The author surveyed two groups of Maryland State Policemen: trainees and regular officers. She found that the recruits had statistically higher F-scale scores than did the regular officers and concluded that high authoritarians were attracted to this organization rather than socialized into authoritarian attitudes by it.5

Aumack's (1955) research concerning authoritarianism of prisoners also seems to support the attraction hypothesis. The prisoners had the highest mean reported for any samples.

5 The recruits' mean F-scale score is 4.51, the officers' 4.28.
at that time and the F-scale scores decreased significantly over a six year period. This last finding suggests that the prison institution did not socialize the inmates into a greater degree of authoritarianism, but rather, effected change in the reverse direction.

There is some evidence to indicate that military groups attain higher F-scale scores than several other segments of the population. Hollander (1954) reports an F-scale score of 3.80, standard deviation of .70 in a group of Naval Pre-flight School Cadets. Jones (1957), in a sample of Naval Aviation Cadets, found an F-scale score of 3.90, with a standard deviation of .75. Sixteen of the twenty-three groups tested in The Authoritarian Personality (Adorno, et al.: 266) had item mean scores lower than these military group means.

Other Variables

Several other variables have been found to correlate highly with authoritarianism. It is expected that these variables will behave as they usually do and it will be necessary to hold them constant while investigating the correlations between authoritarianism and several military-related variables.

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Hollander recorded raw additive F-scale scores, this writer interpolated his figures into a mean score per item.
Affiliation with various religions has been found to correlate to some extent with scores on authoritarianism measures. Catholics are more authoritarian than Protestants, who in turn, are more authoritarian than Jews (Brown and Bystryn, 1956). These researchers also reported that environmental variables effected change in F-scale scores over time. They hypothesized that the unstructured surroundings at various colleges forced minority group members to broaden their intellectual horizons with a resulting drop in authoritarian attitudes.

Warshay, et al. (1964) report somewhat conflicting results. They found groups arranged from low to high authoritarian scores in the following order: Catholic college men, Jewish youth, middle class Baptists, Jewish adults, and Catholic high school students. Since they did not control for education or social class, it is difficult to determine if this order reflects significant religious differences in authoritarianism.

In a tenuously related study, Stouffer (1955: 140-149), when studying tolerance of nonconformists and religion, found that Jews were clearly more tolerant than were Catholics and Protestants. Protestants, in general, were slightly more tolerant than Catholics, but this finding was not consistently supported when the sample was divided according to sex, church attendance and region.
Racial differences have been found to exist with respect to F-scale scores. Negroes have usually scored significantly higher than whites on that measure and its variations (Steckler, 1957: 397; Smith and Prothro, 1957; Greenberg, et al., 1957; Kelman and Barclay, 1963; Warshay, et al., 1964). Blacks are included in the present sample but will not be analyzed separately because of sample size limitations.\textsuperscript{7}

Several researchers have attempted, with mixed results, to link a particular social class with authoritarianism. Adorno, et al. (1950: 265-269), 'probably because of the then prevailing liberal ideology of viewing the working class as the vanguard of democracy, assumed that their working class samples would score lower on the F-scale than the middle class samples. When the reverse was found, they explained it in terms of the liberal groups to which their middle class samples belonged. They did not question their assumption that the working class is more democratic than the middle class.

Lipset (1961) and MacKinnon and Centers (1956) argue that the working class is indeed more authoritarian than the middle class. They hypothesize that the lower level of education, economic insecurity, homogeneous environment, and strict punitive child-rearing experiences of lower class members produce this result.

\textsuperscript{7}There is, in fact, one Negro in the sample. The researcher expected one or two Filipinos to be in the sample, but none were selected.
Janowitz and Marvick's (1953) national samples revealed that the lower middle class was slightly more authoritarian than the lower lower class. When education was controlled the results were similar. Thirty-three percent of the poorly educated lower lower class were classified as highly authoritarian; thirty-nine percent of the poorly educated lower middle class were so classified.

Other researchers claim that educational level is a more satisfactory explanatory variable than social class (Miller and Riessman, 1961; Lipsitz, 1965; Warshay, et al., 1964; and Jones, 1956). These authors are in relative agreement that when education is held constant, class differences in authoritarianism are not significant. Jones' article is particularly interesting in that it deals with two groups of Navy personnel: men undergoing submarine training and men incarcerated in a Naval prison. Using the Pensacola Z scale as the measure of authoritarianism, Jones found that the imprisoned group achieved statistically significantly higher scores than did the submariners but that this difference was almost totally eliminated when scholastic aptitude and education were taken into account.

With the exception of Warrant Officers and a very few regular officers, the U. S. Navy requires its officers to have been graduated from college. Since education is inversely correlated with authoritarianism, it is expected that regular officers will score somewhat lower on the F-scale
than the enlisted and warrant ranks. It is impossible to discern in the literature concerning the military, evidence supporting or refuting this assumption since the studies cited previously use various measures of authoritarianism, several do not report actual scores, and some do not deal with the variable of education.

Some conflicting evidence has also been reported with respect to the influence of geographical region and authoritarianism. In a sample of students at a Negro college, Kelman and Barclay (1963) found that students reared in Maryland and other border states scored lower on the F-scale than those reared in the North and the South. They explain the higher scores of northern students (relative to the border group) as a result of a self-selecting process. They argue that northern Black students who elect to go to an all-Negro Maryland college are "likely to be characterized by relatively narrow perspectives" (p. 614).

Christie and Garcia (1951) found students at the University of California at Berkeley to be significantly lower on the F-scale than a sample of students at a college in the southwest. As previously noted, these investigators decided that the different social climate of two geographic areas was the primary determinant of the reported difference.

Contrary to these studies, Pettigrew (1959) found no regional differences on the F-scale when he compared samples of whites from four southern and four northern small towns.
Stouffer (1955: 109-130), in measuring tolerance of nonconformists, ranked regions from most tolerant to least tolerant as follows: West, East, Middle West and South. These differences were lessened but not eliminated when education and rural-urban differences were held constant.

In most samples, age has been found to correlate significantly in a positive direction with authoritarianism. Janowitz and Marvick (1953) report a significant relationship between these variables. When class was controlled, the significance of age within a class disappeared; inter-class age differences were still important. This writer compared the age groups in Warshay et al.'s (1964) study and found that in general the older groups were more authoritarian than the younger groups. Stouffer (1955: 89-108) reports that younger people are generally more tolerant than older people and that within each age group, the more educated were more tolerant. MacKinnon and Centers (1956) also report a general increase in authoritarianism with increasing age but note that the age group 30 to 39 is less

8Their definition of young and old is dichotomous: "older" is 45 and over in one sample and 50 in their other national sample.

9The comparison of these groups was, at best, approximate; Jewish youth were compared with Jewish adults; adults living in a neighborhood where adolescent synagogue defilers lived were compared with high school students from that neighborhood; adult Baptist churchgoers were compared with girls from a private high school. Readily admitted is that these groups are not truly comparable; however, the trend was in the expected direction.
authoritarian than those in the under 30 group and, in fact, less authoritarian than any other age group. Non-manual workers account for virtually all of the curvilinear nature of the relationship of these variables.

All of the above-mentioned factors will be examined in this research to determine their effects on the relationships between military service variables and authoritarianism. Other, more peripheral influences such as parental social class, working - non-working status of wife, marital status, parental education level, and maternal employment status, will also be examined to see if and to what extent they affect these relationships.
CHAPTER II

HYPOTHESES AND PREDICTIONS

From the foregoing, it is clear that there is little consensus on either the strengths of the relationship between authoritarian predisposition and military experience or the causal direction of the relationship. Through confirmation or refutation of the following hypotheses, it is hoped that these questions may be clarified.

**Hypothesis 1:** Military personnel are more authoritarian, as measured by the F-scale, than persons in most non-military groups.

The main purpose of comparing military with non-military groups is that of placing the degree of authoritarianism of military personnel in perspective. It is usually assumed that this group is highly authoritarian but this assumption should be tested empirically.

The present sample will be compared with various national surveys. Unfortunately, these surveys were conducted during the 1950's and undoubtedly, some temporal changes have occurred which have affected responses on measures like the F-scale. Test-taking proficiency has probably increased since test-taking itself has become more commonplace. With regard to the F-scale, specifically, the meaning of the content of some items has probably changed with the passage of time.
Janowitz and Marvick (1953) utilized a six item scale comprised of three items very similar to F-scale items, one item from that scale, and two other items. (See Appendix for a copy of the Janowitz and Marvick scale.) The two new items were included in the present study so that the samples could be compared. These researchers controlled for education and socioeconomic class, thus permitting a more detailed analysis.

Lipsitz (1965) reanalyzed data from a 1953 NORC survey with a national, male sample. This study also controlled for education and social class. The scale employed consisted of five items which were selected from the F-scale either precisely or nearly so. (See Appendix for a copy of the NORC items.)

Comparisons with these two surveys will be most helpful in determining the strength of authoritarianism of Navy personnel relative to that in the entire society. It must be cautioned, however, that approximately twenty years elapsed between the present research and the earlier ones.

MacKinnon and Center's (1956) study permits a comparison of their sample of Los Angeles County residents with the present sample in terms of age and education. They employed a seven item modified F-scale. (See Appendix for a copy of the scale.) It is very similar to the scale employed by Janowitz and Marvick (1953).
College students are the most widely tested population in social science research. This holds true in the authoritarianism literature as well. These comparisons are expected to produce widely varying results since the college populations are so divergent. Kelman and Barclay (1963) and Smith and Prothro (1957) studied Negroes and whites at southern and border state colleges. Christie and Garcia (1951) focused on students in California and in a southwest state and Haythorne, et al. (1956) studied New York students. Steckler (1957) studied Negro students in various geographical regions of the country. It is expected that the Navy groups as a whole will score higher on authoritarianism measures than white college students because of age and educational variables. The first three studies employed the F-scale. Haythorne, et al. (1956) employed the F-scale as well but computed a raw score mean rather than an item mean. Steckler (1957) utilized a twenty-item F-scale and computed the item mean. He does not report which twenty items were used but he probably used the twenty most efficient ones.

The present sample will also be compared with samples of similar groups.

The military is in some ways similar to civilian police organizations. Both are concerned with defense, with maintaining order, and with controlling those whom they perceive as enemies. Personnel in both organizations are permitted or encouraged to use force in some circum-
stances. Randall's (1968) study of authoritarianism of Maryland State Police personnel will be compared with the sample in this research.

The pervasiveness of military organizations into the lives of its members and the separateness of its members from other groups in society have frequently been noted (Anonymous a, 1946; Anonymous b, 1946; Berkman, 1946; Brotz and Wilson, 1946; Freeman, 1946; Page, 1946; Davis, 1948; and Dornbusch, 1955). Some more recent authors (Janowitz, 1959, 1960; Uyeki, 1960; and Janowitz and Little, 1965) have reported a decrease in these characteristics but imply or note that they still exist to a considerable extent. Pervasiveness and isolation from other groups are features of what Goffman (1961: 1-124) describes as total institutions.

He writes:

A basic social arrangement in modern society is that the individual tends to sleep, play, and work in different places, with different co-participants, under different authorities, and without an over-all rational plan. The central feature of total institutions can be described as a breakdown of the barriers ordinarily separating these three spheres of life. (Goffman, 1961: 5-6)

He continues that, in a total institution, all three aspects of life occur in the same place, under the same authority. Usually the individual is with a large number of other persons, all of whom are treated similarly, and all of whom perform the same activities simultaneously. All activity is rigidly scheduled and prearranged by the officials and formal directives. Activities are coordinated
into a rational plan for the purpose of fulfilling the official institutional goals (Goffman, 1961: 6).

Military organizations qualify at least to some degree for being classified as total institutions. While this characteristic seems most prominent during basic training, in officer candidate school, or at a military academy, it is also present, although to a lesser extent, during one's entire military career. As Uyeki (1960) reports, non-career personnel are better able to disengage from this aspect of the military than are career personnel. The former, however, are greatly restricted relative to other occupational groups.

The total organizational features of the military are probably most evident in the Navy. When ships are deployed, crew members live, work, and play solely on the ship. Because of the irregular and unpredictable nature of deployments, crew members, when in home port, are hindered from joining other secondary groups or forming primary relationships with people not on their ship.

Because prisons are frequently cited as the foremost example of total institutions, this Navy sample will be compared to three inmate samples with respect to authoritarian predisposition. Aumack (1955) studied first offenders serving terms at San Quentin for first degree murder. He does not report the actual F-score mean for the sample but states that it is higher than any score reported at that time. As such, only a non-statistical
comparison can be made. The highest score this writer could find was another group of San Quentin prisoners (Adorno, et al., 1950: 266). Their mean was 4.73; consequently, Aumack's group must have been higher than that. Grusky (1962) employed twenty-four items from the F-scale in his study of inmates in a treatment-oriented prison. It is expected that the Navy sample will have considerably lower means than the prison groups because of the educational and social class differences of the two groups.

The variety of scales used to measure authoritarianism in the above studies will make it difficult to determine the relative authoritarianism of the Navy sample. Some authors used the full F-scale; others shortened it or modified the items, posing an additional problem. Some researchers utilized scoring techniques that differ from the usual. It will not be possible, using reliable statistical techniques, to place the Navy sample on an authoritarianism continuum with all the aforementioned samples. A rather gross approximation will, however, be made. It is possible to place this sample on a number of continua, based on the various scales and scoring techniques used and this will be done.

Hypothesis One will be rejected if the Navy sample means are not generally higher than the non-prisoner means.

\[\text{Items used were from Forms 40-45: 1, 2, 4, 6, 8, 9, 12, 13, 18, 19, 21, 23, 25, 26, 27, 31, 34, 35, 37, 38, 39, 42, 43, 44 (personal communication).}\]
examined in the literature. If this hypothesis is rejected, there will be considerable doubt that the Navy military organization is as authoritarian as is usually assumed. Rejection of the hypothesis will be regarded as support for Janowitz's (1959, 1960) and Janowitz and Little's (1965) contention that military organizations in general are becoming less reliant on authoritarian control. If the means reported for the present sample are low, it will be possible to discuss the authoritarian predispositions of Navy personnel only in relative, not absolute, terms.

The literature has generally considered the following two hypotheses as mutually exclusive but, logically, there is no reason to do so. Following Christie (1952) and Adams (1954), Hypothesis Two suggests that military experience alters individuals in the direction of greater authoritarianism because of socialization processes. Hypothesis Three is derived from Campbell and McCormack's (1956) *post hoc* conclusion that highly authoritarian persons may seek to enter military service as a career.

**Hypothesis 2:** The U. S. Navy socializes its members into accepting authoritarian characteristics.

**Hypothesis 3:** The U. S. Navy attracts into it persons who have already developed relatively strong antidemocratic tendencies.
These hypotheses will be operationalized in terms of duration of military service. There are six logically distinct possibilities. Scores can be initially high and later go up, remain the same or go down. Scores can be initially low and, with increased years of service, go up, remain the same or go down. If F-scale scores are high for persons with relatively little time in the service and scores for those who have been serving a longer time are even higher, both hypotheses will be considered supported. If scores are initially high but decrease over time, Hypothesis Three will be considered supported. If scores are initially high and remain stable over time, one would be led to believe either that the organization does not interfere with its members' authoritarian attitudes or that it supports them at their initial level. If scores are initially low and increase with increased service time, Hypothesis Two will be considered supported. If scores are initially low and decrease over time, neither hypothesis will be considered supported. If scores of persons who have served a relatively short time are low and are also low for persons with a longer service record, one would suspect that the Navy attracts into it low authoritarian individuals and does not affect these values and to an extent perhaps supports equalitarian values.

Several variables will be controlled for when investigating the relationship of length of service to authoritarianism. It is expected that officers will, in general,
have lower scores than enlisted men, at least in part, because of the confounding variable of education. Consequently, support for Hypothesis Two or neither hypothesis is more likely to be found among officers.

No one is officially drafted into the Navy. Some people join, however, more for push than pull reasons. During the Korean War and from approximately 1965 to 1971, a large number of people joined the Navy rather than be drafted by the Army or evade the military obligation altogether. As such, an attempt was made in the present study to differentiate between those who truly volunteered for Navy service and those who joined as an alternative to what they perceived as a worse fate. It is expected that, in the true volunteer subsample, support for Hypothesis Three or both hypotheses will be more in evidence than for Hypothesis Two or neither hypothesis.

Career and non-career subsamples will also be investigated. Career personnel will probably have higher means than non-career personnel, if for no other reasons than the confounding influences of age and voluntary - involuntary entrance. It is logical to expect that this last variable will correlate moderately with career status since those who enter the service voluntarily will more likely be predisposed to view their situation favorably. The empirical evidence (Christie, 1952; and Grusky, 1962) suggests that of those who involuntarily enter an organiza-
tion, those who are more thoroughly socialized by the institution have greater authoritarian proclivities. Consequently, that part of the involuntary entrance group that decides to seek a career in the Navy is expected to provide support for Hypothesis Two. The scores of involuntary entrants who plan to leave the Navy after fulfilling their obligation will probably be relatively low initially and remain fairly low until discharge. It is expected that voluntary entrants who are not career-oriented will evidence support for Hypothesis Three. Voluntary entrants who seek Navy careers are expected to have initially high scores if the attraction hypothesis is valid, as the empirical evidence indicates it is. If the scores remain stable or decrease, Hypothesis Three will be considered supported. An increase in scores will be viewed as support for Hypothesis Two.

Several other variables will also be investigated in terms of their relationship to length of military service and authoritarianism. As has previously been noted (Stouffer, 1955; Brown and Bystryn, 1956; and Warshay, et al., 1964), different religious groups record varying scores on authoritarianism measures. Catholics and southern Protestants appear to have the highest scores, non-southern Protestants next, and Jews, atheists, and agnostics the lowest. In the present study, it is expected that this religious order will be substantiated to some extent.
Social class in the Navy is not really equivalent to social class in the rest of society. Officers and enlisted men are clearly differentiated. Within each group there are also sharp lines of social demarcation: between Lieutenant, junior grade and Lieutenant; between E-3 and E-4, E-6 and E-7. Warrant officers are socially separate from both the officer and enlisted ranks. Rank is not a clear determinant of whether one performs manual or non-manual labor. Many enlisted personnel are white-collar workers. Warrant officers are frequently engaged in manual labor and the duties of some lower ranking regular officers include some manual labor.

Financial compensation is not made completely on the basis of rank. Ensigns, for example, are paid considerably less than enlisted Chiefs (E-7, 8 and 9).

The involuntary entrance of some members into the organization also confuses the social class issue. For example, some college graduates serve in the enlisted ranks. They usually are not interested in a Navy career, and plan to seek a job appropriate for a college educated person when they leave.

It is thus not possible to compare the Navy sample directly with samples of the non-military population. Correlations of rank, education, and parental social class with authoritarianism will be made, however. A high negative correlation of education and authoritarianism is expected in light of the overwhelming amount of empirical
evidence to that effect. (Jones, 1956; Miller and Riessman, 1961; Warshay, et al., 1964, and Lipsitz, 1965 are only a few examples.)

The geographical region of the country where one lives or has lived for most of one's life has been found to affect authoritarianism scores (Christie and Garcia, 1951; Stouffer, 1955; Pettigrew, 1959; and Kelman and Barclay, 1963). If the theories advanced by Stewart and Hoult (1959), Kelman and Barclay (1963) and Gabennesch (1972) are sound, one would expect people who have been geographically mobile to be less authoritarian than those reared in the South, since breadth of perspective and opportunity to master more roles would likely be increased by mobility. Because of the urban nature of the East and parts of the West, persons from these regions should also be relatively non-authoritarian. The Midwest and Northcentral subsample should be less authoritarian than the Southern group and more so than the other sub-samples.

Age has rather consistently been found to correlate positively with authoritarianism (Janowitz and Marvick, 1953; MacKinnon and Centers, 1956; and Warshay, et al., 1964). It is expected that the present sample will support these findings.

These intervening variables will be held constant, when possible, in determining the strength of the relationship between length of military service and authoritarian predisposition.
CHAPTER III

METHODOLOGY

The Samples

Two independent random samples of Navy personnel, one each of officers and enlisted men, were selected. The sampling was carried out by PAMILANT, U. S. Naval Base, Norfolk, Virginia. This office is responsible for supplying manpower for all surface Navy shore and ship facilities in the Fifth Naval District. It has, consequently, current information on the location of every person in the District. The populations from which the samples were drawn consisted of persons stationed on bases or ships in Norfolk, Portsmouth and Virginia Beach, Virginia. Persons whose ships were not expected to remain in the area for at least two of the four months following the selections were not included in the samples by the Navy personnel who carried out the sampling. The Navy makes an effort to have ships in home port during the Thanksgiving and Christmas holidays. Since the samples were drawn in October, very few persons had to be excluded from them. The procedure was identical for both the officer and enlisted samples.
The office that supplied the samples does not have jurisdiction over Naval Air or Submarine Service personnel and consequently none were included in the samples. Since there is a greater proportion of technical specialists in these branches than in the surface Navy, the alleged trend of military organizations toward less authoritarian control (Janowitz, 1959, 1960; and Janowitz & Little, 1965) may be less marked in the present research than it would be if persons in all branches of the Navy had been included. Most of the subjects in the empirical research reviewed in Chapter II that deals with authoritarianism in the military are persons in highly technical fields. This study is concerned with the larger and more representative surface Navy.

The department providing the samples also does not deal with members of the Marine Corps and members of that sub-service are not included in the samples.

The original samples provided by the Navy consisted of sixty-eight officers and fifty-two enlisted men. A slightly larger group of officers was requested and selected to insure that enough warrant officers would be included to permit separate discussion with respect to some variables. The interview success rates are as follows. Forty-four officers were interviewed. There were two refusals. Eleven were not located. They had been transferred to another ship or shore station, moved from their present home, or had left the Navy. Eleven were not able
to be interviewed because they were at sea. An interview schedule was mailed to those at sea, along with an explanatory letter. This effort was unsuccessful however; only three schedules were returned. Because of the different circumstances in which these were filled out and because enough were not returned to permit a separate analysis, these three returns were not included in the data analysis in this study. Thirty-one enlisted men were successfully interviewed. There were five refusals. Nine persons were unable to be found, for the same reasons listed for the unlocated officers. Seven were at sea. The mailed interview schedule was equally unsuccessful in this sample: there was but one return. Again, this return was not included in the present analysis.

The Navy provided an extra thirty names, fifteen officers and fifteen enlisted men. No home addresses or work locations were provided however. This writer was able to locate six persons by way of telephone directories and information operators, and city directories. Although these six were interviewed, they are not included in this study because of their unrepresentativeness. The ease with which they were located seems to be due to the fact that they were all career military men who had been stationed in the Norfolk area for some time. The shortest period any had served was five years.
Pretest

The interview schedule was pretested on eight men on one small ship. (See the Appendix for a copy of the schedule.) These men were not a random sample and hence may have been unrepresentative. They did, however, encompass a considerable range of ranks, education and length of time in the Navy. Since the main purpose of the pretest was to ascertain the clarity and appropriateness of the questions on the schedule rather than to make statistical generalizations about the sample, it was felt that the unrepresentativeness did not present a problem. Another reason for the pretest was to determine if the time required to complete one interview would be uncomfortably long for the respondents.

Each question on the first part of the schedule was discussed with each person in the pretest group. No particular problems with the questions were found. The pretest group understood them with no difficulty or additional information. The questions received the types of answers that were sought. The second part of the schedule (the attitude scales) was not discussed item by item with the respondents. Rather, a general reaction was requested. The F-scale has been used in enough other studies to assume that the statements in it are comprehensible to most respondents, although the referents may vary from person
to person or group to group. It should be noted that the more highly educated pretest respondents complained about the all or nothing nature of the statements much more than the less educated respondents did. These last voiced no complaints at all about the scales. No one appeared to be or complained about being embarrassed by any of the questions.

The interview, apart from discussion of the questions, lasted from twenty to twenty-five minutes each, on the average. This was deemed tolerable since no objections were raised.

The Interview Method

It was originally hoped that a mailed questionnaire could be employed in this research. Previous studies in the area concerned with here, (Christie, 1952; Adams, 1954; Hollander, 1954; and Campbell and McCormack, 1956) have been rather limited in scope, dealing with one or another particular, and rather unique group of servicemen. A mailed questionnaire would have permitted a larger and representative cross-section of personnel. There were two major reasons for not using this technique. First, a very low return rate of the questionnaires was feared. A low response rate was predicted because of the high mobility of the respondents, the relatively low education of the enlisted sample, and the fact that the Navy refused to cooperate in any way in writing a letter to accompany or precede the questionnaire. It was believed that interviewing
would insure a greater degree of cooperation on the part of the respondents. If the questionnaires that were mailed out are a true indication of expectable return rate, this fear was well founded. Only four of the eighteen questionnaires were returned, a return rate of 22 per cent.

The second reason for not mailing questionnaires was more practical: money. The advantage of mailing questionnaires is that it would have allowed a larger number of people to be surveyed. The cost of purchasing this larger list of names was prohibitive, however, for this researcher. Because of theoretical and financial limitations, then, it was decided to interview respondents personally.

Interviews were conducted from seven o'clock until nine-thirty in the evening. Most were conducted at the respondents home. Those who live on ships were interviewed there. No letters or telephone calls of explanation preceded the visit by the interviewer, to minimize the possibility of refusals. It was believed that if the interviewer presented herself at the door, there was a better chance of successfully completing the interview. The rate of completed interviews seems to bear this out. 95 per cent of the officer sample who were contacted in person were interviewed and 86 per cent of the enlisted sample who were contacted were successfully interviewed. All of these interviews were completed and none had to be discarded later because of omissions.
All interviews were conducted by this writer so there is no possibility that the respondents could have been influenced by inter-interviewer differences. The interviewer attempted at all times to project a pleasant, non-comittal image in an effort to minimize interviewer-induced bias.

A brief, non-directive, statement was made by the interviewer to whoever opened the door at each respondent's home. This statement contained a short self-introduction, the method by which the respondent was chosen, and a disguised version of the purpose of the research. The respondents were told that the interviewer was studying personality variables of military personnel. (See the Appendix for a copy of this statement.)

The interview itself consisted of two parts: one filled out by the interviewer, the other filled out by the respondent. The first part consists of fixed-alternative and open-ended questions. The goal in this section was to gather demographic data, data from which one could ascertain whether entrance into the Navy was voluntary or involuntary, and data from which one could determine whether the respondent was career-oriented or not.

The second part of the interview schedule consisted of the authoritarianism scales. These the respondents filled out themselves. It was believed that they would be
more willing to give honest responses on paper than to another, unknown, person (see Oppenheim, 1966: 36-37). A copy of the both parts of the schedule is located in the Appendix.

**Measurement of Key Variables**

**Authoritarianism**

In this study, authoritarianism is operationalized by use of the F-scale and modifications of it. The first 30 items on the Opinion Study part of the Interview Schedule (see Appendix) comprise the F-scale. The first 28 items are from Forms 45 and 40. Item 29 is from Form 78, item 67; number 30 is from Form 60, item 44. The thirty-first statement is item 55 from Form 78. It was added because Campbell and McCormack (1956) used it in their scale and it was required for comparison purposes. Statements 32, 33, 36, 37, and 38 were used in the 1953 NORC study reviewed by Lipsitz (1965). Items 34 and 35 were used by Janowitz and Marvick (1953) and were included here to permit comparisons of the data. Item 34 is reverse-scored. In responses to the other items, agreement indicates authoritarianism whereas, for item 34, agreement indicates equalitarian values.

It is recognized that countless problems concerning the F-scale have been enumerated. Because this research entails comparison of these samples with others, however, it was necessary that the scale be employed.
The F-scale was intended by its designers to perform two tasks: measure prejudice covertly and, more importantly, measure antidemocratic tendencies at the personality level (Adorno, et al., 1950: 222-223). Hyman and Sheatsley (1954) point out that by trying to do the first, the authors improve their chances of appearing to do the second since items for the F-scale were selected on the basis of their correlation with the prejudice scales and because the item content for these scales is similar.

The scale has also been criticized for its lack of unidimensionality (Christie and Garcia, 1951; Christie, 1954; Aumack, 1955; Webster, et al., 1955; Bordura, 1961; Kerlinger and Rokeach, 1966). A unidimensional scale consists of "items that do not raise issues, or involve factors, extraneous to the characteristic being measured" (Selltiz, et al., 1966: 373). The literature concerning the F-scale is replete with attempts to determine exactly what factors are involved. The authors admit that the components they list as parts of authoritarianism are not statistical clusters but rather, a product of the underlying theory (1950: 361-262). Some empirical studies have located the same clusters the initial researchers specified as a priori but others have found contrary evidence. Christie and Garcia (1951) found clusters resembling the theoretical ones in their samples of California and southwest U. S. college students. They found, however, that an item that
was in one cluster in one sample, often was in another cluster in the other sample. They attribute this to the fact that the items are fairly ambiguous and the referents varied in the two subcultures.

Aumack (1955) argues that his prison study results challenge the scale's unidimensionality because, while overall scores dropped over a six-year period, some clusters showed no change over time and others evidenced a curvilinear relationship with time.

Adorno, et al. (1950) would probably say, in reply to these critics, that personality is not one dimensional, that it is a highly complex phenomenon and that it requires a multidimensional scale to tap it.

Another criticism of the scale is that it measures adequately only rightist authoritarianism. Shils (1954) argues that Adorno's group of researchers assumed a right-left dichotomy, with democrats being a residual category. He also contends that the authors overemphasized the differences of rightist and leftist values and ignored the similarities.

Several attempts have been made to construct general authoritarianism scales, most notably by Rokeach (1952, 1960). He argues that his dogmatism scale cuts across the right-left continuum and measures individual differences with respect to the open or closed nature of belief systems.
There has been some support for his reasoning. Plant (1960) found the dogmatism and ethnocentrism scales to correlate about equally with the F-scale in two of four samples and the correlation between dogmatism and ethnocentrism to be appreciably lower than that between the F- and ethnocentrism scales. He took these findings to be supportive of Rokeach's hypothesis that the dogmatism scale is a better measure of general authoritarianism than the F-scale. It should be noted, however, that these results were not consistent from sample to sample, and that the highest correlation he achieved was between the dogmatism and authoritarianism scales: .77.

Hanson (1968) supports Rokeach to some extent as well. He found no significant differences in dogmatism between authoritarians and non-authoritarians but also found that authoritarian responses achieved higher correlations with dogmatism than non-authoritarian responses. He concludes that the dogmatism scale taps general authoritarianism but authoritarian persons are more dogmatic than non-authoritarians.

It should be made clear that Adorno, et al., at least by implication, were interested in rightist authoritarianism. It is not until well into the book that the "authoritarian" label appears. Prior to that, the emphasis is on "potentially fascist" persons. Fascism is, by definition, regarded as a rightist phenomenon. The research was conducted and the book written shortly after World War II, during which attention was naturally focused on fascist Germany.
In fact, the research was supported in part by the American Jewish Committee. While there is no necessary connection between a supporting agency and a particular piece of research, it seems reasonable to assume that Jews were more concerned with fascism than communism at the time. It does not seem quite fair to criticize a scale because it does not do something it was not intended to do. It is admitted, however, that it is difficult, using the F-scale, to determine in any absolute sense, who is a potential fascist and who is not. We can speak only in terms of relative susceptibility to fascist propaganda. In addition, not being susceptible to fascist propagands does not necessarily imply that one is a democrat or a communist. As Shils correctly notes, it is a residual category.

The F-scale is constructed so that agreement with the items always indicates authoritarianism. This characteristic has been the subject of lengthy debate. Many studies argue that the F-scale lends itself to response set or style on the part of the respondent. They are not precise concerning what response set or style is however. Some authors contend that selection of responses is made regardless of item content, that is, a person may have a tendency to select one particular response option. Other writers argue that a respondent may select a particular response because he has a psychological need to do so. Content is important here; it is that which the respondent is reacting to. Rorer (1965) categorizes the first as response style, the second as response set.
Estimates of the influence of response set or style vary widely. Samelson (1964), Samelson and Yates (1965), Rorer (1965) and Rokeach (1967) contend that this factor plays an insignificant part in determining F-scale scores. Christie, et al. (1958) and Campbell, et al. (1967) believe that response set is of moderate importance. On the other hand, some writers (Bass, 1955, 1956; and Peabody, 1964) argue that response set is one of the major determinants of F-scale scores. Leavitt, et al. (1955) agree that response set is a factor, but argue that the F-scale successfully differentiates authoritarians from non-authoritarians partly because authoritarians tend to agree with authoritatively stated items.

The method most commonly used to determine whether a response set is operating is to present mixed statements or statements and their reversals and see whether a respondent agrees with both. (See, for example, Bass, 1955; Leavitt, et al., 1955; Christie, et al., 1958; Berkowitz and Wolkon, 1964; and Rokeach, 1967.) If he does, the argument goes, it is due to response set. Rokeach (1967) points out, however, that there are two other possible explanations. A person may tell the truth in answer to one item and lie when responding to the reversal. Another alternative is that he believes both statements. The likelihood of the second alternative is enhanced by the fact that reversals are often inadequate. Christie, et al., (1958) note three major problems in reversing items: the reversals must be
logically opposite, they must avoid using extreme phraseology such as "all," "everyone," "never," and "always," and they must be psychologically opposite. This last is the most serious, it seems, and the most difficult to effect successfully.

The adversaries in this argument have presented strong cases but the outcome is still in doubt. Unidirectionally worded scales seem to encourage a response set of some kind and to some uncertain extent. Reversed scales, while apparently eliminating this problem, present numerous additional problems, however.

A further problem must be noted. The F-scale is a Likert-type scale and as such, it should be treated as an ordinal level measure. Most studies that this one will be compared with treated it as an interval-level scale, and consequently, it will, when necessary, receive that treatment here.

Despite these several problems, the F-scale has been used in hundreds of studies and will be used here as well.

**Length of Time in the Navy**

Respondents were asked specifically how long they have been in the Navy during the interview (Question 10). This information will be used to determine if and how the authoritarianism measures vary with amount of in-service time. It is primarily these data which will determine
whether the second, third or neither hypothesis or both hypotheses are supported. These data will be used in both ungrouped and grouped forms. Length of service was provided on the sample lists in some cases. These dates were compared with the dates given by the respondents themselves. There were no major discrepancies. A few men who had served for a long time miscalculated by a month or two but since their service time was recorded in years only, this is of no great import. It was concluded that the respondents gave quite reliable estimates of their service time. Respondents who had served less than five years were coded in terms of both years and months.

**Intervening Variables**

1. Respondents were asked whether they were career or non-career personnel (Question 14). They were coded according to five options: definitely yes, probably yes, unsure, probably no, and definitely no. Persons who were retiring after having had a full career in the service were coded as definitely yes since to do otherwise would have distorted the intent of the question. Persons who were unsure were not pressured into deciding one way or the other for the benefit of the questionnaires. They were merely coded unsure.

2. Voluntary - involuntary entrance into the Navy was determined by Question 11. Respondents were asked if they wanted to join the Navy and what their reasons were. They
were probed, if necessary, to ascertain whether a threat of being drafted into the Army influenced their decision. Persons were classified as voluntary entrants if their reasons for entering were among or a combination of the following: desire to serve the country; thought it would be fun, exciting, interesting or challenging; good experience; security; just wanted to join; travel; economic advancement. Persons were classified as involuntary entrants if their reasons for enlisting encompassed any or all of the following: the draft (this was by far the greatest factor pushing respondents into the Navy; judicial order (this was an a priori category into which no respondents fell); unable to get a job because of unfulfilled military obligation. When respondents reported both push and pull factors, the interviewer coded their answers according to what they emphasized as the most important influence. Annapolis graduates were generally classified as volunteers. A very few were placed in the involuntary group because it had not been their decision to go to the academy. On balance, it was not difficult to group the respondents. Most were very emphatic and clear about why they enlisted.

3. Parental social class was determined on the basis of Question 5, that is, father's occupation. The North and Hatt social class index was used to assigned social class. Scores from 33 through 45 were assigned to Class 5 (the lowest); 46 through 58, to Class 2; 59 through 71, to Class
3; 72 through 84, to Class 4; 85 through 96, to Class 5 (the highest class). Occupations were interpolated when necessary. Class was assigned on the father's principal job. If he was in semi-retirement, was retired, deceased, or temporarily unemployed, his last major occupation was sought.

4. Fathers' and mothers' educational achievement levels were ascertained by Questions six and eight. An attempt will be made to see if these have any bearing on the authoritarianism level of the respondent.

5. Mothers' occupational status is asked in Question 7. What was desired was to determine if a respondent's mother is a housewife primarily or is employed outside the home, not the type of job she has.

6. The educational level the respondent had reached was sought in Questions 2 and 3. The interviewer excluded active duty military schools from the total and included vocational and technical training and equivalency certificates. Since education has such a strong inverse relationship with authoritarian predispositions, this variable was deemed especially important.

7. The educational achievement of the respondent's wife, if any, was determined in Question 15a. Marital status was incidentally ascertained at the same time. The reason for the inclusion of these questions was curiosity about whether a married status, insofar as it requires mastery of additional roles, might influence authoritarianism scores. The education and employed-housewife (Question 15b) questions
were introduced to see if they too would have any impact on the scores.

8. Rate or rank (Question 1) was asked as a gross measure of social class. As explained previously, position in the military is not directly comparable to civilian social class, but it was believed that rate or rank might behave in somewhat of a similar manner with respect to authoritarianism. The rates ranged from E-1 (Enlisted-1, the lowest position in the Navy) to E-9. Ranks ranged from W-1 (Warrant Officer-1) to O-3 (Officer -3). Rate or rank of respondents was provided with the sample lists. Most respondents were still at the same position but a few had been promoted. This did not occur frequently enough to suspect deceit on the part of the respondents.

9. Age has been found to correlate somewhat with authoritarianism and this variable was determined by Question 4. This characteristic will be treated in an ungrouped state and in various groupings to permit comparisons with other studies.

10. To ascertain what region of the country the respondents had spent the most time in, apart from military duty stations, they were asked what state or states they were from (Question 9). The states were grouped into regions as follows: Geographically mobile: had moved a great deal and not spent a major part of their time in any one state. Northeast: Maine, New Hampshire, Vermont,
Connecticut, Rhode Island, Massachusetts, New York, Pennsylvania, New Jersey, Delaware. West: Nevada, Washington, Alaska, Oregon, California, Montana, Idaho, Wyoming, Utah, Colorado, New Mexico, Arizona, Hawaii. North central and Midwest: North Dakota, South Dakota, Nebraska, Minnesota, Iowa, Kansas, Missouri, Wisconsin, Illinois, Indiana, Ohio, Michigan. South: Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, Kentucky, Florida, Georgia, South Carolina, North Carolina, Virginia, West Virginia, Maryland, District of Columbia. This variable is seen as important because F-scale responses have been reported to differ somewhat from region to region and because some regions are alleged to encourage or tolerate wider perspectives than others.

11. Religion and religious dogmatism are reported to influence authoritarianism scores. Respondents were handed a card with various religions listed on it and were asked to state which they subscribed to, if any (Question 10). In the data analysis, religions will be grouped as follows: Catholic; Protestant; Jew; None. They will also be grouped according to hypothesized dogmatism of the religion: Roman Catholic; Baptist, and other fundamentalist Protestant churches; Methodist, Lutheran, Presbyterian, Episcopal, Congregational, and other non-fundamentalist churches; Jewish; atheist, agnostic or none.
The statistical procedures that will be employed are numerous. Difference of means tests will be used in comparisons of data from this study with those of other studies. Pearson's $r$ and partial correlations will be used to determine relationships between interval level data. Other correlational measures will be used with other level data. Descriptive statistics such as frequency distributions, column, row and table percentages, and scattergrams will be employed when appropriate. Statistical tests of significance will also be used when proper.
CHAPTER IV

DATA ANALYSIS

Demographic Characteristics

Before proceeding to an analysis of the interview results, it is perhaps useful to describe the composite sample involved.

First, the sample is young. The mean age is 26.9, with a standard deviation of 8.6; the range is from 18 to 40. The mean age of officers is 26.8, of enlisted men, 27.2.

There are two major reasons for this youthful sample. Firstly, the officer sample only includes persons in the rank of lieutenant or below. Since higher ranking older officers were not included, the age range was depressed. The ages of warrant officers vary considerably since one may become one after serving a relatively short time in the enlisted ranks or when one's career is nearing an end. Because of this variety, the mean age of the officer group as a whole was not greatly affected. The second reason is related to the age structure of the Navy in general. The Navy work force is pyramidal in shape, with the greatest number of members in the lower ranks. Since age generally increases with rank, and there are fewer individuals in the higher ranks, the population is perforce relatively young. In addition, retirement from the Navy is possible
after serving approximately eighteen to twenty years. This early age of retiring also depresses the average age of the population.

All respondents but one have completed at least high school. The Navy requires a college degree of its regular officers, except for those few who succeed in rising from the enlisted ranks. Warrant officers are not obliged to be college graduates. Enlisted personnel are encouraged to have a high school diploma, but this policy seems to fluctuate with manpower demands. Those without diplomas are officially encouraged to earn a high school equivalency certificate. For the composite sample and the enlisted and officer groups separately, the educational breakdown is as follows:

**TABLE 1**

Composite Navy Sample, Educational Achievement Distribution

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed less than a high school education</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Completed high school or equivalent</td>
<td>24</td>
<td>32.0</td>
</tr>
<tr>
<td>Completed more than 12 and less than 16 years</td>
<td>16</td>
<td>21.3</td>
</tr>
<tr>
<td>Completed 16 years</td>
<td>27</td>
<td>36.0</td>
</tr>
<tr>
<td>Completed more than 16 and less than 18 years</td>
<td>4</td>
<td>5.3</td>
</tr>
<tr>
<td>Completed 18 years or more</td>
<td>3</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### TABLE 2

**Enlisted Navy Sample, Educational Achievement Distribution**

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed less than a high school education</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Completed high school or equivalent</td>
<td>19</td>
<td>61.3</td>
</tr>
<tr>
<td>Completed more than 12 and less than 16 years</td>
<td>9</td>
<td>29.0</td>
</tr>
<tr>
<td>Completed 16 years</td>
<td>2</td>
<td>6.5</td>
</tr>
<tr>
<td>Completed more than 16 and less than 18 years</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Completed 18 years or more</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>31</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### TABLE 3

**Officer Navy Sample, Educational Achievement Distribution**

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed less than a high school education</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Completed high school or equivalent</td>
<td>5</td>
<td>11.4</td>
</tr>
<tr>
<td>Completed more than 12 and less than 16 years</td>
<td>7</td>
<td>15.9</td>
</tr>
<tr>
<td>Completed 16 years</td>
<td>25</td>
<td>56.8</td>
</tr>
<tr>
<td>Completed more than 16 and less than 18 years</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Completed 18 years or more</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>44</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Because officers as a group have a generally higher educational level than do enlisted men, it was expected, and, as will later be explained, found, that the former's authoritarianism scores would be lower than the latter's.
Thirty-one persons were interviewed for the enlisted sample. Ten of these are seaman recruits, seaman apprentices or seamen (E-1, E-2, and E-3). Eleven are third, second, or first class petty officers (E-4, E-5, and E-6). Ten are chief, senior chief or master chief petty officers (E-7, E-8, and E-9). This sample overrepresents the higher rates and underrepresents the lower rates in terms of their actual population proportions. The lowest ranking group is probably underrepresented because most seaman recruits and some seaman apprentices are still in Navy schools and have not been assigned to ship or shore facilities. In addition, the percentage of seaman recruits in the total population is usually considerably lower than the other rates in that group because the time spent in that rate is relatively short. The higher rates usually require that at least one year be spent in them before being promoted. In contrast, most seaman recruits are promoted to apprentice shortly after basic training is completed.

Twelve members of the officer sample are warrant officers. Eleven are ensigns, nine lieutenants, junior grade, and twelve are lieutenants. This distribution is approximately what was expected. Ensigns appear to be slightly overrepresented, most probably because shortly before the sampling was done, the Navy extended the minimum length of time spent in that rank from twelve to
fifteen months. Consequently, a slight accumulation of persons occurred there.

Because religion has been cited as correlative with authoritarianism (Brown and Bystryn, 1956; Warshay, et al., 1964), this variable was considered in the present research, especially with respect to the dogmatic characteristics ascribed to some faiths. The religious breakdown of the composite sample is as follows:

TABLE 4

Composite Navy Sample, Religious Distribution

<table>
<thead>
<tr>
<th>Religion</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic</td>
<td>20</td>
<td>26.7</td>
</tr>
<tr>
<td>Protestant</td>
<td>43</td>
<td>57.3</td>
</tr>
<tr>
<td>Jew</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Atheist, Agnostic</td>
<td>11</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The Protestant group is further distributed: seven Baptists, eleven Methodists, four Lutherans, ten Presbyterians, six Episcopalians, one Congregationalist, and four persons who belong to other Protestant sects and denominations. This sample distribution was approximately as expected.

In terms of region of origin, persons from the Northeast are overrepresented. This was not unexpected however.
The Norfolk area is the largest Naval District near the Northeast and since the Navy allows its members some latitude in choosing their stations, it is possible that many from the Northeast elected to remain in that general area. The regional distribution of the composite sample is:

<table>
<thead>
<tr>
<th>Region</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographically mobile</td>
<td>7</td>
<td>9.3</td>
</tr>
<tr>
<td>Northeast</td>
<td>29</td>
<td>38.7</td>
</tr>
<tr>
<td>West</td>
<td>10</td>
<td>13.3</td>
</tr>
<tr>
<td>Midwest, North Central</td>
<td>13</td>
<td>17.3</td>
</tr>
<tr>
<td>South</td>
<td>16</td>
<td>21.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Social class, as explained previously, was determined by using the North-Hatt scale. Nearly 75 per cent of the parents of the parents of the respondents belong to classes 2 and 3. One person (1.3 per cent of the composite sample) did not know his father's occupation, since the latter had deserted the family some time ago. Eleven persons (14.7 per cent) had fathers in the highest rated, class 1, occupations. The parents of twenty-five respondents (33.3 per cent) were in class 2. The parental social class of thirty respondents (40 per cent) was class 3. Eight respondents' parents were placed in class 4 (10.7 per cent).
No persons had parents in the lowest class, class 5. This last was somewhat surprising since military organizations are thought to contain a reasonable number of lower class youth. The absence of members of this class in the present sample is likely an artifact of the cutting points assigned. These points were determined without reference to the sample. Rather, the scale was divided into five categories, each of which had an equal number of ratings in it. This resulted in only the most menial occupations being located in the lowest class. Many occupations, such as gas station attendant and farmhand, placed in class 4 in this analysis, are often considered lower class occupations.

With these demographic characteristics in mind, it is perhaps now appropriate to discuss the relative authoritarianism or nonauthoritarianism of the Navy sample.

Authoritarianism or Nonauthoritarianism of the Navy Sample

An overall perspective can perhaps best be gained by comparing the present respondents with national survey groups. Janowitz and Marvick (1953) utilized two national samples in their study of the relationship of authoritarianism and political behavior. Since they were interested in political behavior, they utilized a scale that they thought would tap only the relevant dimensions of authoritarianism: authoritarian submission and power and toughness. (See the Appendix for a copy of the scale.) To be categorized as high authori-
tarian, a respondent had to have a cumulative score of less than nineteen. To be classed as low authoritarian, a respondent had to have a cumulative score of twenty-five or more. The intermediate authoritarian classification consists of those scoring from nineteen to twenty-four. For the purpose of comparison, this researcher computed the Nave group responses to these items in the same manner.\textsuperscript{11} The results are given below:

### TABLE 6

<table>
<thead>
<tr>
<th>Authoritarianism</th>
<th>National Sample</th>
<th>Navy Sample</th>
<th>Significance Level\textsuperscript{a}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>High</td>
<td>262</td>
<td>23.0</td>
<td>18</td>
</tr>
<tr>
<td>Intermediate</td>
<td>437</td>
<td>39.0</td>
<td>35</td>
</tr>
<tr>
<td>Low</td>
<td>430</td>
<td>38.0</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>1129</td>
<td>100.0</td>
<td>75</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Difference of proportions tests were performed using Blalock's (1960) formula.

The Navy sample appears to be only very slightly more authoritarian than the national sample. The largest difference is not in the high authoritarian group. Rather, the Navy has a considerably smaller percentage of low authoritarians than the national sample and the intermediate group is proportionally larger. Thus, while the Navy has approximately the same percentage of high authoritarians as the national group,

\textsuperscript{11}Responses were scored from 1 to 6, 1 representing strong agreement and 6, strong disagreement, except for a reversed item.
it has fewer low authoritarians than would be expected if that sample was representative of the nation as a whole.

Janowitz and Marvick further investigated the distribution of authoritarianism by controlling for education. They divided their sample on the basis of limited education (high school or less) and fuller education (more than high school). The results are as follows:

**TABLE 7**

Distribution of Authoritarianism According to Education, Janowitz and Marvick's National Sample and Composite Navy Sample, by Percentage

<table>
<thead>
<tr>
<th>Authoritarianism</th>
<th>National Sample</th>
<th>Navy Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Limited Education</td>
<td>Fuller Education</td>
</tr>
<tr>
<td>High</td>
<td>25.0</td>
<td>40.0</td>
</tr>
<tr>
<td>Intermediate</td>
<td>40.0</td>
<td>35.0</td>
</tr>
<tr>
<td>Low</td>
<td>35.0</td>
<td>46.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Persons with more than a high school education tend to be less authoritarian than those with more limited educational backgrounds. Regardless of educational level, the Navy groups have higher percentages of high authoritarians and lower percentages of low authoritarians than the comparable groups in the national survey. A larger percentage of Navy personnel with limited educations are classified as high authoritarians than in the national sample. Fuller education markedly increases the percentage of Navy respondents classified as
low authoritarians, although the percentage still is not as
great as in the Janowitz and Marvick sample.

It is not possible to conclude that the Navy sample
is considerably more authoritarian than the general popula-
tion. The former sample does, however, seem slightly more
authoritarian and a good deal less authoritarian than the
national sample.

Lipsitz (1965) reevaluated national survey data concerned
with authoritarianism, that had been collected by NORC in
1953 (A copy of the scale used is in the Appendix.) He
classified the men as high on authoritarianism if they
answered three or more of the questions in an authoritarian
direction. He further distinguished between middle class
and working class respondents. Since class status of people
in the military is often not directly comparable to class
status of civilians, it was decided to categorize officers
as middle class and enlisted men as working class for the
purposes of this comparison. The results are listed in Table 8.

TABLE 8

Distribution of Authoritarianism According to Social Class,
Lipsitz' National Sample and Composite Navy Sample

<table>
<thead>
<tr>
<th>Authoritarianism</th>
<th>Middle Class</th>
<th>Working Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
<td>Navy Sample</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>Sample</td>
</tr>
<tr>
<td>High</td>
<td>N</td>
<td>N %</td>
</tr>
<tr>
<td></td>
<td>103</td>
<td>38.2</td>
</tr>
<tr>
<td>Low</td>
<td>167</td>
<td>61.8</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>N %</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>64.5</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The Navy sample is considerably less authoritarian than the national group whose responses were reanalyzed by Lipsitz. It is suggested that one of the items used in this scale distorted and confused the results. Item five is: "No decent man can respect a woman who has had sex relations before marriage". In the Navy sample, only eight respondents agreed to any extent at all with this item. Obviously it is not of much value in distinguishing between authoritarians and non-authoritarians in the Navy sample. Since the respondents had to answer at least three of the five items on the scale in an authoritarian direction to be classified as High and since this item was virtually useless, a much smaller percentage of people were categorized as High than would have been if a more discriminating item had been employed. Enlisted men nonetheless have almost twice as high a percentage of persons classified as High on authoritarianism as officers. If officer-enlisted status can be considered a gross measure of social class, the Navy sample evidences some support for the hypothesis that authoritarianism is more prevalent in the working class than in the middle class.

MacKinnon and Centers (1956) related authoritarianism to various demographic variables in their study of Los Angeles County residents. They administered a seven item authoritarianism scale (a copy of which may be found in the Appendix). Each item was scored from one to six with one reverse-scored. Individual means were computed and the sample was divided at the median into an equal number of
authoritarians and equalitarians. As indicated below, they found that authoritarianism generally increases with age but the thirty to thirty-nine age group had the lowest percentage of authoritarians of all the groups.

TABLE 9

Distribution of Authoritarianism According to Age Groups, Los Angeles and Composite Navy Samples

<table>
<thead>
<tr>
<th>Authoritarianism</th>
<th>Los Angeles Sample</th>
<th>Navy Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian</td>
<td>50.0 35.0 50.0</td>
<td>50.0 65.0 100.0</td>
</tr>
<tr>
<td>Equalitarian</td>
<td>50.0 65.0 50.0</td>
<td>50.0 35.0 0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0 100.0 100.0</td>
<td>100.0 100.0 100.0</td>
</tr>
<tr>
<td></td>
<td>(N=111) (N=125) (N=97)</td>
<td>(N=54) (N=20) (N=1)</td>
</tr>
</tbody>
</table>

Because the Navy sample did not include anyone in the age groups fifty and above, only the younger groups in the MacKinnon and Centers sample are compared in the table. The most striking difference is in the thirty to thirty-nine age group. The Navy sample reverses the distribution found in the MacKinnon and Centers sample. This can in part be explained by the fact that most persons thirty and over in the Navy are making a career in that organization. As will be seen later, F-scale scores for career men are significantly higher than scores of non-career personnel. The under thirty groups in both samples have the same percentage of authoritarians and equalitarians. The Navy under thirty group contains a large number of non-career, involuntary entrants who presumably
offset the more authoritarian career-oriented, voluntarily serving personnel in that category. There are obviously not enough people in the Navy sample's forty to forty-nine age group to merit discussion of differences. In the Navy sample, the product-moment \( r \) correlation between age and F-scale score is moderately low, \( .277 \), which is not statistically significant. Figure 1 illustrates this quite well. Absence of a strong correlation is partially explained by the fact that the twenty to twenty-two age group has a considerably higher mean than the other groups under thirty, as can be seen in Figure 2. While the trend is generally higher authoritarianism with increasing age, this is obscured in the linear correlation measure by the twenty to twenty-two group mean.

MacKinnon and Centers also divided their samples according to the education of the respondents. This variable has consistently been found to vary inversely with authoritarianism and its components. (See, for example, Miller and Riessman, 1961; Lipsitz, 1965; Warshay, et al., 1964; Jones, 1954; Stouffer, 1955.) The \( r \) correlation between education and authoritarianism, as measured by the F-scale, for the Navy sample as a whole is \( -.528, p<.01 \). This correlation is illustrated in Figure 3 and the means for various educational level groups are shown in Figure 4. The negative correlation between education and authoritarianism is considerably stronger for officers than enlisted men. The correlation for the former is \( -.488, p<.01 \);
FIGURE 1

Scattergram of Correlation Between Age and F-Scale Score, Composite Navy Sample

F-Scale Score

Age

r = .277
FIGURE 2
F-Scale Means According to Age Groups, Composite Navy Sample

F-Scale Score
4.50 -
4.25 -
4.00 -
3.75 -
3.50 -
3.25 -
3.00 -
2.75 -
2.50 -

17-
19
20-
22
23-
25
26-
28
29-
31
32-
34
35-
37
38-
40
N=4
N=19
N=14
N=12
N=7
N=6
N=9
N=4

Age
FIGURE 3
Scattergram of Correlation Between Education and F-Scale Score, Composite Navy Sample

F-Scale Score

Education

r = -.528
FIGURE 4

F-Scale Means According to Educational Groups, Composite Navy Sample

F-Scale Score

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Score</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-10 (N=1)</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>12 (N=24)</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>14 (N=16)</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td>16 (N=27)</td>
<td>3.50</td>
<td></td>
</tr>
<tr>
<td>18-20 (N=7)</td>
<td>3.25</td>
<td></td>
</tr>
</tbody>
</table>
the correlation in the enlisted sample is -.250, which is not statistically significant and could have occurred by chance. Scattergrams of these correlation (Figures 5 and 6) illustrate the weaker relationship in the enlisted sample. As mentioned previously, most officers are college graduates, and so it was expected that they would have lower F-scale scores than enlisted men. In fact, the item mean F-scale score for officers as a group is 3.35, standard deviation of .75. The mean for enlisted men is 3.91, standard deviation of .67. With a t of 3.33, the difference between the means is significant at .005, using a one-tailed test. When the officer sample is separated into warrant and regular officers, the results of the difference of means tests are as reported in Table 10.

TABLE 10
F-Scale Means and Rank, Difference of Means Tests

<table>
<thead>
<tr>
<th>Rank</th>
<th>N</th>
<th>X</th>
<th>sd</th>
<th>Groups Compared</th>
<th>t</th>
<th>Significance Levela</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enlisted Men</td>
<td>31</td>
<td>3.91</td>
<td>.67</td>
<td>1,3</td>
<td>5.50</td>
<td>.0005</td>
</tr>
<tr>
<td>2. Warrant Officers</td>
<td>12</td>
<td>3.91</td>
<td>.63</td>
<td>1,2</td>
<td>0.00</td>
<td>n.s.</td>
</tr>
<tr>
<td>3. Regular Officers</td>
<td>32</td>
<td>3.14</td>
<td>.68</td>
<td>2,3</td>
<td>3.33</td>
<td>.005</td>
</tr>
</tbody>
</table>

aOne-tailed test.

Warrant officers and enlisted men have identical means, while regular officers have a significantly lower mean than either of the other groups. Warrant officers are promoted to officer status from the enlisted ranks. As such, they are not required to have college degrees and in fact, none of
FIGURE 5

Scattergram of Correlation Between Education and F-Scale Score, Navy Officer Sample

F-Scale Score

Education

\[ r = -0.488 \]
FIGURE 6

Scattergram of Correlation Between Education and F-Scale Score, Navy Enlisted Sample

F-Scale Score

5.30
5.10
4.90
4.70
4.50
4.30
4.10
3.90
3.70
3.50
3.30
3.10
2.90
2.70
2.50
2.30
2.10
1.90

Education

r = -.250
the warrant officers in the sample has been graduated from college. In light of the inverse relationship between education and authoritarianism, it is not surprising that warrant officers have a significantly higher F-scale score than do regular officers.

MacKinnon and Centers classified the Los Angeles sample into six educational levels. Since everyone in the present sample has at least completed grade school, the two lowest categories are not of concern here. The differences between the two samples are listed in Table 11.

**TABLE 11**

Distribution of Authoritarianism According to Years of Education Completed, Los Angeles and Composite Navy Samples, by Percentage

<table>
<thead>
<tr>
<th>Authoritarianism</th>
<th>Los Angeles Sample</th>
<th>Navy Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 12</td>
<td>12</td>
</tr>
<tr>
<td>Authoritarian</td>
<td>73.0</td>
<td>46.0</td>
</tr>
<tr>
<td>Equalitarian</td>
<td>27.0</td>
<td>54.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The Navy sample follows the same pattern as the Los Angeles sample in that the percentage of authoritarians decreases with increased education. The Navy sample, however, has a larger percentage of authoritarians in every category than does the MacKinnon and Centers sample. It is only in the college educated groups that the Navy sample has a larger percentage of equalitarians than authoritarians. In contrast, in the Los
Angeles group, there is a larger percentage of equalitarians in every category except "Some High School." It thus appears that education, while it reduces authoritarianism in the Navy sample, does not reduce it to the level found in the Los Angeles group. The Navy sample, regardless of educational level, appears to be more authoritarian than the Los Angeles residents.

In fact, this conclusion may be highly misleading. MacKinnon and Centers do not report the median score of their sample. Only if that score is approximately the same as that of the present sample would the conclusion that the Navy sample is more authoritarian be warranted. The only conclusion that can safely be drawn is that, within the Navy sample, authoritarianism decreases with increased education. A chi square test (Table 12) indicates that this relationship is significant at the .02 level.

**TABLE 12**

Significance of the Relationship of Authoritarianism—Equalitarianism and Education in the Composite Navy Sample, Using MacKinnon and Centers' Scale and Definitional Criteria

<table>
<thead>
<tr>
<th>Education</th>
<th>Authoritarian</th>
<th>Equalitarian</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed College</td>
<td>12</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>(18.6)</td>
<td>(15.4)</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>10</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>( 8.7)</td>
<td>( 7.1)</td>
<td></td>
</tr>
<tr>
<td>Completed High School</td>
<td>18</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>(13.1)</td>
<td>(10.9)</td>
<td></td>
</tr>
<tr>
<td>Some High School</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(  .5)</td>
<td>(  .5)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>34</td>
<td>75</td>
</tr>
</tbody>
</table>

\[ x^2 = 10.231, \text{ df } = 3, \ p < .02 \]

*aThe numbers in parenteses are expected frequencies.*
Regional differences in authoritarianism have been noted previously (Kelman and Barclay, 1963; Christie and Garcia, 1951; Stouffer, 1955). Pettigrew (1959), however, found no differences in the South and North. It was previously predicted that the geographically mobile would be the least authoritarian group in the sample, since, according to Kelman and Barclay's (1963) breadth of perspective hypothesis, these people would have had more opportunity for varying experiences. In fact, as Table 13 shows, this was not the case.

**TABLE 13**

F-Scale Means of the Composite Navy Sample, According to Region

<table>
<thead>
<tr>
<th>Region</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographically Mobile</td>
<td>7</td>
<td>3.54</td>
<td>.75</td>
</tr>
<tr>
<td>North</td>
<td>29</td>
<td>3.32</td>
<td>.76</td>
</tr>
<tr>
<td>West</td>
<td>10</td>
<td>3.48</td>
<td>.71</td>
</tr>
<tr>
<td>North Central, Midwest</td>
<td>13</td>
<td>4.10</td>
<td>.41</td>
</tr>
<tr>
<td>South</td>
<td>16</td>
<td>3.72</td>
<td>.82</td>
</tr>
</tbody>
</table>

These regions are listed in the order of expected authoritarianism from low to high. As can readily be seen, the expected order was not found. The reason the geographically mobile did not have the lowest scores perhaps relates to the fact that six of the seven persons in this category are children of career military men. While they may have lived in many parts of the country, their stays were probably brief
since a tour of duty usually varies from eighteen months to three years. Because of the constant moving, the values espoused in the home may have been of greater import. If military men in fact are more authoritarian than other groups, these six persons may have been socialized into accepting authoritarian attitudes or have modeled their attitudes after their parents'. An alternative explanation is that since many military bases are located in the South, it is possible that several of these persons spent much of their lives there. In this sample, southerners have the second highest mean of the regional groups. The six mobile persons may have accepted the relatively authoritarian attitudes of that subculture.

Persons from the North Central states and the Midwest had the highest mean of all the groups. In addition, they were remarkably consistent, with a standard deviation of only .41. A possible explanation of the high mean for this group is that five are Catholics, a religion often found to be related to intolerance and authoritarianism. The mean for these five is 4.02. In addition, the six Protestant non-fundamentalists had a mean of 4.16, the highest by far of any other regional group of Protestants. (The next highest mean for non-fundamentalist Protestants is 3.46 in the Northeast.) Perhaps some religious factor is operating to produce this high authoritarianism in the North Central and Midwestern states.
Theta was computed to determine the association between region and Authoritarianism. The results are shown in Table 14.

**TABLE 14**

Region and Authoritarianism, Distribution and Association in the Composite Navy Sample

<table>
<thead>
<tr>
<th>Region</th>
<th>F-Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00-2.50</td>
</tr>
<tr>
<td>Geographically</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>14.3% (N=1)</td>
</tr>
<tr>
<td>Northeast</td>
<td>17.2% (N=5)</td>
</tr>
<tr>
<td>West</td>
<td>0.0% (N=0)</td>
</tr>
<tr>
<td>North Central,</td>
<td>0.0% (N=0)</td>
</tr>
<tr>
<td>Midwest</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>12.5% (N=2)</td>
</tr>
</tbody>
</table>

Theta is .302. This indicates that in about 30% of the comparisons, there are systematic differences in region and

---

12 Theta is a statistic devised by Linton C. Freeman (1965: 108-119) as a measure of association between a nominal scale and ordinal scale and varies from 0 to 1. The formula is $\theta = \frac{\epsilon D_i}{T_2}$. $D_i = |f_{bi} - f_{ai}|$. $F_b$ is derived by multiplying each frequency by the sum of the numbers both in the row below and to the right of it. $F_a$ is derived by multiplying each frequency by the sum of the numbers both in the row below and to the left of it. $T_2$ is derived by multiplying the total frequency in each nominal class by the totals of each of the ordinal classes two at a time and summing the totals.
and authoritarianism. This is interpreted as a moderate correlation and prediction would be accurate in about 30 per cent of the cases.

Although other studies dealing with region and authoritarianism have had students as subjects, perhaps there is some value in comparing them with the Navy sample. These comparisons are given in Table 15.

The mean of Navy sample is significantly higher than the means of two regional college samples and lower than those of two others for which standard deviations were available. The Northeastern and Western college samples are lower. This was expected in light of the fact that, in the Navy sample, persons from these regions have the lowest means of the regional groups. In addition, the college samples are younger, in general, than the Navy men, and authoritarianism usually increases with age. The Negro sample from Maryland and the white sample from the Southwest have higher means than the comparable group of southern Navy men. Negroes have been found generally to have higher F-scale means than whites, with the exception of prisoner samples. The Southwest college sample's mean is surprising however. The mean score for Navy men from the South was 3.72, considerably lower than the 4.10 evidenced by the students. It must be noted, however, that the Christie and Garcia study was carried out in 1949, a time when the state in which the college is located legally segregated Negroes. Over time, attitudes in that state may have become less authoritarian. This should be tested empirically, but intuitively it
### TABLE 15

Comparison of Regional Student and Navy Samples with Respect to Authoritarianism; Difference of Means Tests

<table>
<thead>
<tr>
<th>Samples</th>
<th>N</th>
<th>X</th>
<th>sd</th>
<th>Groups Compared</th>
<th>t</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maryland Negro students b</td>
<td>282</td>
<td>4.54</td>
<td>.84</td>
<td>1,6</td>
<td>9.32</td>
<td>.0005</td>
</tr>
<tr>
<td>2. Southern Negro male students c</td>
<td>60</td>
<td>4.51</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Southwest college students d</td>
<td>114</td>
<td>4.10</td>
<td>.77</td>
<td>3,6</td>
<td>4.72</td>
<td>.0005</td>
</tr>
<tr>
<td>4. Southern white male students c</td>
<td>46</td>
<td>3.87</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5. Southern Navy group</td>
<td>16</td>
<td>3.72</td>
<td>.82</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6. Composite Navy sample</td>
<td>75</td>
<td>3.58</td>
<td>.77</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Western Navy group</td>
<td>10</td>
<td>3.48</td>
<td>.71</td>
<td>7,8</td>
<td>.60</td>
<td>n.s.</td>
</tr>
<tr>
<td>8. Berkeley students d</td>
<td>386</td>
<td>3.33</td>
<td>.83</td>
<td>6,8</td>
<td>2.40</td>
<td>.01</td>
</tr>
<tr>
<td>9. Northeastern Navy group</td>
<td>29</td>
<td>3.32</td>
<td>.76</td>
<td>9,10</td>
<td>.92</td>
<td>n.s.</td>
</tr>
<tr>
<td>10. University of Rochester male students e</td>
<td>213</td>
<td>3.19</td>
<td>.74</td>
<td>6,10</td>
<td>4.87</td>
<td>.0005</td>
</tr>
</tbody>
</table>

aUsing a one-tailed test.
bKelman and Barclay, 1963. These students attended a predominantly Negro state college.
cSmith and Prothro, 1957. No standard deviations are available so t cannot be computed.
dChristie and Garcia, 1951. The students were enrolled in introductory psychology courses at their schools.
eHaythorne, et al., 1956. These students were all male volunteers.
it seems possible. At least the difference may not be as large as it appears here. Smith and Prothro (1957) do not provide enough data to compute t-values but their southern white sample appears to have somewhat of a lower mean than the Southwest sample. In fact, their white sample mean does not differ greatly from the mean of the southern Navy men. The Negro sample mean, is, however, almost as high as the Maryland Negro sample's. Except for Kelman and Barclay's research, the data for the other studies were gathered in the 1940's and 1950's. It is difficult to determine what attitudinal and test-taking ability changes have occurred in the twenty-year interim and so it is difficult to ascertain if the reported differences are real or if they are an artifact of the time differential.

If the white student groups alone are considered, the means of the Navy men from comparable regions are higher in two cases, approximately the same in one case, and lower in one case. This is interpreted as partial support for the idea that the Navy is at least relatively authoritarian, as compared to white college students. A cautionary note should be introduced here. In two of these comparisons, the differences are not statistically significant and difference of means tests were unable to be performed in the other two cases.

In view of the contradictory evidence regarding the relationship between religion and authoritarianism (Brown and Bystryn, 1956; Stouffer, 1955; and Warshay, et al., 1964),
this writer was interested to see what the correlation would be in a group of military personnel. The means and the correlation are illustrated in Table 16.

TABLE 16
Religion and Authoritarianism, Distribution and Association in the Composite Navy Sample

<table>
<thead>
<tr>
<th>Religion</th>
<th>F-Scale Scores</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00-2.50</td>
<td>2.51-3.50</td>
<td>3.51-4.50</td>
<td>4.51-5.50</td>
<td>X</td>
</tr>
<tr>
<td>Catholic</td>
<td>12.5% (N=1)</td>
<td>23.1% (N=6)</td>
<td>32.3% (N=10)</td>
<td>30.0% (N=3)</td>
<td>3.76</td>
</tr>
<tr>
<td>Protestant Non-fundamentalist</td>
<td>50.0% (N=4)</td>
<td>38.5% (N=10)</td>
<td>25.8% (N=8)</td>
<td>20.0% (N=2)</td>
<td>3.42</td>
</tr>
<tr>
<td>Protestant Fundamentalist</td>
<td>12.5% (N=1)</td>
<td>3.8% (N=1)</td>
<td>38.7% (N=12)</td>
<td>50.0% (N=5)</td>
<td>4.07</td>
</tr>
<tr>
<td>Jew, Agnostic, Atheist</td>
<td>25.0% (N=2)</td>
<td>34.6% (N=9)</td>
<td>3.2% (N=1)</td>
<td>0.0% (N=0)</td>
<td>2.89</td>
</tr>
</tbody>
</table>

The fundamentalist Protestants, which include only Baptists, have a higher mean than Catholics. In fact, in a religion by religion breakdown, Baptists, Methodists, and Lutherans have higher means than Catholics. Many of the Catholics in the sample come from the Northeast, however, the region with the lowest F-scale mean. Perhaps living in that region tempered the authoritarian tendencies of the Catholic respondents. Presbyterians, Episcopalians, Congregationalists and other non-fundamentalist Protestant denominations had lower means than did Catholics. Jews, Agnostics and Atheists had the lowest mean, as expected. These results concur with those
found by Stouffer (1955) in his investigation of intolerance of non-conformists. He found Jews most tolerant while Protestants and Catholics varied from sub-sample to sub-sample with respect to which group was most intolerant. It should be noted that the grouping of Protestants into Fundamentalist and non-Fundamentalist categories was quite crude, since all Baptists are not Fundamentalists and some persons in the other denominations are.

The association of authoritarianism and religion in this table is .353 as measured by Theta. This is interpreted as indicating that about 35 per cent of the comparisons made reveal systematic differences. Religion is thus more highly correlative than region, which had a Theta of .302.

Compared with other military groups surveyed in the literature, the present sample as a whole has a relatively low mean F-score. This can perhaps best be illustrated in Table 17. The Hollander and Jones cadet samples both have significantly higher means than the Navy sample in this study. The Air Force cadets with one year of service in the Campbell and McCormack study have a higher mean than those in the present study who have been in the Navy from .1 to 2.0 years. This difference only achieves significance at the .20 level, however. The lengths of service of these samples are not precisely comparable. The Navy sample had no respondents who had just entered the service. It was thus necessary to include in the recruit portion those who have served two years or less.
TABLE 17
Comparison of Military Samples and the Composite Navy Sample with respect to Authoritarianism; Difference of Means Tests

<table>
<thead>
<tr>
<th>Samples</th>
<th>N</th>
<th>X</th>
<th>sd</th>
<th>Groups Compared</th>
<th>t</th>
<th>Significancea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New USAF Pilot Cadets</td>
<td>146</td>
<td>11.7</td>
<td>3.7</td>
<td>1,3</td>
<td>2.46</td>
<td>.02</td>
</tr>
<tr>
<td>2. USAF Pilot Cadets, one year of service</td>
<td>146</td>
<td>10.7</td>
<td>3.9</td>
<td>2,3</td>
<td>1.33</td>
<td>.20</td>
</tr>
<tr>
<td>3. Composite Navy Sample, less than two years of service</td>
<td>20</td>
<td>9.4</td>
<td>2.7</td>
<td>3,4</td>
<td>.61</td>
<td>n.s.</td>
</tr>
<tr>
<td>4. Composite Navy Sample, 2.1 to 6.0 years of service</td>
<td>26</td>
<td>8.8</td>
<td>3.9</td>
<td>2,4</td>
<td>2.32</td>
<td>.05</td>
</tr>
<tr>
<td>5. Naval Aviation Cadets</td>
<td>1860</td>
<td>3.90</td>
<td>.75</td>
<td>4,5</td>
<td>3.68</td>
<td>.001</td>
</tr>
<tr>
<td>6. Naval School, Pre-Flight Cadets</td>
<td>268</td>
<td>3.80</td>
<td>.70</td>
<td>4,6</td>
<td>2.44</td>
<td>.02</td>
</tr>
<tr>
<td>7. Composite Navy Sample</td>
<td>75</td>
<td>3.58</td>
<td>.77</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

aUsing a two-tailed test.
bCampbell and McCormack, 1956. These authors used a twenty item F-Scale and awarded scores on the basis of the number of items answered in an authoritarian direction.
cUsing Campbell and McCormack's items and scoring.
dJones, 1957.
eHollander, 1954.
The means of the Air Force cadets decreased significantly with the passage of time. The Navy men also had decreasing means over time but the difference was not statistically significant. Perhaps if more recent entrants had been sampled, the results might have been different. At any rate, the Navy sample's mean is in all cases, lower than the means reported for other military groups, although in one case, the difference could well have occurred by chance. Many of these studies used as respondents enlisted men and/or persons with less than a college education. When the Navy enlisted sample is utilized rather than the composite sample, none of the differences is significant. It is possible that if college educated officer samples had been employed by previous researchers, the present sample would not appear as nonauthoritarian as it does relative to their samples.

The Navy samples appear to be less authoritarian than many other occupational and social class groups that have been surveyed. This is illustrated in Table 18.

No other occupational sample had a lower mean than that of the Navy Officers in the present research, although the mean of Adorno, et al.'s (1950) group of middle class men was significantly higher only at the .10 level. The working class men have a significantly higher mean than that of the Navy enlisted men but this difference may have occurred by chance since p<.20. In almost every case, the composite, enlisted or officer samples have lower means than comparable
occupational and social class samples, although the difference between the means is not always significant. The only exception is that the Navy Enlisted sample's mean is higher than that of the Working Class Women sample, but this difference is not statistically significant.

TABLE 18

Occupational and Social Class Samples Compared With the Navy Samples in Terms of Authoritarianism

<table>
<thead>
<tr>
<th>Samples</th>
<th>N</th>
<th>X</th>
<th>sd</th>
<th>Groups Compared</th>
<th>t</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. German Factory workers b</td>
<td>140</td>
<td>5.26</td>
<td>.86</td>
<td>1, 5</td>
<td>8.56</td>
<td>.001</td>
</tr>
<tr>
<td>2. Working Class men c</td>
<td>61</td>
<td>4.19</td>
<td>1.18</td>
<td>2, 5</td>
<td>1.30</td>
<td>.20</td>
</tr>
<tr>
<td>3. Service Club men c</td>
<td>63</td>
<td>4.08</td>
<td>1.03</td>
<td>3, 9</td>
<td>3.27</td>
<td>.01</td>
</tr>
<tr>
<td>4. Maritime School men c</td>
<td>343</td>
<td>4.06</td>
<td>.77</td>
<td>4, 9</td>
<td>5.21</td>
<td>.001</td>
</tr>
<tr>
<td>5. Navy Enlisted Sample</td>
<td>31</td>
<td>3.91</td>
<td>.67</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6. Working Class women c</td>
<td>53</td>
<td>3.86</td>
<td>1.67</td>
<td>5, 6</td>
<td>.14</td>
<td>n.s.</td>
</tr>
<tr>
<td>7. Middle Class men c</td>
<td>69</td>
<td>3.69</td>
<td>1.22</td>
<td>7, 11</td>
<td>1.67</td>
<td>.10</td>
</tr>
<tr>
<td>8. Middle Class women c</td>
<td>154</td>
<td>3.62</td>
<td>1.26</td>
<td>8, 11</td>
<td>1.36</td>
<td>.20</td>
</tr>
<tr>
<td>9. Composite Navy Sample</td>
<td>75</td>
<td>3.58</td>
<td>.77</td>
<td>2, 9</td>
<td>19.39</td>
<td>.001</td>
</tr>
<tr>
<td>10. Professional women c</td>
<td>63</td>
<td>3.43</td>
<td>.86</td>
<td>7, 9, 10</td>
<td>1.68</td>
<td>n.s.</td>
</tr>
<tr>
<td>11. Navy Officer Sample</td>
<td>44</td>
<td>3.35</td>
<td>.75</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

a Using a two-tailed test.
b Cohn & Carsch, 1954.
c Adorno, et al., 1950.
F-scale means of prisoners are in all cases higher than the enlisted, officer, and composite means of the Navy sample. Grusky (1962) reports a mean of 4.79 for 71 inmates of a treatment-oriented prison. Adorno, et al. (1950) state that 110 prisoners at San Quentin have a mean of 4.73 and Aumack (1955), also studying San Quentin inmates, lists no scores but says that the mean is higher than 4.73. These means are significantly higher than those of the Navy samples.

Although prisoners and military men are comparable in that both are members of total or nearly total institutions, the institutions do differ considerably in terms of goals and recruitment methods. In addition, Jones (1956) found that education virtually eliminated the differences on an authoritarian measure (the Pensacola Z scale) between enlisted military offenders and enlisted submarine duty trainees.

Randall's (1968) study of Maryland State Police recruits and officers is the only study for which the time difference problem is not salient. Only four years have elapsed between that survey and this. She reports an overall mean of 4.35, a recruit mean of 4.51, and an officer mean of 4.28. These means are significantly higher than those achieved by the enlisted, officer, and composite Navy samples. In this case, it seems fairly certain that these differences are real, and not an artifact of changing values. Even when comparing only those Navy personnel from the South, the police means are considerably higher.
In conclusion, if one compares the means of the enlisted, officer, and composite Navy samples with those reported in the literature, it appears that the Navy sample is relatively low in authoritarian characteristics. If controls such as region, religion and education, are imposed, the authoritarianism of Navy personnel increases. For example, the members of the sample from the Northeast and West have a higher means than college students from those regions. Navy enlisted men have a mean of 3.91, which is approximately the same as the mean for Naval Air Cadets without college training, 3.90.

If 4.0 is accepted as the logical neutral point between authoritarianism and nonauthoritarianism, relatively few Navy men can be considered authoritarians. In fact, prisoners, Negroes, members of the British Fascist Party, college students in an unnamed Southwestern state, Maryland State Policemen, German factory workers, and Navy men from the Midwest and North Central parts of the United States are about the only groups reported in the literature that would qualify for that label.

If one chooses to speak, instead, about relative authoritarianism, and disregard the 4.0 neutral point, Navy personnel can be regarded as being moderately authoritarian. In the literature surveyed, when controls are imposed, the Navy sample and groups within it are more authoritarian than some groups and less so than others. Hypothesis One is considered moderately supported insofar as relative authoritarianism is
concerned. In terms of absolute authoritarianism, that is, above 4.0, the Navy sample generally cannot be considered authoritarian.

**Breadth of Perspective**

Kelman and Barclay (1963) interpret the F-scale as a measure of breadth of perspective. In the present research, information was elicited from the respondents about variables that may in some way relate to narrow or broad perspectives. These are variables not frequently investigated with respect to authoritarianism, but it was thought they might have some bearing, if only peripheral. Kelman and Barclay argue that opportunity for widening one's experiential world varies considerably from individual to individual. They hypothesize that if a person is exposed to the same ideas and values constantly, he does not have the opportunity to develop tolerance of new and different ideas, values, and people. This is similar to Stewart and Hoult's (1959) argument that limited opportunity for mastering roles produces authoritarianism. Role playing, as previously mentioned, tends to alter one's attitudes in the direction of those held in the role. If circumstances are such that opportunity to role play is restricted, one's attitudinal options are likewise restricted.

Marital status may possibly have an impact on tolerance. Marriage may reduce a person's tolerance in that he may withdraw into that one-to-one relationship and forsake other contacts, thus limiting his opportunity for encountering new
attitudes and ideas. Alternatively, a single person may have more personal contact with others, yet because these may be transitory and superficial, he may not benefit from them in terms of widening his tolerance limits.

No prediction was made concerning which group would have lower F-scores, since this is essentially exploratory. As it happens, the married men had a mean of 3.65, the single men, 3.47. Age was not controlled so it is difficult to determine what impact this may have had on the results. The data were grouped and Theta computed.

TABLE 19

Marital Status and Authoritarianism in the Composite Navy Sample

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>F-Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00-2.51-3.51-4.51-4.51-</td>
</tr>
<tr>
<td></td>
<td>2.50 3.50 4.50 5.50</td>
</tr>
<tr>
<td>Single</td>
<td>3 11 12 2</td>
</tr>
<tr>
<td>Married</td>
<td>5 15 19 8</td>
</tr>
<tr>
<td>Total</td>
<td>8 26 31 10</td>
</tr>
</tbody>
</table>

The relationship is very weak, .111, that is, in about 11 per cent of the cases is there a systematic relationship between the two variables. In fact, even this relationship is suspect since .111 is not statistically significant, according to the Mann-Whitney U - test.

Educational achievement levels of respondents' fathers and mothers were considered as possibly influencing breadth
of perspective. Parental educational achievement may have had some impact during the respondents' childhood. The correlation between fathers' education and respondents' F-scale scores is \( -0.414 \), which is significant at \( .01 \). The correlation is diagramed in Figure 7. The correlation between mothers' education and respondents' F-scale score is \( -0.415 \), also significant at \( .01 \) (Figure 8). These correlations are moderate ones. In both cases, about 22 per cent of the variance in F-scale scores is associated with paternal and maternal education. Although a casual direction cannot be determined by a correlation the time order suggests that education is the explanatory variable.

Wives' education is correlated \( -0.490 \) with respondents' F-scale scores, \( p < .01 \), (Figure 9). Approximately 24 per cent of the variance in F-scale scores is associated with wives' educational achievement level.

The relationship between the respondents F-scale score and whether their wives work outside the home or not was determined by Theta. Table 20 displays the results.

**TABLE 20**

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>F-Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00-2.50</td>
</tr>
<tr>
<td>Employed</td>
<td>4</td>
</tr>
<tr>
<td>Nonemployed</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
</tr>
</tbody>
</table>
FIGURE 7
Scattergram of Correlation Between Fathers' Education and Respondents' F-Scale Score, Composite Navy Sample

F-Scale Score

Fathers' Education

$r = -.414$
FIGURE 8

Scattergram of Correlation Between Mothers' Education and Respondents' F-Scale Score, Composite Navy Sample

F-Scale Score

Mothers' Education

$r = -.415$
FIGURE 9

Scattergram of Correlation Between Wives' Education and Respondents' F-Scale Score, Composite Navy Sample
Theta is .147, a low correlation which could have occurred by chance alone. Thus, marital status and wives' employment status are all correlated very slightly, if at all, with respondents' F-scale scores. If causal direction could be determined, these variables would remain poor prediction devices.

As indicated previously, F-score means vary considerably by social class. Gamma, a measure of association between ordinal level scales, was computed to determine the strength of the relationship.

**TABLE 21**

Relationship of Parental Social Class and Authoritarianism, Composite Navy Sample

<table>
<thead>
<tr>
<th>Parental Social Class</th>
<th>F-Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00-2.50</td>
</tr>
<tr>
<td>(Low)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>(High)</td>
<td>1</td>
</tr>
<tr>
<td>Total a</td>
<td>8</td>
</tr>
</tbody>
</table>

\(^a\)One respondent was excluded because his father deserted the home when he was a child. He did not know his father's occupation then or at the present.

Gamma is \(-.456, p < .05\) level. Thus, there is approximately 45 per cent more inversion than agreement in comparing the rankings of the two variables. Parental social class as measured by father's occupation, and F-scale score are mutually predictable in about 45 per cent of the cases.
Whether a respondent's mother was employed outside the home was determined during the interviews. No prediction was made with respect to what influence, if any, this variable may have on F-scale scores. One possibility however, is that if a mother works because of reasons other than dire financial straits, and this employment is approved by her husband, this would perhaps indicate a tolerant home environment. In addition, the working mother herself might have a broader perspective because of her extra-familial activities, and inculcate this characteristic in her children. On the other hand, if working was an economic necessity, indicating a lower class family, the employed status of the mother may not be important since it would not necessarily indicate a tolerance for the concept of female employment. As it happens, the F-scale mean for respondents with non-employed mothers is 3.69, while that for respondents of employed mothers is 3.35. Theta was derived to determine the strength of the association between these variables.

### TABLE 22

Maternal Employment Status\(^a\) and Authoritarianism, Composite Navy Sample

<table>
<thead>
<tr>
<th>Maternal Employment Status</th>
<th>F-Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00-2.50</td>
</tr>
<tr>
<td>Not Employed</td>
<td>4</td>
</tr>
<tr>
<td>Employed</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
</tr>
</tbody>
</table>

\(^a\)All mothers were included, whether they were alive or deceased. If deceased, it was ascertained whether they had worked when living.
Theta for these scales is .306; respondents with employed mothers rank lower in authoritarianism in about 31 per cent more cases than they rank higher. This difference is statistically significant. When intra-class comparisons are made, the respondents with employed mothers are lower on the F-scale in every class but 4, the lowest. In this class, respondents whose mothers do not work outside the home have the lower mean.

As previously noted and illustrated by Figures 1 and 2, education is significantly correlated with F-scale scores, in a negative fashion. Religion, too, has been seen to vary with F-scale score, although the evidence has not been as consistent as for education.

A very crude measure of breadth of perspective was constructed from these data in an attempt to see how it would relate to authoritarianism scores. It consists of four categories, each scored dichotomously. The first is respondents' educational level. Those who had completed twelve years or less of school received a zero, those with more than twelve years, a one. The second item is parental social class, with those whose parents are in class one or two receiving a one. Other classes received a zero. The third part is maternal employment status. Sons of working mothers were scored one, non-working mothers, zero. Religious affiliation is the fourth item. Catholics, Baptists and other fundamentalists were scored zero; other religious affiliation or
non-affiliation was coded one. Thus the range of possible scores was from zero to four, zero indicating limited opportunity for increasing tolerance limits; four indicating a wide range of opportunities for broadening one's perspective. The correlation of breadth of perspective with F-scale scores is presented in Table 23.

**TABLE 23**

Breadth of Perspective and Authoritarianism,
Composite Navy Sample

<table>
<thead>
<tr>
<th>Breadth of Perspective</th>
<th>F-Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00- 2.50- 3.50- 4.50- 5.50</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
</tr>
<tr>
<td>0</td>
<td>0 0 6 3 9</td>
</tr>
<tr>
<td>1</td>
<td>0 3 4 5 12</td>
</tr>
<tr>
<td>2</td>
<td>2 8 12 1 23</td>
</tr>
<tr>
<td>3</td>
<td>4 10 7 1 22</td>
</tr>
<tr>
<td>4</td>
<td>2 5 2 0 9</td>
</tr>
</tbody>
</table>

Gamma for this table is —0.571. The correlation indicates that, in general, the higher the respondent scored on the breadth of perspective scale, the lower he scored on the F-scale. This rather high association is partly explained by the fact that each part of the scale also correlates rather strongly with authoritarianism scores. The purpose of devising the scale was merely to see if future attention should be given to constructing a more expert one. The correlation received here indicates that this effort may be profitable.
Attraction and/or Socialization

The Navy sample appears to be, in comparison with other samples, moderately authoritarian, although not absolutely so. It is reasonable to discuss, then, whether this moderate authoritarianism is a product of the military experience, whether it is this characteristic that attracts men into Naval service, or both. Figure 10 illustrates that for the composite sample, in general, F-score means increase with increased length of service. There are noticeable fluctuations, however. Those persons who have served from 3.1 to 4.0 years have the lowest mean of any group. The difference between this group and those who have served less than a year is only about three tenths, however. The r correlation between F-scale score and length of service for this sample is .466, p < .01 (Figure 11). This correlation is moderate, not strong. It indicates that, for this sample, about 22% of the variance in authoritarianism is associated with length of time in the service. The r correlation between education and length of service is -.451, p < .01. The less educated the respondents are, the longer the length of service tends to be. Again, this is a moderate, significant correlation. The partial correlation between length of service and authoritarianism, with education controlled, is .308, p < .01. Thus, education explains about half of the variance between length of service and authoritarianism. When education is controlled, length of service accounts for about 9.5% of the variance, a fairly small amount.

It would perhaps be informative to inspect these relation-
FIGURE 10

F-Scale Means According to Length of Service, Composite Navy Sample

F-Scale Score
4.50
4.25
4.00
3.75
3.50
3.25
3.00
2.75
2.50

0.0.1 01.1 02.1 03.1 04.1 06.1 08.1 12.1 16.1 20.1
01.0 02.0 03.0 04.0 06.0 08.0 12.0 16.0 20.0 30.0
N=11 N=9 N=10 N=8 N=8 N=3 N=8 N=6 N=11 N=1

Length of Time in the Navy (in years)
FIGURE 11

Scattergram of Correlation Between Length of Service and F-Scale Score, Composite Navy Sample

F-Scale Score

Length of Service

$r = .466$
ships in various sub-samples. It was hypothesized that those who voluntarily entered the Navy would be likely to evidence support for Hypothesis Three or both Hypotheses Two and Three since they were attracted enough by the Navy to join it and they may have been further socialized into organizationally accepted attitudes. In fact, they do show support for both hypotheses. Table 24 illustrates the mean F-scale scores for the voluntary and involuntary entrants over time.

**TABLE 24**

Length of Service and Authoritarianism According to Voluntary or Involuntary Entrance, Composite Navy Sample

<table>
<thead>
<tr>
<th>Type of Entrance</th>
<th>Length of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0- 1.1- 2.1- 3.1- 4.1- 8.1- 16.1- Totals</td>
</tr>
<tr>
<td></td>
<td>1.0 2.0 3.0 4.0 8.0 16.0 30.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Voluntary Entrance</th>
<th>Involuntary Entrance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

|                  | 0.0- 1.1- 2.1- 3.1- 4.1- 8.1- 16.1- Totals |
|------------------|-------------------|-------------------|
|                  | 1.0 2.0 3.0 4.0 8.0 16.0 30.0   |

<table>
<thead>
<tr>
<th></th>
<th>Voluntary Entrance</th>
<th>Involuntary Entrance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Voluntary Entrance

<table>
<thead>
<tr>
<th></th>
<th>3.54</th>
<th>3.05</th>
<th>4.33</th>
<th>3.72</th>
<th>3.27</th>
<th>3.79</th>
<th>4.33</th>
<th>3.76</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>12</td>
<td>10</td>
<td>41</td>
</tr>
</tbody>
</table>

Involuntary Entrance

<table>
<thead>
<tr>
<th></th>
<th>3.31</th>
<th>3.45</th>
<th>3.56</th>
<th>2.56</th>
<th>3.61</th>
<th>3.30</th>
<th>3.73</th>
<th>3.31</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>31</td>
</tr>
</tbody>
</table>
The mean of the voluntary entrants in their first year of service is somewhat higher than that mean for involuntary entrants. This is interpreted as an indication of support for the attraction hypothesis. In addition, there is a general increase in the mean of this group over time, indicating support for Hypothesis Two. Those in their second year of service have a lower mean, but there are only two cases in this category. This would lead one to doubt the representativeness of these respondents. In fact, there are so few cases in all of the sub-groups that these means must be interpreted only as suggestive. The mean of all voluntary entrants is 3.76, for involuntary entrants, 3.31. These means differ significantly, p<.01.

With the exception of two sub-groups, the means of the involuntary entrants increase with increased time in the Navy. In most cases, they are lower than the means in the comparable voluntary entrants group. The r correlation between length of service and authoritarianism for voluntary entrants is .474, for involuntary entrants, .544. Both are significant at the .01 level. (See Figures 12 and 13.) The correlation is stronger for the involuntary group, perhaps indicating that, although it is lower in authoritarianism, being in an environment like the Navy's may have more effect on this group than on the more authoritarian voluntary group.
FIGURE 12

Scattergram of Correlation Between Length of Service and F-Scale Score, Voluntary Entrants

F-Scale Score

5.30

Length of Service

r = .474
FIGURE 13

Scattergram of Correlation Between Length of Service and F-Scale Score, Involuntary Entrants

F-Scale Score
5.30
5.10
4.90
4.70
4.50
4.30
4.10
3.90
3.70
3.50
3.30
3.10
2.90
2.70
2.50
2.30
2.10
1.90
1.5
3
4.5
6
7.5
9
10.5
12
13.5
15
16.5
18
Length of Service
r = .544
Career Navy personnel follow a pattern similar to that of the voluntary sub-group. This, of course, is not surprising since many of these are the same people. The career group mean as a whole is 3.90 while that of the non-career group is 3.26. The career men's mean is significantly higher than that of the non-career men, p < .01. The differences over time are shown in Table 25.

The career group has an initially high mean and it increases, in general, with increased length of service. Again, support is indicated for both the attraction and socialization hypotheses. The Navy appears to attract moderately high authoritarians into it, but also seems to reinforce and support this characteristic at least for these groups. The product-moment correlation between length of service and authoritarianism for the career group is .225, which is not statistically significant (Figure 14).

<table>
<thead>
<tr>
<th>TABLE 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Service and Authoritarianism According to Career or Non-career Status Composite Navy Sample</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Career Status</th>
<th>Length of Service</th>
<th>X</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0-1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.1-2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.1-3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.1-4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.1-8.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.1-16.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.1-30.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>3.73</td>
<td>4.10</td>
<td>2.90</td>
</tr>
<tr>
<td>N</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Non-Career</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>3.31</td>
<td>3.46</td>
<td>3.62</td>
</tr>
<tr>
<td>N</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>
FIGURE 14

Scattergram of Correlation Between Length of Service and F-Scale Score, Career Navy Personnel

F-Scale Score

5.30 ----------------------------------------
5.10
4.90
4.70
4.50 -------
4.30
4.10 --------
3.90 --------
3.70 --------
3.50 --------
3.30 --------
3.10 --------
2.90 --------
2.70 --------
2.50 --------
2.30 --------
2.10 --------
1.90 --------

Length of Service

r = .225
The non-career group's correlation is -.126, also not significant, and may have occurred by chance alone (Figure 15). This relationship may be slightly curvilinear in that the means increase over time and then decrease. It is difficult to discern a curvilinear pattern in the scattergram, however. This group evidences some slight support for the argument that the Navy socializes its personnel into accepting authoritarian norms but this argument is weakened considerably by the lower means in the last two service time categories. As previously mentioned, however, there are very few cases in all these sub-samples and their categories. A much larger sample is required to investigate whether the trends noted here are artifacts of the sample size or sampling error, or are substantively significant.

The correlation between length of service and authoritarianism for the officer sample is .445, p< .05 (Figure 16). When education is controlled, the partial correlation is .159, p >.05. Education thus reduces the association between length of service and authoritarianism to non-significance in the officer sample.

The enlisted sample's correlation between length of service and F-scale score is .218, which is low and not statistically significant (Figure 17). When education is controlled, the correlation is weakened slightly, the partial being .208, p >.05. Education in the enlisted sample is of considerably less importance than in the officer's
FIGURE 15

Scattergram of Correlation Between Length of Service and F-Scale Score, Non-Career Navy Personnel

F-Scale Score
5.30
5.10
5.00
4.90
4.80
4.70
4.60
4.50
4.40
4.30
4.20
4.10
3.90
3.80
3.70
3.60
3.50
3.40
3.30
3.20
3.10
3.00
2.90
2.80
2.70
2.60
2.50
2.40
2.30
2.20
2.10
2.00
1.90

Length of Service
1.5
3
4.5
6
7.5
9
10.5
12
13.5
15
16.5
18

$r = -0.126$
Figure 16

Scattergram of Correlation Between Length of Service and F-Scale Score,
Navy Officer Sample

F-Scale Score
5.30
5.10
5.00
4.90
4.70
4.50
4.30
4.10
3.90
3.70
3.50
3.30
3.10
2.90
2.70
2.50
2.30
2.10
1.90

Length of Service
1.5 3 4.5 6 7.5 9 10.5 12 13.5 15 16.5 18

r = .445
FIGURE 17

Scattergram of Correlation Between Length of Service and F-Scale Score, Navy Enlisted Sample

F-Scale Score

Length of Service

$r = .218$
sample. It should be noted however, that educational achievement varies considerably within the officer sample because of the inclusion of warrant officers in that group. The enlisted sample, on the other hand, is more homogeneous with respect to educational achievement. The means for the enlisted and officer samples over time are illustrated in Table 26.

**TABLE 26**

Length of Service and Authoritarianism, Enlisted and Officer Navy Samples

<table>
<thead>
<tr>
<th>Length of Service</th>
<th>0.0-1.1</th>
<th>1.1-2.0</th>
<th>2.1-3.0</th>
<th>3.1-4.0</th>
<th>4.1-8.0</th>
<th>8.1-16.0</th>
<th>16.1-30.0</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enlisted Sample</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.40</td>
<td>3.89</td>
<td>4.16</td>
<td>3.87</td>
<td>3.62</td>
<td>3.69</td>
<td>4.30</td>
<td>3.91</td>
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<td>2</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td>Officer Sample</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.28</td>
<td>3.30</td>
<td>2.99</td>
<td>2.24</td>
<td>3.36</td>
<td>3.68</td>
<td>4.36</td>
<td>3.35</td>
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<tr>
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<td>7</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>9</td>
<td>4</td>
<td>44</td>
</tr>
</tbody>
</table>

This table illustrates several of the differences between these two groups. In every length of service subgroup save one, the enlisted men's means are higher than those of the officers. In most cases the difference is quite striking. The enlisted means are more homogeneous than the officers'. In the officer sample the means increase steadily in the last three subgroups are the last two means are very similar to those in comparable subgroups in the enlisted
sample. In the shorter length of service subgroups, the officer means are substantially lower than those in the enlisted sample, probably because of the higher education of the members of these officer sample subgroups. It will be recalled that education was much more important as an intervening variable in the officer sample than in the enlisted sample. For officers, the correlation between education and length of service is - .722, for enlisted men, - .080. This correlation may help to explain the patterns observed in Table 26.

Support for Hypotheses Two and Three varies considerably from subgroup to subgroup. It appears that those who are attracted to the organization, namely the voluntary and career subgroups (see Tables 24 and 25), are relatively authoritarian and this characteristic increases over time. These groups support both hypotheses.

Those persons who are not particularly attracted into the Navy are also minimally affected by their experiences in it, at least with respect to authoritarianism. Non-career personnel evidence erratic authoritarian tendencies.

It seems that, in general, if the organization is vital to the individual in terms of personal expectations or career goals, then the individual is affected by the attitudes expressed in the institution, in this case, moderate authoritarianism.
CHAPTER V

CONCLUSIONS

The goals of the present research were two: to determine how authoritarian Navy personnel are and to ascertain whether the Navy attracts into it persons who are relatively authoritarian, socializes people into accepting authoritarian attitudes, or whether both or neither of these processes is operating.

The Navy samples were compared with various other groups that had been investigated with respect to the distribution of authoritarianism. Unfortunately, many of these studies are fifteen or twenty years old, and it is impossible to determine if this time gap rendered comparisons meaningless. At any rate, the Navy group was found to be moderately authoritarian. The Navy men from the Northeast had higher F-Scale scores than did students in that area. Similarly, the Navy men from states in the West were more authoritarian than students in California. The Southern sub-groups had lower means than did students from that area. Prisoner samples, in all cases, had higher F-Scale scores than the present sample. Blacks also were relatively more authoritarian than the Navy men. The present sample was less nonauthoritarian than the national sample surveyed by Janowitz and Marvick (1953).
Age, religion, educational achievement, parental social class and several other variables were used in determining the distribution of authoritarianism throughout the sample and in comparing this sample with others. It was concluded that while the Navy group could not be considered authoritarian in absolute terms, that is, subgroup means only occasionally were higher than the 4.0 neutral point, it could be considered moderately, not highly, authoritarian relative to the other groups surveyed in the literature.

In light of the Kelman and Barclay (1963) interpretation of the F-Scale as a measure of breadth of perspective, a number of situational variables were investigated in terms of their relationship to authoritarian tendencies. Marital status and employment status of respondents' wives were found to be relatively unimportant as correlates of authoritarianism. In contrast, parental educational achievement was significantly correlated, in an inverse fashion. Parental social class was also inversely associated with F-Scale scores. Respondents whose mothers were employed outside the home had lower authoritarianism scores than those whose mothers did not work. This last variable, as well as respondents' educational level, parental social class, and religious affiliation were incorporated into a crude measure for ascertaining the relationship between opportunities for developing tolerance and open-mindedness and authoritarianism. This scale was rather highly correlated with F-Scale
responses, - .571. It is hoped that in other studies, it will be possible to refine this measure or construct a more sensitive one. The situational variables, which are of interest to sociologists, are too frequently ignored in much of the research dealing with attitudes. Although these variables are not, of themselves, causative, they provide or encourage situations within which causative factors can operate.

Most of these variables have been found to influence authoritarian tendencies in military and civilian groups. With respect to parental and respondents' social class, the evidence is mixed, with some researchers locating greater authoritarianism in the lower classes, others locating it in the middle classes. Education has been consistently found to vary inversely with authoritarianism. Jones (1956) confirmed this relationship in a military sample. In terms of religious affiliation, Jews have generally scored lower on authoritarianism measures than Protestants and Catholics. According to one study (Brown and Bystryn, 1956), Catholics are more authoritarian than Protestants, but Stouffer (1955) reports that when sex, church attendance and region of respondents are taken into consideration, the results are mixed, with some subgroups of Protestants being more authoritarian than some Catholics. These variables are important in the society as a whole and are influential
in the present sample, not particularly because of its military nature, but because its members are representative of most segments of the society.

The evidence reported in this study indicates that the attraction and socialization hypotheses often operate in conjunction. Those groups who were attracted into the Navy also tended to manifest greater authoritarianism with increased time spent in the service. A word of caution should be introduced here. This was not a longitudinal study, rather, it attempted to approximate one. The same individuals were not viewed over time. Instead, the sample was divided into groups varying in length of military service and were viewed as if they were in fact the same group. There is one particular danger involved in this type of design. The subjects in the various time groups may for some reason not be similar. In this sample, for example, many of the persons who have been in the Navy for a short time are members of that organization, not because they thought it would be a good experience or interesting, but because they did not want to be drafted or go to jail or Canada. The persons with longer lengths of military service are more often in the Navy for positive reasons. An attempt was made to control for this difference by dividing the sample into voluntary and involuntary entrance and, career and noncareer groups. It is suggested, however, that some differences that may exist within and between the
enlisted and officer samples could have been obscured by using this type of design.

In any event, some persons who were not attracted into the Navy also evidenced an increase in authoritarianism with increased time in the service. The involuntary entrance group, which was in the Navy more for push than pull reasons also had means which increased with length of service. Since this group cannot be considered to have been attracted into the Navy, and because its mean increased over time, it was concluded that it may have been socialized by the organization into accepting more authoritarian attitudes.

Christie's (1952) study indicated that those persons more accepted than rejected by their peers and noncommissioned training personnel increased in authoritarian attitudes after a six-week period. He concluded that the military organization socialized these recruits into more authoritarian attitudes. Campbell and McCormack (1956), on the other hand, produced support for the hypothesis that authoritarians were attracted into the Air Force. While these studies may seem to have reached opposite conclusions, they may both be valid. Christie investigated draftees. The group that was accepted by the other recruits and by the training group may have consisted of people who were "voluntarily" drafted or who found being in the Army to be a satisfying experience and made it salient to their own goals. In either case, their F-Scale
scores would be likely to rise. Perhaps because they were well-liked by their peers and superiors, they felt obligated to emulate what they perceived as a correct military role. As Janis and King (1958) and Harvey and Beverly (1961) note, role-players sometimes alter their attitudes in the direction of those held by the role they play. Persons in the Navy may alter their attitudes in the direction of what they think is appropriate to a military role-incumbent or in the direction of the attitudes held by their superiors, or both. The evidence in this study suggests that, to some extent, role-incumbency may have affected attitudinal changes. Fensterheim and Birch's (1950) conclusion that membership in ideological groups influences attitudes may also be salient here. In their research, they found that when persons who had similar personalities joined various communistic or fascistic groups, their personalities changed. Perhaps when persons are exposed to the Navy subculture, their personalities may also change. Fensterheim and Birch do not attempt to explain how or why these changes occur and there are many possible explanations, including role-playing, modeling, learning, and identification and internalization. Campbell and McCormack's conclusion is also warranted, since some groups have been found to have been attracted into the military. In other words, attraction and socialization may operate separately or in conjunction.
They are not necessarily logically incompatible and should not be treated as if they were.
APPENDIX
JANOWITZ AND MARVICK SCALE - 1953

1. Human nature being what it is, there will always be war and conflict.

2. A few strong leaders could make this country better than all the laws and talk.

3. Women should stay out of politics.

4. Most people who don't get ahead just don't have enough will power.

5. An insult to your honor should not be forgotten.

6. People can be trusted. (scored inversely)

Responses were scored from 1 to 6, 1 representing strong agreement and 6, strong disagreement, except for item 6. To be classified as a high authoritarian, a respondent had to have a cumulative score of less than 19. To be classified as a low authoritarian, a respondent had to score at least 25. The intermediate group included persons whose scores ranged from 19 to 24.
1. Human nature being what it is, there must always be war and conflict.

2. The most important thing a child should learn is obedience to his parents.

3. A few strong leaders could make this country better than all the laws and talk.

4. Most people who don't get ahead just don't have enough will power.

5. Women should stay out of politics.

6. People sometimes say that an insult to your honor should not be forgotten.

7. People can be trusted. (scored inversely)

Responses were scored from 1 to 6, 1 representing extreme disagreement, 6 representing extreme disagreement, except for item 7.
INTERVIEW SCHEDULE

1. What is your current rate or rank?
   E_____ W_____ O_____

2. How many years of formal education have you completed?
   (Probe to insure that answer encompasses technical,
   business, etc. schools.)
   ____________________________Years

3. If you have passed an educational equivalency test,
   what is the last equivalent grade you have completed?
   ___________Years ___________NA

4. What was your age at your last birthday?
   ___________Years

5. What is your father's or male guardian's occupation?
   ________________________________
   Please state specifically what he does at work.
   If he is deceased or retired, describe his last major
   job.

   Presently working_____Retired_______Deceased_________

6. How many years of formal education did your father or
   male guardian complete?
   ___________Years

7. What is your mother's or female guardian's occupation?
   ________________________________
   Please state specifically what she does at work.
   If she is deceased or retired, describe her last major
   job.

   Presently working_____Retired_______Deceased_________

8. How many years of formal education did your mother or
   female guardian complete?
   ___________Years

9. In which state or states have you spent the most time,
   not including military duty stations?
10. What religion are you affiliated with? (Hand list on card to respondent)
Protestant
Baptist
Methodist
Lutheran
Presbyterian
Episcopal
Congregational
Other (specify)

Catholic
Roman Catholic
Other (specify)

Jewish

11. Did you want to join the Navy?
Yes________ No________ DK________

a. If yes, why?

b. If no, what were the reasons you joined?

PROBE: To the best of your knowledge, would you have been drafted had you not volunteered?

12. How long have you been in the service on active duty?
___________Years___________Months

13. Do you plan to re-enlist when this enlistment ends?
Definitely yes_______
Probably yes________
Unsure___________
Probably no________
Definitely no_______

a. Why or why not?

b. (If answer was unsure, probably no, definitely no) What do you plan to do?

(If answer was probably yes, definitely yes),

14. Do you intend to make military service your career?
Definitely yes________
Probably yes________
Unsure________
Probably no________
Definitely no________

a. Why?

b. (If unsure, probably no, definitely no) what are your future career plans?

15. Are you married? (If obvious, i.e. if introduced to wife, don't ask)
   Yes____ No_______(If divorced, separated, widowed, code "No")

   a. How many years of formal education has she completed?
      __________Years

   b. What is your wife's occupation?

      __________________________.

      What exactly does she do at work?

* Question 15 was not on the original questionnaire but was added for each interview.
OPINION STUDY

The purpose of this survey is to determine how public opinion is divided on a number of important topics. There are no right or wrong answers to the questions that follow. Your own personal opinion is what is desired. All of your answers will be held in strictest confidence and your name will not be revealed to anyone.

Please be sure to read the questions carefully, answer each question, and give your own point of view.

Please mark with an X each statement in the square that best indicates your opinion on each item.

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Disagreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

1. Obedience and respect for authority are the most important virtues children should learn.

2. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.

3. If people would talk less and work more, everybody would be better off.

4. The business man and the manufacturer are much more important to society than the artist and the professor.

5. Science has its place, but there are many important things that can never possibly be understood by the human mind.
6. Every person should have complete faith in some supernatural power whose decisions he obeys without question.

7. Young people sometimes get rebellious ideas but as they grow up they ought to get over them and settle down.

8. 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.

9. No sane, normal, decent person could ever think of hurting a close friend or relative.

10. Nobody ever learned anything really important except through suffering.

11. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.

12. An insult to our honor should always be punished.

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

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Disagreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str.</td>
<td>Mod.</td>
</tr>
</tbody>
</table>

120
14. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

15. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feebleminded people.

16. Homosexuals are hardly better than criminals and ought to be severely punished.

17. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.

18. Nowadays more and more people are prying into matters that should remain personal and private.

19. Some people are born with an urge to jump from high places.

20. People can be divided into two distinct classes: the weak and the strong.

21. Some day it will probably be shown that astrology can explain a lot of things.

22. Wars and social troubles may someday be ended by an earthquake or flood that will destroy the whole world.

23. No weakness or difficulty can hold us back if we have enough will power.

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str. Mod.</td>
<td>Slt. Slt Mod. Str.</td>
</tr>
</tbody>
</table>
24. Most people don't realize how much our lives are controlled by plots hatched in secret places.

25. Human nature being what it is, there will always be war and conflict.

26. Familiarity breeds contempt.

27. 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.

28. 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.

29. When you come right down to it, it's human nature never to do anything without an eye to one's own profit.

30. In order for us to do good work, it is necessary that our bosses outline carefully what is to be done and exactly how to go about it.

31. Although leisure is a fine thing, it is good hard work that makes life interesting and worthwhile.

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Disagreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Str. Mod.</td>
<td>Slt. Mod. Str.</td>
</tr>
</tbody>
</table>

| | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
32. Any good leader should be strict with people under him in order to gain their respect.

33. No decent man can respect a woman who has had sex relations before marriage.

34. People can be trusted.

35. Women should stay out of politics.

36. The most important thing to teach children is absolute obedience to their parents.

37. Prison is too good for sex criminals. They should be publicly whipped or worse.

38. There are two kinds of people in the world: the weak and the strong.
INTRODUCTION STATEMENT

Hello, my name is Barbara D'Eugenio. I'm a student at William and Mary and I'm doing research for my master's thesis. I developed an interest in people in the Navy because my husband is also in it and it seemed to me that there are a lot of ideas about what people in the Navy are like. I'm trying to find out how accurate these ideas are.

I'm interviewing a limited number of people in the Navy and I'd be very grateful if you'd let me talk with you for a little while. Everything of course is confidential and your name wouldn't even be on the questionnaire.
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