ADEQUACY OF OFFICER FITNESS REPORTS

BY

JOSEPH F. FOLEY

THE ADEQUACY OF OFFICER FITNESS REPORTS

A study toward improving the
present methods of evaluation
of officer performance in the
Navy

A Thesis

Presented in Partial Fulfillment of the Requirements

for the Degree Master of Science

By

JOSEPH F. FOLEY, B.Sc.

The Ohio State University

1950

Approved by:

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Adviser

THE LANGUAGE OF OFFICER EFFICIENCY REPORTS

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PART I

INTRODUCTION

Chapter 1

THE PROBLEM AND ITS IMPORTANCE

The problem of rating or judging one's subordinates is as old as Organization itself. Many writers have stressed the point that judging the employees under him is an integral part of the job of the supervisor. May[1] argued that consciously or not, the supervisor rates his men whenever called upon to choose between them for special assignments, special awards, promotions, or reductions in force. Jucius[2] considers that the rating of employees is one of the oldest and most universal practices of management and that there never was a time when supervisors and leaders did not judge the relative value of employees. Tiffin[3] emphasized that though the term "merit rating" (service rating) is of recent origin, the judging of employees by their supervisors is not.

NEED FOR FORMAL METHOD

If many writers have agreed that service rating cannot be dispensed with, an equal number are in consonance as to the need for a formal method of making and recording these judgements. Marble[4] proclaimed that the service rating device protects the employee from "managerial capriciousness" in the determination of his service standing.

White[5] taught that one of the purposes of the formal efficiency rating is "to protect employees against the snap judgements, prejudice, and ill will of some supervisors". Tiffin[6] feels that the emergence of the formal rating system has "involved the transfer of ratings from haphazard, random, and frequently irresponsible judgements of supervisors made perhaps during the heat of a quarrel, to ratings made calmly, deliberately, systematically....". In addition to this need for minimizing the effects on the ratings of the frailties of the rater, Jucius[7] sees further value in the formal recorded rating, in providing a means for preserving a measure of an employee's worth so that even in a large industry the treatment received by all employees and the opportunities opened to them will be consistent throughout the organization.

OBJECTIVES OF RATING

The objectives of rating are manifold. Principally, of course, the purpose is to secure a recorded judgement of the employee's value to the organization. But underlying this and giving it direction and motive, are many specific aims. Mention has been made of the utility of ratings in affording a basis for choice between one's subordinates for special assignments, special awards, promotions, and reductions in force. Less obvious but no less important, is the use suggested by Yoder[8], of ratings as criteria for evalu-

Weber[2] insists that one of the purposes of the formal rational system rather is "to provide individuals explanations rise more judgments, prejudices, and ill will of some sequaintance". Within[3] these sort the conditions of the formal rating over the "Invisibel hand" towards of rating free objectivity, neutral, not irrationally influenced by personnels of superiors and peers people doing the part of a manager, is rating more social, unknowing, irrationality....". In addition of this need for eliminating the effects on the rating of the familiarity of the rater, Weber[4] sees further value in the formal rational rating, in providing a model for interactive a measure of an individual's worth or just rewards in a larger industry the bureaucratic machine by his subjective and the objectivistic method in your will is emphasized knowledge and the objectivation.

SUBJECTIVITY OF RATING

The objectives of rating are manifold. Primarily, of course, the purpose is to assure a reasonable judgement of the employee's value to the organization. Not unexpectedly this and yields to diversity and bias, the may specific aims. Rating can have each of the utility of motive in interacting a fault its within ignored and's administration for special assignments, special awards, promotions, and retention from to times. Less obvious but is less desirable, is the use suggested by Weber[5] of rating as outlets for aggre-

ating the effectiveness of other personnel practices. Tiffin[9], Pigors and Myers[10], and Mosher and Kingsley[11] made much the same point when they listed ratings as a source of information on which to base programs for employee improvement, training, and development. Associated with this is the use of the data from ratings as a foundation and guide for studies to improve screening and selection procedures. Further, operation of a good rating plan results in improvement of the supervisor, as mentioned by both Tiffin[12] and Jucius[13], and therefore such improvement may be considered as one of the purposes of the program.

Not specifically mentioned in the literature is the use of the service rating as an instrument to aid in the fostering of good discipline and morale. Much good work and many minor deficiencies are not deserving of special action other than as reflected in the marking of the service rating blank. Yet good work must be rewarded and brought to the attention of the employee and management, and the service rating provides a means of doing this. Though the effect on the employee may be vitiated somewhat by the fact that the psychologically sound principle of the "immediacy of the reward" is violated, the dependance on the service rating as a form of reward is justified on pragmatic grounds.

THE VALUE OF SERVICE RATING TO THE NAVY

The considerations which serve to render service ratings so valuable to large industries are effective to an even greater degree in the personnel administration of the Naval Service. Three conditions operate to make this true. First, there is the fact of sheer numbers. The officer corps of the Regular Navy is composed of 43,939 individuals[14] while the officers of the Naval Reserve total up to a much larger figure. Second, the problem posed by size is complicated by the twin factors of wide dispersion over large areas of the earth, and mobility within and beyond those areas. In fact, it is safe to say that Naval units are likely to be found anywhere except possibly behind the "Iron Curtain", the currently popular term for the boundary between Russian dominated territory and the rest of the world. Finally, the difficulties of Naval authorities are not limited to the problem of size and ubiquity. An even more severe strain is placed on administration during periods of rapid expansion in times of National Emergency and during the process of demobilization when the emergency has passed. With final authority for all administrative action necessarily centralized in the Navy Department in Washington, and with so many individuals involved in numerous widely separated and mobile groups, personal knowledge on the part of those responsible for admin-

istrative action, of the qualities of even a small number of the officers of the Navy is impossible.

The Navy Department recognizes the importance of service ratings, or fitness reports. Ample evidence of this is contained in the following passage from Navy Regulations.[15]

> Article 1701. Fitness Reports and Records of Officers.
>
> 1. The fitness of an officer for the service, with respect to promotion and assignment to duty, is determined by his record, Reports of fitness are decisive in the service career of the individual officer, and have an important influence on the efficiency of the entire service.....

The Navy's "OFFICER'S FITNESS REPORT", Form NAVPERS 310 A (Rev 6-45), is intended to fill the need for a merit rating in the Service, but unfortunately it is a partial failure. First of all, it is subject to significant observer errors, like most rating devices and, disappointingly, its design omits several features which authorities consider will eliminate or reduce such errors. In addition, its makeup does not provide for the use of the latest techniques in machine scoring, sorting, and tabulation. This is an important weakness in view of the growing importance of maximum efficiency implicit in the concept of readiness for "Total War". Although small numbers of the fitness reports are not laborious to prepare, any considerable study of even a moderate number of them, such as must be performed when making selections for promotion or special assignments, or

for evaluating other personnel procedures, is inefficient and time consuming under present conditions.

PART I

Chapter 2

PLAN FOR TREATMENT OF THE PROBLEM

The design and use of service ratings is a task in psychological measurement and the designer's most formidable obstacle has been the difficulty of eliminating or controlling the "human error" or bias of the rater. This paper will, therefore, examine rather thoroughly the psychological factors bearing on the question in an effort to show the nature and extent of this "human error" and perhaps assist the reader in gaining insight into the problem.

Much valuable research has been and is being performed in the field of service rating design and use, and a great deal can be learned from a review of the reported results. Consequently, a chapter will be devoted to the description and discussion of the more important types of rating devices and rating procedures in use. This discussion will include weighing of the relative advantages and disadvantages of the several devices and systems and consideration of the various error-producing psychological factors which the measures described are designed to combat. From this treatment a body of "best practices" will be assembled.

The four Services which are included under the general name of "Armed Forces", each use a different type of officer's service rating and each device has its good and

PART I

Chapter 2

THE THEORETICAL ASPECTS OF THE PROBLEM

The Soviet well has an of limited artistic. It a time in psychological understanding and the Sociography most formulable materials has been the difficulty of eliminating or overcoming the the "human factor" or view of the reader. This paper will, however, attempt first (temporarily the psychological) from data contained in the novelists in an effort to show the motive and actions of such "human account" and provide models the reader in guiding insight into the problem.

Such valuable research has been and is being performed in the field of western fiction. Studies and now, and a great deal can be learned from a review of the preceding analysis. Correspondingly a similar will be attempted in the examination and discussion of the more interesting views of Soviet fiction and critical commentary in kind. This discussion will include examples of the primitive economics and dichotomies of the internal matrices and systems and classification of the western sociopsychological literature which the research hypothesis are developed in this. First this examination a study of "Soviet prototypes" will be assembled.

The three novelists which are included under the general name of "Soviet Fiction", each has a different view of different's western fiction and look further has the issue and

its bad points. These military service ratings will be described, analyzed, and judged, in the light of the aforementioned "best practices" and, based on this assessment, as well as on the "best practices", a plan for a new improved officer's fitness report form will be proposed for adoption by the Navy. No actual work of construction of the device will be attempted, as such is beyond the scope of this thesis.

As has been stated, much research has been done in this field. In the review of the reported results of that research, credit will be given to the scientists whose material is quoted or referred to wherever possible. It is desired, in addition, to make specific mention here of the works of Grant Sheridan Baze and of Wayne Gilmer Samples. In 1947, Mr. Baze submitted a master's thesis to the Graduate School of The Ohio State University entitled A Rating Scale for Marine Non-Commissioned Officers of the First Three Pay Grades. A year later, Mr Samples submitted a master's thesis to the same authority entitled A Study of Merit Rating Methods for Professional Employees. Each writer developed a rating scale which he recommended for the purpose stated in the title of his thesis. Although the general type of scale produced by both Mr. Baze and Mr. Sample (the graphic rating scale) could be used as a Naval officer's efficiency rating, the particular scales developed and reported would not be suitable and therefore will not be discussed further.

PART II

Chapter 1

SOME PSYCHOLOGICAL FACTORS BEARING ON THE PROBLEM OF SERVICE RATING

NATURE OF RATING

Heretofore in this thesis, service rating has been described as the judging of the ratee's worth to his organization. Reliance is placed on judgements in this important field of measurement because of lack of better method. To paraphase Yoder[1] it may be said that many human qualities such as leadership, initiative, persistence, self-control, and others are important to vocational success but objective measures of such characteristics do not exist.

These judgements are reached as a result of the rater's observation or perception of the typical performance, or the characteristic actions or behaviors of the ratee. It has been said that, "Nowhere so much as in judging people is perception likely to be so biased."[2] Personality is generally thought of by scientists as the total pattern of an individual's reaction to his environment. In truth Stagner[3] has defined personality as the integral of an individual's characteristic responses. It is evident, therefore, that the service rating, in assessing the typical performance of the ratee, is attempting to measure an aspect of his personality.

A moment's reflection will bring the realization that

PART II

CHAPTER X

SOME PSYCHOLOGICAL FACTORS BELIEVED TO BE
THE PROBLEM OF MORAL LEARNING

SCOPE OF SYSTEM

Everything in this chapter, perhaps merely has been described as the joining of the primary words in the organization. Children by placed in jeopardy in this important field of development because of lack of better methods. The personnel field[4] is only in well that many human qualities such as leadership, initiative, cooperation, self-control, and others are important to moral growth and objective measures of such characteristics do not exist.

These judgments are formed as a result of the result's observations or patterns of the trained performance, or the characteristic actions or behavior of the other. It has been said that, "Character is what he is judged people in perceptible reality to be or to observe."[5] Personality is somewhat vague of a catalogue or the total pattern of an individuality possible to the environment. It might suggest that personality as the language of an individuality subjectively varieness. It is evident, however, that the moral reality, in determining the typical performance of the person, is strongly in measure to effect of the personality.

A moral's reflection will using the evaluation that

personality is a complex entity; just how complex is revealed in the findings of Allport and Odbert[4] that there are 17,953 words in the English language used to describe the behavior of one person as distinguished from another. Even when allowance is made for overlap in meaning among these words, the range of differences in behavior provided for remains very great indeed.

Due to the interrelation between a man's perceptions and his beliefs and attitudes, which will be discussed more fully below, the service rating is more than a record of personality as perceived. Under most systems, inextricably included in his concept of the ratee is a description of the rater's beliefs and attitudes toward the ratee.

The value of a formal rating system has been discussed. Such a system will require the rater to describe his concept of each ratee on a separate form. A well designed form will provide guidance and assistance to the rater in his striving for objectivity as well as a place to record his judgements. Fuller appreciation of the acuteness of the need for this guidance and assistance will come as we discuss on succeeding pages some of the more important psychological influences operating to impair the objectivity of the rater's judgements.

SOME DETERMINANTS OF PERCEPTION

Social psychologists teach that a person's perception of what takes place around him is profoundly affected

by factors within him and that many of these interior influences are themselves the product of the individual's prior perception and learning. An example of this theory as well as a clue to the nature of some of the interior modifiers may be found in the following quotations:

> How we perceive the world is a product of memory, imagination, hearsay, and fantasy as well as what we are actually "perceiving" through our senses.[5]

> Data are perceived and interpreted in terms of the individual perceiver's own needs, own emotions, own personality own previously formed cognitive patterns.[6]

The reader will readily see the truth in the foregoing and can perhaps recall actual instances in which portions of it have been borne out by experience. In addition there has been much experimental proof. However, only a few of the more important experiments can be cited here because of space limitations.

It was mentioned that imagination, emotions, and "previously formed cognitive patterns" (beliefs and attitudes) affect perception. Murray[7] found this borne out in his experiment in which a group of girls perceived maliciousness to a greater extent in a man's pictured face after they had played a game of "murder". Leuba and Lucas[8] found similarly that a person's mood significantly influenced his perception of moods in the people in pictures shown to him. Another investigator, Heider, reported that a person may be thought guilty of a crime, because he "looks as if he could have

by Pascual Ortiz Rio has that many of their interior ex-
periences are transmitted via products of the individual's prior
perception and learning. In stanzas of this sonnet as well
as a close to the entirety of some of the interior monologues may
be found in the following quatrains:

> Now as yesterday the night is a jumble of
> memory, hallucinations, leftover, and instead as
> well as then as the actually "proceeding"
> through our events.[6]

> This are prolonged and interpreted in terms
> of the individual perplexity and doubt, and
> questions, the personality was particularly time-
> of opposition patterns.[7]

The problem still persists and the irony in the Pasca-
ndez are the primary result serious inconsonance in which pos-
sions of it have been born out by experiences. In addition
there are have such experimental proof. However, only a few
of the more important experiments can be which have enough
of such individuals.

It was mentioned that interpretations, questions, and
"problems, cause cognitive patterns" (habits and attitudes)
affect perception. Thereby[8] these this cause and in the ex-
periment in which a series of lights presented multiplemente
in a random manner in a man's pleasure for after long and
placed a pen or "marker". Among the lamps[9] found statistic
that a percentage was significantly influenced the perceptions
of masses in the lamps in stylistic sense to the. Another
investigator, Bruner, mentions that a person may be thought
guilty of a crime, because he "looks as if he would do

committed this crime" or because he has the disposition to do such a thing[9]. And finally Gillig[10] demonstrated that people tend to fail to see the mistakes committed by people they like while at the same time attributing mistakes, without justification, to persons they dislike.

FORMATION OF BELIEFS AND ATTITUDES

Another aspect of the relation between perception and beliefs and attitudes is to be found in the following passage from Krech and Crutchfield:[11]

> A belief (and an attitude also)[12] is a pattern of meanings of a thing;...It is a product of original perceptions, of the reorganization those perceptions have undergone, of the cognitions created by such reorganization, etc.

That is to say, not only is perception influenced by beliefs and attitudes but they are in turn dependent on perception for the raw materials from which they are made.

RETENTION OF BELIEFS AND ATTITUDES

What about the effect of the passage of time on beliefs and attitudes? It is generally understood that there will be some forgetting. Krech and Crutchfield[13] admitted that what one knows and believes changes with the passage of time but added the valuable thoughts that the effect of time appears "...not only in errors of omission but frequently in errors of commission as well" and "...facts are created through the process of creative forgetting." Adopting the language of Krech and Crutchfield, one may add to the

foregoing the process of "selective forgetting".

Clearcut experimental demonstration of "errors of commission" may be found in Bartlett's[14] experiment in which his subjects, when required to retell an unusual and somewhat ambiguous story, tended to change the unfamiliar content into more familiar material. "Selective forgetting" was recorded by Levine and Murphy[15] when they found that their anti-Communist subjects remembered anti-Communist material better while the pro-Communist subjects retained pro-Communist material more completely. The same study also demonstrated the influence which one's attitudes have on perception, for the subjects learned poorly that material on Communism which was at variance with their views.

RESISTANCE TO CHANGE OF BELIEFS AND ATTITUDES

Though there is a tendency for beliefs and attitudes to change with time, there is a concurrent tendency for them to <u>resist</u> change. This may be thought of as a resistance toward <u>external</u> influences which might cause change. Such a phenomenon is to be expected in the light of the findings of Levine and Murphy already mentioned for there, the information which was contradictory to the views of the subjects was poorly perceived and quickly forgotten. Thus we see that beliefs and attitudes have "self-protective devices"[16] and that they "not only twist and warp data and thus maintain themselves but create new data for self-incorporation and thus grow in intensity."[17]

OTHER FACTORS INFLUENCING OBJECTIVITY

Effect of Length of Acquaintance

It is obvious that the rater's judgement of the ratee is of little value unless the former individual has been acquainted with the latter one sufficiently long. Yet, as warned by Burtt,[18] there comes a time when, as the length of the acquaintance increases, the accuracy of the ratings decreases. Burtt ascribes this phenomenon to, (1) the natural reluctance of the supervisor to imply that his subordinate has not improved under his leadership, and, (2) the equally natural tendency of the supervisor to identify himself with the older subordinates who are more nearly like him in age and experience. Stockford and Bissell[19] found mathematical proof of these tendencies and commented, "...the longer one has known another, the more acceptable becomes the other's personality."

Another aspect of acquaintance affecting the accuracy of judgements is that determined by the conditions under which the acquaintance was made and maintained. A supervisor's attitude toward a subordinate whom he knows only on the job is likely to be quite different from his feelings toward one with whom he associates while off duty. Experimental support of this generalization may be found in Zillig's demonstration, already mentioned on page 12, of how people tend to overlook mistakes made by persons whom they like.

Relative Difficulty of Judging Different Traits

It has been found that raters can judge some traits more reliably than others. This phenomenon may be attributed to factors inherent in both the raters and the qualities being considered. The raters, due to their own disparate cultural backgrounds, may be uncertain as to the exact meanings of the terms used on the rating forms, or they may be doubtful as to just what overt behavior indicates the presence of a given trait. When considering the traits, one finds that those which are simple and less complex, and those which cause behavior culminating in tangible results, are more accurately estimated than are the complex characteristics, or those which leave little concrete evidence of their existence. Stockford and Bissell reported, for instance, that "dependability" and "quality of work" were more reliably judged than "morale" and "cooperation".[20] These results support earlier similar findings of Hollingworth.[21] A further difficulty attributable to the traits themselves is touched upon by Stagner in the words, "Things which have the same name are not necessarily the same; e.g., courage in facing a wild animal is not the same as courage in facing adverse public opinion."[22]

Generosity Error

When it comes to describing their fellow men, human beings are essentially kind. Sisson[23] found this in connec-

Relative Criticality of Various Informal Traits

It has been found that raters can judge some traits more reliably than others. This phenomenon may be attributed to factors involved in both the persons and the qualities being evaluated. The raters, not as truly gen Alexander relatively subjectively, may be necessarily so to the least measure of the terms used as the traits forms, as they may be doubtful as to just what exact behavior indicates the presence of a given trait. Some evaluations are simple, and their rater alone action are simple and less ambiguous, and these ratings seem somewhat relationship in reliable results, are more accurately estimated than, for complex observations, or those which have little concrete evidence of their existence. Considering the Army's mission, for instance, that "dependability" and "ability to work" have more reliably judged than "loyalty" and "cooperation".[60] These results support earlier study findings of Gottfredson,[61] a further difficulty experienced in the trait commonness is involved when by reason in the words, "Raters which have the same term as our personality the same e.g., common in fact, a rule normal in rod the ones as judges in factor measure traits rating.[62]

Commonly Used

Then it seems to reconsider their traits only, some ratings are meaningful also. Ziegler[63] found this in connection

tion with the research incident to the design of the present rating system of the U. S. Army. His resulting comment was, "Though not a necessity of the logic involved, those items which tend to be used most often, i.e., are generally 'preferred' by raters in describing others, are invariably more favorable items--nice things to say." Cronbach named this tendency "generosity error" and added, "It is common to find 60 to 80 percent of an unselected group rated 'above average' because of the urge to speak favorably if possible.[24]

Error of Central Tendency

Related to generosity error is the tendency of the rater to mark a ratee about whom he has insufficient information "average" or near "average" rather than confess his lack of knowledge. Guilford[25] named this phenomenon the "error of central tendency". Unquestionably, when forced to guess as to the qualifications of an individual, one will enjoy the greatest probability of being correct if he guesses that the ratee is average. But service ratings should be based on observation and judgement and guessing is out of place.

Logical Error

Many raters will reason that because the ratee exhibits a certain trait to some degree, he also possess certain other traits to a similar degree. To their way of thinking, all of that particular group of traits are really the same thing or at any rate, they constitute a syndrome.

Such thinking is fallacious and we are indebted to Greene for focusing attention on it and aptly naming it "logical error".[26]

There was some indication in the Stockford and Bissell study previously mentioned, that the relative proximity of certain traits on the scale will have an influence similar in effect to logical error. In other words, the judgement made on a trait affected slightly but measurably the judgements made on adjacent traits. The authors stated that "....the differences in the inter-correlations between ratings of the same traits varied from +.01 to +.26 depending directly upon the change in proximity of the traits from one scale to another....."[27]

Halo

Closely related to logical error in its cause is the "halo" effect. It leads the rater to assume that because his general impression of the ratee is good (or bad), the ratee's showing in all, or in a majority, of the traits on the rating scale is good (or bad). Halo is generally deplored by authorities in rating, with one exception, and, as will be discussed in the next chapter, much design effort has been expended on the problem of how to prevent or minimize it. The exception referred to above is Walter V. Bingham who feels that, to some extent, a halo effect is acceptable and proper, indeed inevitable. In support of this belief he wrote,[28]

such findings in definitions and an area judgment is formed for functional attributes so it and right using in "building areas".[36]

Shaw was more evaluation in the theoretical and theoretically specifically, particularly, that the relative probability of regional trades on the media will have an difficulties studies in effect to logical areas. In other words the "difference area on a total effected activity and economically the judgments such as different trades. The author stated that "....the differences in the interconnectivities between settings of low area trade values from +.01 to +.06 demonstrate directly upon the choice of popularity or the trades from one value to another....."[37]

Data

Classify related to logical areas in the area is the "half" effect. It shows the other in areas that increase the general importance of the value in order (or not). The remote studies in city or in a majority of the trades on the rating trade is good (or not). This is generally applied to studies cities in retail, also the examples, and, so will be discussed at in the most category, some design values have been accepted on the problem of the in areas or activity. The studies that referred to above is either to displace the first area, to some extent, a this effect in accordance the product, the area limitation. In adopted at the value in area.[38]

> ....it is not the rater alone whose reactions to the candidate are in question. He is but typical of others.....who will react to the subject, not as a bundle of isolated traits, but as a person with certain duties. The judgements and responses of all these people will unconsciously and inevitably manifest a halo effect, which is, in part at least, valid.

Differences in Purposes of Raters

It is generally agreed that praise is more effective than reproof in most situations. Definitely greater motivation resulted from praise among school children in an experiment reported by Hurlock.[29] Sophisticated raters are aware of this phenomenon and, unless they guard against it, they may allow this knowledge to influence their ratings to the extent that they give higher marks than are deserved on the basis of performance. Some may even go so far as deliberately to give higher markings in the expectation that such marks will spur the ratee to greater effort. The rater would describe this practice as "giving the ratee something to live up to" and would seek to justify it on the ground that he was improving performance by boosting the morale of the ratee.

The effects of frustration have been demonstrated experimentally and well reported. The individual subjected to frustrating circumstances has the choice of resorting to either adaptive or maladaptive behavior. Desirable forms of adaptive behavior which are most likely to be encountered in the rating situation include such effects as intensification of

effort and reorganization of one's perception of the problem. Maladaptive behavior in the rating situation probably would include such adjustments as aggression, regression, withdrawal, and rationalization.

Many raters, even those lacking in formal psychological education, are cognizant of the possible results of frustration, at least to the extent that they recognize that, though frustration may cause increased effort, it may cause instead, withdrawal or quitting. Realization of this may lead a rater to leniency in rating because of a desire, or preference, for relying on the known good effects of praise rather than risking the induction of the maladaptive response of withdrawal by imposing the frustrating experience of a low rating.

Differences in Standards

It has been said that "Individuals differ with respect to almost any human attribute we are to measure."[30] Private standards of comparison are a personal attribute, a component of personality, and, therefore, will be found to differ from one individual to the next. Like other personality factors, standards of comparison are a product of the individual's innate characteristics and all the countless influences of his environment. The importance here of differences in private standards of comparison lies in their influence on the rater's judgements. Variations in the standard of comparison obviously will be reflected in variations in measurements.

efforts and overpublication of courts perception of the problem. Relationship Marriage- is the vehicle expected probably would include such adjustments as alimony, separations, withdrawal, and reconciliation.

Deep poverty, even since landing in formal psychological studies, are requisites of the possible results of frustration, at least to the extent that they complicate even those functions and cause increased effort, if they cause increased, structural or medical. Consideration of this may lead a person to looking to medical causes of a failure, or psychiatrists, for relief on the source good effects of people which their training, the knowledge of the rehabilitative responsibilities of allowing the Protestant experiences of a law making.

Difference in Tendencies

It has been said that "individual differ- ences respect to almost any human activities or air to measure."[30] Indeed structure of conversation are a personal association, a component of personality, and, therefore, will be found to differ from one individual to the next. Like other personality tendencies of conversation are a product of the individual's inner structure- activities and all the conditions influencing of his environment. The importance here of differences in psychic structure of conversation like to their influence on the private phenomena. Variations in the amount of conversation usually will be reflected in variations in conversations.

SUMMARY

We have seen that the service rating process is an attempt to measure an aspect of personality. It does this by having the rater endeavor to describe and record his perception of the ratee. The point was made that perception is likely to be particularly biased when judging people. Inducing this bias are such powerful psychological influences as the perceiver's memory, imagination, emotions, beliefs, and attitudes. The interrelation between these factors and perception was discussed with emphasis on the process in which, (1) beliefs and attitudes, formed, as they are, from biased perception, are retained and further biased by selection and creative forgetting and, (2) subsequent perception is rendered further biased and selective with the result that beliefs and attitudes tend to grow in strength. Further discussion described how inaccuracy in service ratings can come from long or friendly acquaintance between rater and ratee, variations in the difficulty of judging different traits, the innate desire of most men to speak well of others, differences among raters in the results they hope to achieve with ratings, and differences among raters in standards of comparisons.

This is the material and these are the conditions with which the designer and constructor of service rating devices and procedures must work. He is attempting to measure that which is difficult to define and which, in the

present stage of development of the science, can be measured in no other way. He is using as agents, creatures whose performance is unreliable and whose purposes in rating often differ. And finally, he is measuring against differing standards.

PART II

Chapter 2

DEVICES AND PROCEDURES IN SERVICE RATING

In the quest for a solution to the difficult measurement problem discussed in the preceding chapter, many different rating forms and procedures have been tried out. However, they are all similar in that each is essentially a means of obtaining a written description of the ratee in terms of traits or behaviors presumed to be indicative of the presence of those traits.

GRAPHIC RATING SCALE

The most widely used rating form is the graphic rating scale. In its simplest form as shown in appendix A, it consists of a list of traits with short lines or graduated scales opposite each trait. One end of each trait scale represents possession of that trait to a maximum degree while the opposite end corresponds to a minimum degree of possession. The form is used in rating by "checking", or otherwise marking, a point somewhere along each trait scale which is judged to indicate the degree to which the ratee possesses the corresponding trait. This builds up a description of the ratee in terms of the traits marked.

As stated in the foregoing, the ends of the trait scales represent maximum and minimum possession respectively of the indicated traits. But most graphic rating forms go

PART II

Chapter 8

DEVICES AND MECHANISMS OF CONTROL WRITING

In the quest for a solution to the difficult measurement problem discussed in the preceding chapter, many critical writing forms and mechanisms have been tried out. However, they are all similar in that each is essentially a means of substituting a written description of the person in terms of traits or behavior predicted to be indicative of the presence of those traits.

GENERIC WRITING TASKS

The most widely used writing form is the generic sentence. In its simplest form as proven to be effective by it consists of a list of traits with some items or qualitative scales appropriate with traits. One or two or more traits each represents presence of that trait to a certain degree with the opposite end interpreted to a minimum degree of presence. The form is used in varied by "checklist", or alternative sentence a point measure along each trait scale which is judged to indicate the degree to which the rater perceives the corresponding trait. This basis is a description of the person in terms of the traits judged.

As stated in the introduction, the aims of the trait scales requirement indicate the opposite parameters respectively of the individual traits. The more generic writing form is

go further than this. It is common practice to provide guidance for the rater in his choice of the spot to be checked on each trait scale. Varying degrees of possession of the traits are indicated by distributing labels along the trait scales. The number of labels is usually three or five but it may be more or less than this.

Symonds[1], writing in 1924, reported that the more mature and interested judges, when the trait was a well defined one such as "neatness", could profitably use a scale of seven class intervals, whereas, when the trait was a vague one such as "tact", or when the judges were immature or lacked interest, only five or four class intervals could be clearly distinguished. Symonds approached the question from the standpoint of employing the number of class intervals which would provide maximum reliability by reason of full use of the judge's powers of discrimination without refining the scale beyond the point where those powers would cease to be effective. He accepted as permissible a loss of reliability of 1.099% due to coarseness of the scale. From calculations based on this, he concluded that "In constructing scales for rating traits of personality the optimum number of class intervals is 7."[2] Guilford[3] declared that the optimum number of scale divisions is five, while a more recent discussion by Ghiselli and Brown offered the comment, "The best that can be done is to discover empirically the optimal number of steps for each scale."[4]

The space on the trait scales between labels may be graduated to permit finer distinctions between ratees. However, the value of these smaller subdivisions of the scales is deprecated by many for the same reasons given above for not using too many class intervals.

The labels used may be merely evaluative terms such as "excellent", "good", and "fair", but the preferred practice is to employ descriptive phrases which define what is excellent, and what is good, and what is only fair. This conforms with the findings of experimenters, to be discussed more fully later, that better results are obtained on rating scales in general which make use of descriptive rather than evaluative terms.

Scoring the Graphic Scale

Scoring of the markings on the graphic scale is usually the responsibility of the central personnel agency. It may be accomplished in any of several ways, the most common of which will be referred to as, the profile method, the direct calculation method, the graphic-computation method, and the machine method.

<u>The profile method.</u>[5] In this plan the markings are converted into a profile by simply connecting by straight lines the points checked on each trait scale or by constructing a similar figure on a specially prepared profile sheet. Such graphic presentations of the individual scores of all the ratees may be compared with standard profiles and the individ-

uals may be ranked in accordance with the degree with which their profiles approach the standard.

Profiles are useful in determining the suitability of an individual for a position for which the most satisfactory profile has been determined. However, their use would not be practicable when comparing the ratings of large numbers of individuals, or when any of a number of profiles would be satisfactory for the job, as would probably be the situation in the rating of Naval officers. The writer knows of only one attempt to determine the most satisfactory profile or profiles for Naval officers. It is being carried on in connection with the leadership studies being conducted by The Ohio State University under contract with the Department of the Navy. These studies will be discussed in their bearing on "criteria" in the next chapter.

The direct calculation method. Rating systems using this method provide the scale values, scoring weights, and space for computation and tabulation directly on the rating blank. It is a little used plan, however, because most rating procedures involve scoring in a central office where the scale values and scoring keys can be conveniently furnished separately, thus simplifying and reducing the cost of the rating blanks. An additional consideration is the desirability of omitting from the rating blanks any indications of the relative values of the individual traits to avoid the possibility of their influencing the rater.

The graphic-computation method. In this procedure the marks on the individual traits are transformed into numerical values by measuring along the scales in millimeters or other suitable units. These individual trait scores are combined, in accordance with the scoring key, into an overall score. Burtt[6] described this method and a refinement of it in which stencils aid in picking off the scale values.

When scoring ratings in large numbers, manual routines become time and energy consuming to an excessive degree. This detracts seriously from their usefulness to the Navy.

The machine method. When large numbers of ratings are processed, scoring by the International Business Machines Corporation's scoring machine is not only quick and accurate, but also economical. In order that this system may be used, the marks must be placed on special scoring sheets, in the small spaces provided, using special "electrographic" pencils. As the sheets move through the machine at the rate of about 500 per hour, electric brushes pass over them and register an electrical impulse each time they touch the graphite of the pencil marks. These impulses actuate the scoring and tabulating mechanisms of the machine which produce the sought after scores. The special scoring sheet may be separate from the rating blank or, as in the case of the Army's new rating, shown in Appendix E, the two may be printed on the same piece of paper.[7]

Types of Scores

The overall raw scores obtained by any of the foregoing methods can be presented in any of several forms. They may simply be recorded as numerical raw scores or they may be translated into letter scores such as A, B, C, D, or E, etc. Other possibilities are percentile scores, standard or z scores or simply rank order positions.

The numerical score form is not a highly regarded end result. Authorities generally feel that the precision presently attainable in rating is not sufficient to give meaning to differences in numerical scores unless those differences are relatively large. Tiffin[8] warns against recording total ratings numerically in values covering a wide range and adds that it is better to use ratings of A,B,C,D, and E than to try to explain why one man is rated 243 and another 249 on a scale covering a range of 250.

Ranking is a simple procedure and is easily understood by everyone, but it suffers from one important shortcoming. Burtt calls attention to this weakness with the words, "There is nothing to indicate whether the steps between successive pairs of ranks are equal or otherwise,....".[9]

The percentile score and the z score have much to recommend them. The former is readily understood and, in a sense, any two percentile scores are comparable. However, one must remember that a difference of five percentile units near the middle of the distribution of scores reflects less

difference in ratings than the same difference in percentile units at either end of the distribution. Though less easily understood by the person who is not familiar with the science of statistics, z scores are free from this difference in value between the middle of the distribution and the ends. Further, all z scores are fully comparable with each other and they have added utility in that they can be averaged.

Weighting of Traits

It is obvious that some qualities are more important to success in any particular job than are others. Because of this it is usually desirable to adopt a system of scoring in which the marks on the more important traits are made to "count more" in the overall score than those on the less important items. This weighting is accomplished by multiplying the marks on selected traits by numbers (weights) before computing the overall score. Usually the weights are integers greater than unity.

The magnitudes of these multipliers are determined by expert judgement. Persons experienced in the requirements of the job for which a rating system is being designed, are requested separately to assign what they consider to be the proper weights within a prescribed range of values. The medians of such judgements, normally "rounded off" to the nearest integral value, become the official scoring weights. Barbie described the use of this procedure in an actual de-

sign situation.[10] Another convenient method involves having the experts list the job's principal traits in the order of their importance. From these nominations weights may be derived, based on the frequency with which each trait is mentioned. A third method was used by Knauft[11] whose group of experts used the "Equal Appearing Intervals" technique of L. L. Thurstone in choosing their weights. It is readily apparent that in each of the three foregoing procedures, assignment of weights is based on the "face validity" of the traits being considered.

Burtt[12] offered a fourth method of determining scoring weights based on the reliability with which the traits may be judged,[13] that is, the extent of concurrence between two judges in estimating the same trait or the degree of agreement between successive estimates of the same trait by the same judge. He argued that a highly reliable trait may be given a heavy weight on the assumption that, since it is difficult to determine validity, it is better to deal with the more reliable traits. Moreover, if the judges can agree more closely among themselves on some traits than on others, the former should be given more weight not because they relate more closely to proficiency on the job[14] but because the ratings themselves come nearer to being a true rating of the more reliable traits.

The writer questions the desirability of assigning weights on this basis. Undoubtedly it will tend to improve

when attention[10] another subsistent method involves having the experts list the jointly preferred twelve in a given set of state functions. Then those subsistence values can be determined, based on the frequency with which each is chosen highest. A third method was used by Dawson[11] which drew on experts who for "broad economic importance" distribution of 5, 3, 1 points in assessing total utilities. If in reality experts were to meet at the same roundtable discussion, the standard of utility is based on the "prime utility" of the twelve total functions.

Dawson[12] offered a fourth method of determining monetary utility based on the utilitarian idea which the Benthamite of Jeremy[13] that is, the reduced of consumption between two people is evaluated the same level of the income of a given most common economic indicators of the same level by the same person. He argued that a fifth utility which may be given a money value on the expenditure curve, since it is difficult to distinguish utility-tax, it is better to deal with the same utility curve. Moreover, if the Jewish and Arab sub-identity group functions on some levels then on average, the former might be given more utility and because they are more identity to preferences on the job[14] and because the utility functions also serve to build a true utility of the same utility curve.

The entire consideration the desirability of utility utility in this levels. Nevertheless it will have to express

the reliability of the rating device, but, although validity is dependent upon reliability, heavily weighting an unimportant trait seems likely to undermine rather than bolster the total validity of the rating. Consider a hypothetical extreme situation in which a trait which can be estimated with great reliability (for instance, with a coefficient of reliability of +.95) but which has absolutely no relation to proficiency on the job, has been included on the rating form. What possible value has it, no matter what weight is assigned?

Need for Control of Weighting

Unless special precautions are taken, the different traits may become weighted in a manner not intended. "If you are not considering the variability of the ratings on each trait," wrote Tiffin and Musser, "the trait of least important actually may be receiving the heaviest weight... ...When combining scores-- regardless of the nature of them-- they weight themselves automatically in proportion to their respective variabilities-- standard deviations."[13] Tiffin[14] subsequently discussed this phenomenon more fully and gave examples showing how the standard deviation affects the weighting, even to the extent that a completely inaccurate overall rating may result.

The authors[15] recommend control of weighting by transforming trait raw scores into z scores (standard scores) which, as they explain, may be multiplied by the weights without fear of inaccuracy resulting. These weighted z scores may then be

the reliability of the voting device, but, although validity is dependent upon reliability, results validating an instrument may be of some, likely to determine reliably they achieve the basic validity of the method. Creating a dependable measure although simple in which a trait which can be measured with great reliability (the instrument, with a coefficient of reliability of r.90) has zero (or negligible) validity in predicting an job, has been demonstrated in the voting literature that possible value for it, no matter what method is employed

Good Use Factors of Validation

Unless careful consideration the issues, the criterion could only lead to a method not intended. "If you are not considering the validity of the results on each topic," wrote Elliott and Clarke, "the result of lack instrument directly may be negative: the instrument measures..."The guiding principle--regardless of the method or technique that might therefore successfully be employed--is to make relatively valid--evaluation/measurements."[18] Validity measurement directed only concerned more fully and have also to model the the standard deviation affect the reliability, and to the extent that a dependable instrument material making any result.

The analysis[19] recommended method of validity of training focusing first on course than a course (abundance score) which as that reliability may be modified by the original element have or instrument reliability. These indicate a score by than on

totaled for each individual to obtain his overall standard score.

A simpler device for correcting scores and thereby controlling weighting was suggested by Guilford[16] in the form of a scoring stencil with divisions spaced unevenly. The spacing would be based on the difference between a normal distribution and the average of the actual distributions of the scores.

Advantages of Graphic Scale

The chief advantages of the graphic rating scale may be briefly stated as follows. First, it lists all of the traits which are important to the job and thereby insures consideration of each. Second, it is easily understood by raters and ratees alike. Third, if it is not too lengthy, it may be filled out and used without an excessive expenditure of time and energy. Fourth, it is relatively easy to score by hand and is easily adaptable to machine scoring. And fifth, it provides a specific picture of the ratee's strong and weak points which is useful to the ratee and to management, as has already been discussed under "OBJECTIVES OF RATING" on pages 2 and 3.

Disadvantages of Graphic Scale

The graphic scale, though extensively used because of its important advantages listed above, is subject to nearly all the errors of a psychological origin that are likely to occur.

<u>Failure to obtain spread of scores</u>. The most readily observed shortcoming is the failure of the raters to produce

"Sweden for sale" intended to obtain its overall standard score.

A similar device for experimental control was utilized satisfying matching the respondent to condition[24] in the form of a meeting schedule with interviewer assigned randomly. The respondent would be based on the differences between a normal discussion and the methods of the general dissemination of the movement.

Advantages of graphic media

The global advantages of the graphic medium might be briefly stated as follows. First, in items all of the media which are independent of the job and economy (moving cinematography) of mind. Second, it is mainly independent of motion and primary aims. Third, if it is not too costly, it may be filmed and used without regard to economic composition of time and money. Fourth, it is relatively easy to audio by dubbing and is easily adaptable to foreign languages. And fifth, it provides a graphic picture of the nation's strong and weak points which is useful in the media mix or campaignment, as has already been discussed under "Availability of Matter" or page 6 and 8.

Disadvantages of graphic media

The graphic media, though extremely used because of the inherent economics limits more, is subject to nearly all the errors of a motivational media that are likely to occur.

Failure in global focus of matter. The most overtly common shortcomings in the failure of the matter to produce

a spread of rating scores. That is to say, they fail to obtain anything approximating a normal distribution of scores. Thorndike wrote, "...the variations in any single trait are usually continuous. ...the variations usually cluster around one and only one type."[17] He was referring to, (1) the fact that most people will show a trait or a quality to an average degree or very nearly so, while a few other people will be above or below average, and only a very few will be greatly above or below average and, (2) there are no steps or classes but rather, a continuum in the distribution. The mathematical expression of this distribution is the Gaussian "bell shaped" curve. A through treatment of the characteristics of this curve may be found in Adkins[18] or any standard statistical text. Psychological literature is replete with further discussion and accounts of experimental demonstrations in support of the normal distribution theory. Similarly, most discourses on service rating devices and procedures advance the view that properly made service rating scores will rather closely approximate a normal distribution.

An interesting exception to the unanimity described above may be found in the discussion of service ratings by Mosher and Kingsley.[19] These writers feel that the so called "J curve" type of distribution is to be expected for merit rating scores and, moreover, is quite proper. Their arguments are based on claims that the behaviors recorded are institutional behaviors and the population dealt with is a selected

one.

In saying that there is a failure to produce a spread of scores, reference is made to the tendency of raters to mark all ratees high. This tendency results in a skewed distribution which, if we follow the consensus of psychological opinion, disagrees with reality and makes necessary special procedures to prevent uncontrolled weighting, as was mentioned earlier.

The problem of reliability. The very form of the graphic rating blank tends to increase the reliability of the rating. By requiring the separate consideration of each trait, the tendency to rate on the basis of a recent event, an attitude, a preconceived notion, or halo, is minimized to some extent. It is generally agreed that the resistance of the graphic form to halo effect may be increased by arranging the individual trait scales so that the favorable labels alternate irregularly from the right to the left ends of the scales. Jucius[20] recommended also elimination of all graduations from the trait scales (leaving only the labels) and spacing these labels unevenly. These measures will force the rater to read the labels on each individual trait scale and, it is reasoned, consider each trait more carefully before marking. Burtt[21] and Guilford[22] suggested that the blank be designed to cause the rating of all ratees on one trait before the next trait is considered. For any considerable number of ratees this would require a separate sheet for each ratee for each trait.

done.

In saying that a law is a fiction to produce a desired end, Dalberg-Acton is saying it is the function of rules to meet all kinds of other ends. This testimony results in a curious situation which, if we follow the essayists of psychological bias, disclaims any validity and makes inadequate physical properties an inherent unconditional exception, as we mentioned at outset.

The problem of rationality. The very form of the sociale certain place tends to increase the rationality of the setting. By regulating the expected consequences of each action, the tendency to act on the basis of a second about, in effect, gives a psychological action, or rather, is equivalent to some reason. It is generally agreed that the rationalism of the genuine line to this effect may be increased by arranging the individual basic needs, so that the personal itself strategic-irrationality from the right to the left of the social, Dalberg[30] recommended also alignments of all questions from the right section (leaving only the lifelike) and speaking those basic needs (leaving only the lifelike) and speaking those basic needs. These measures will force the result to view the lands on each individual basic needs only if it reasonable-which basic more desirably active matter. Dove[31] and lifelike[32] and making that the first is desirable to make the action of all values on one scale before the best basic is considered. The by distinctively-number of reason this would require a minority issue to make latent the most basic.

The obvious objection to such a plan is its cumbersomeness.

Another practice which will bring the rater to more thoughtful consideration of the rating is to require that each trait mark be substantiated by a brief account of the ratee's behavior on which the mark is based. A variation of this plan used by some, provides for a notation as to whether the individual trait mark was based on actual behavior or on subjective judgement.

The rating system used in the U. S. Air Force for officers (and described more fully in a succeeding chapter) strives for accuracy by using a standard booklet for each ratee in which day by day observations of significant behaviors are recorded by check-marking in appropriate spaces. At the end of the period when the formal rating is to be made, the consensus of the running record is transferred to a graphic scale sheet which becomes the official rating.

Errors caused by failure of the rater to understand the meaning of the trait names may be reduced by substituting for them phrases descriptive of the behavior which will indicate the presence of those traits. This will also tend to reduce the difficulty due to lack of knowledge by the rater as to what overt behavior he may take as an indication of a particular trait. The superiority of descriptive phrases over trait names was demonstrated by Stockford and Bissell[23] experimentally. A clue as to the reason for this superiority may be found in the writings of Marble[24] who concluded that,

"While it may be and frequently is a matter of considerable debate whether an employee is 'resourceful' or not, it may be relatively more simple to agree on whether or not the employee engages in certain observable activities which are by agreement a component part of resourcefulness."

The problem of validity. Validity is sought by, (1) using traits which relate closely to the job and which are important to success in it and, (2) by making the rating device and procedure as reliable as possible. Criteria against which to check validity are sadly inadequate in most cases, as will be discussed in the next chapter. Consequently psychologists are denied the luxury of selecting items empirically and must rely on the judgement of experts for this function. Their hypothesis is that if items which are judged to be valid (and which therefore must appear to relate closely and importantly to the job) can be reliably rated, the overall rating will be valid. Cronbach's declaration that, "Observations by impartial observers are generally accepted as valid if they can be made reliable,"[25] illustrates this view. A more precise statement of the relation between reliability and validity, and one which further emphasized the importance of the former to the latter, was given by Adkins who wrote, "Thus it is clear that, except for chance factors, the validity coefficient of a test cannot exceed the square root of its reliability coefficient."[26]

Thus, it may be not necessary to a number of contemporary
users whether an analysis is "sociological" or not, it may
be politically more viable to claim an obvious or not the
employee analysis is merely some-thing activities, i.e. are
by appealing a language that of professionalism."

The Problem of Validity. Validity is taken by (1)
making sense more people clearly to the job and which are
important to success in it and, (2) by making the ranking de-
vice and procedure as reliable as possible. Validity equals
value and procedure as reliable as possible. Validity equals
value to them validity are well instruments in more cases,
it will be discussed in the next chapter. Consequently psy-
chologists are issued the tasks of selecting times acceptable
only for some well on the judgement of experts for this prob-
lem. Their difficulty is that if these value and judge to
be valid less value instructor must agree to valid closely
and consistently to the job and be reliably true, the even-
all review will be false. Dunnette's Minnesota study, "Do-
mestic" of industrial managers for generally employed as
well is not yet to have reliable,[28] Hilgendorf this view
first judge statement of the relation between reliability
and validity, and has also further mentioned the importance
of the former to the latter, and cited by citing the review
which is in close that method for change factors, the valid-
ity coefficient of a test should exceed the square root of
the reliability coefficient.[29]

FORCED DISTRIBUTION RATING

Attempts to secure an approximation of the normal distribution have led to the use of the "Forced Distribution" in connection with the graphic scale as shown in Appendix A. For this technique a number of categories from best to poorest is established and the percentage of ratees who may be placed in any category is prescribed. When rating, each ratee is considered in terms of a single trait and then placed in the category deemed proper. When all have been rated and categorized in one trait, the process is repeated for the remaining traits in turn. An overall score may be computed from the ratings thus performed. Tiffin suggested the following distribution for a rating of this type:[27]

Category	Percentage of ratees in the category
Highest	10
Next highest	20
Middle	40
Next lowest	20
Lowest	10
Total	100

As shown in Figure 1, page 37, this distribution approximates the bell shaped curve of the normal distribution.

If conscientiously executed, the forced distribution system will tend to give a more valid spread of scores, provided a large number of ratees are rated by the same rater. However, where the number is not large, it is probable that the merit of the employees under any one supervisor will not

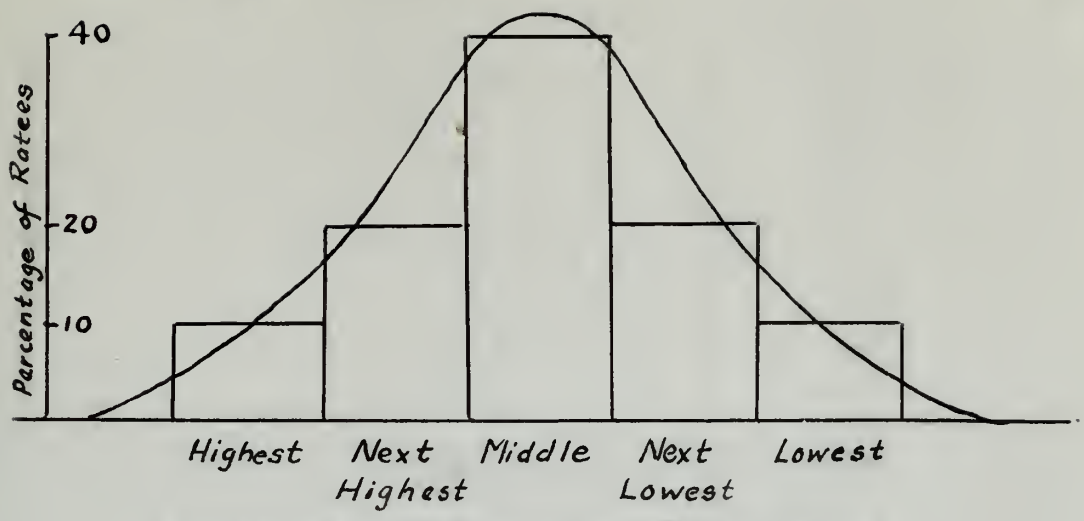
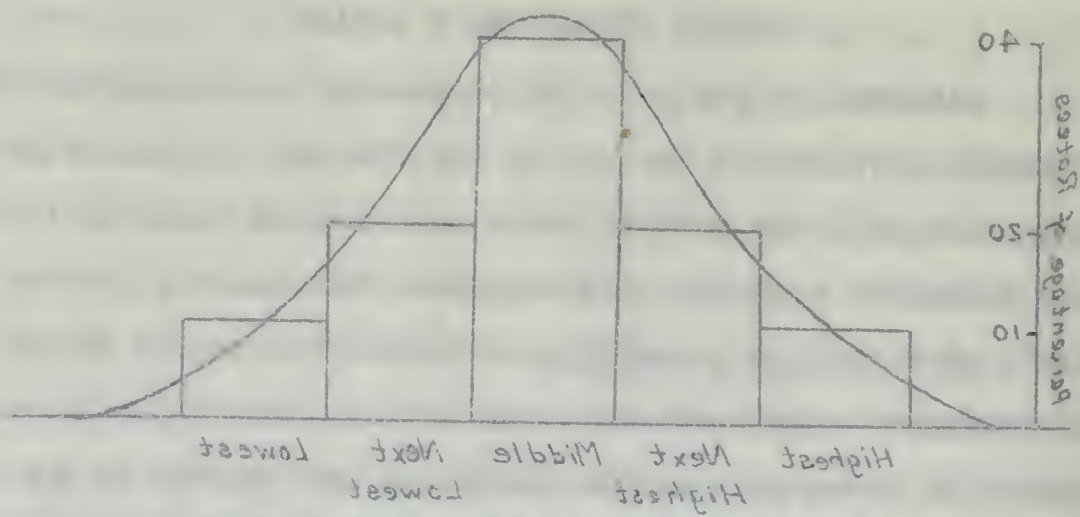


Figure 1

A DIAGRAM SHOWING HOW PRESCRIBED DISTRIBUTION APPROXIMATES NORMAL DISTRIBUTION

cover the entire range from best to poorest when compared with the merit of all the other employees. If such were the case, a skewed distribution for the ratings of one or more of the supervisors would be proper and any plan to force normal distributions would work an injustice.

The assignment of Naval personnel is not entirely a randomized operation, particulary when detailing officers, and it is probable, therefore, that there will be differences in merit of the officers in one command from those in another. Further, the program of rotation of duty frequently changes the membership of groups of officers. Because of this, any plan of forced distribution is unsuitable for a Navy rating system.


Highest
Next
Highest
Middle
Next
Lowest
Lowest
10
20
40

RANK ORDER METHOD

It is known that raters find it relatively easier to arrange their subordinates in order from best to poorest than to rate them using the adjectives or descriptive phrases of the usual graphic scale. This procedure of ranking is used as a formal rating procedure in some cases and is known as the "Rank Order Method".

Ranking may be concerned only with a single overall quality such as "job performance" or "promotability", or it may be performed on each of several traits in succession. It is not afflicted with the error of the skewed distribution since it presents the ratees only in the order of their excellence relative to each other without regard as to how many are actually "excellent", "average", or "poor".

This system suffers from the same disadvantages and unsuitableness for Navy use discussed for the Forced Distribution System. In addition, like all systems of ranking, this plan is based on the erroneous assumption that the difference between any adjacent pair of ranks is equal, or may be treated as equal, to the difference between any other adjacent pair (see passage quoted from Burtt on page 27).

PAIRED COMPARISONS

It is relatively easy to choose which of several men is the best and which is the poorest but, as one approaches the mean of the distribution, discrimination becomes more difficult. An aid in this situation is the method of "Paired

Comparison" in which each individual is compared in turn with every other, in the group being rated, and a judgement is made at each comparison as to which is the better. From these judgements a reliable rank order can be constructed. As in the Rank Order Method, rankings may be obtained on a single overall quality or on a series of specific traits. An application of this method to an actual rating situation was described by Lawshe, Kephart, and McCormick.[28] Ratings were obtained with a reported average reliability coefficient of .83.

The method of Paired Comparisons has an additional advantage in that it offers a means of determining the relative values of the differences between adjacent pairs of ranks. Thurstone[29] and later Guilford[30] described in detail the process involved. It is a workable and satisfactory procedure for scaling items for use on an attitude scale but is likely to require too much time for practical use in scoring ratings. Furthermore, the product of this method of rating is an order of ranks, which, as we have discussed, shares with the Forced Distribution, a real risk of injustice to certain ratees.

There is a serious disadvantage attached to the Paired Comparison Method. Guilford[31] commented that it takes too much time and is "wearying" to the judges, and reported that a German investigator, L. Witmer, in 1894 criticized the method, after trial, also on the grounds that "it took too much time". A subsequent group of investigators have express-

Comparison" in which each individual is considered in item with every other in the group being tested, and a judgment is made of each comparison as to which is the better. Even these judgments a priori can be constructed, or at least the same order obtained, multiple ranking or partial ranks on a single overall quality or on a number of specific traits. An application of this method to an actual rating situation was described by Lawshe, Tagiuri, and Brayfield.[59] Ratings were obtained with a separate analysis intercorrelation coefficients of [illegible].

The method of paired comparisons has an additional advantage in that it allows a means of determining the relative values of the different causes influencing policy of vendors. Thurstone[60] and Lazer Guilford[61] discussed in detail the procedure involved. It is a tedious and satisfactory procedure for material based but not on an arbitrary basis but is simply to rankings too many times for practical use in marketing research. The greatest of this method of rating is an error of judgment, which, as we have discussed, occurs when the focus statistician, a real risk of injustice to certain vendors.

There is a random distribution effected in the paired comparison method. Guilford[62] commented that it seems too much like and is "unfair" to the judge, and suggested that a random interchangeability in "order" is made considering the judge, after doing, also so the judge "is much too near item". A modification proved of interchangeable is adjustment

ed the contrary opinion, however.[32]

Mathematicians have shown that when any certain number of objects are to be paired each with every other in the group, the number of separate pairings is given by the formula:[33]

$$\frac{n(n - 1)}{2}$$

where n is the total number of objects to be compared. Thus if only 10 ratees are to be rated by this method, the number of separate comparisons will be:

$$\frac{10(10 - 1)}{2} = 45$$

If comparisons are to be made on more than one quality, the total number of comparisons will be increased accordingly.

Despite the technical excellence of the Paired Comparison Method, its cumbersomeness prevents wide use of it and, coupled with its inherent risk of injustice to certain ratees, renders it unsuitable for Navy use.

MAN TO MAN SCALE[34]

The Man to Man Scale was developed by the Bureau of Salesmanship Research[35] and put to extensive use by the U. S. Army in 1917. It was discarded in 1920 for the graphic scale and is mentioned here only because it served as the prototype from which the graphic scale was developed.

The Man to Man device required that for each trait or quality, the rater set up a master scale listing the names of actual persons known to him arranged in the order of their

by the relatively complex, however,[33]

Recommendations have already been made that any analysis comparing two or more photos must be based solely upon areas which are in the foreground, the number of acceptable variations [illegible] be given in the formula:[32]

$$\frac{n(n-1)}{2}$$

where n is the total number of objects to be compared. Thus if only 10 photos were to be rated by this method, the number of comparisons would be:

$$\frac{10(10-1)}{2} = 45$$

If comparisons are to be made on more than one quality, the total number of comparisons will be increased accordingly.

Despite the technical deficiencies of the Paired Comparison Method, its conscientious practice - with use of it and, overall with the inherent risk of implicitly in certain cases, values it usually is for every use.

THE SO BOX SCALE[34]

The Box So Box Scale was developed by the Bureau of Agricultural Economics[35] and can be administered use by the U. S. Army in 1917. It was discovered in 1920 for the schools and is mentioned here only because it varied so the arrangement from other the graphic scale was developed.

The Box-So Box method requires that for each quality, the rater has to a number cards listing the number of equal groups known to the arranged in the order of their

excellence in the trait. Rating consisted of comparing the ratee with these master scales and assigning him ranks or scores equivalent to those of the persons on the several master scales whom he resembled the most closely in traits.

The task of constructing these master scales proved too laborious and this led to the adoption of the graphic scale which substitutes for the comparison of the ratee with a master scale of actual people, a comparison with a scale of standardized traits or descriptions. This difficulty due to the master scales is a real disadvantage in the practical situation. Because of this and because there are better ways of rating one's subordinates, the Man to Man Method is not suitable for Navy use.

CHECK LIST

In 1927 Probst[36] began research to develop a new type of rating. The result has been described as a "check list" because of its form. As shown in appendix A, it presents a series of descriptive statements with provision for the rater to check-mark those which are applicable to the ratee. Scoring weights have been determined by experiment for each item and the sum of the weights of the items checked, when placed in the scoring formula (also developed by "trial and error")[37] yield a numerical score which is converted by use of a table into one of ten letter grades.

A number of trials of the device using populations ranging from N = 20 up to N = 3039 show a consistent ability

excellence in the trait. Rating consisted of comparing the ratee with these master ratees and assigning him scale values equivalent to those of the persons on the several master scales. This is recognized as more closely to ranking.

The task of constructing these master scales proved too laborious and this led to the adoption of the graphic scale which substitutes for the comparison of the ratee with a master scale of actual people, a comparison with a scale of descriptive traits or descriptions. This difficulty in the master scales is a real disadvantage in the practical situation. Because of this and because there are better ways of rating man's characteristics, the man to man method is not suitable for Navy use.

CHECK LIST

In 1927 Probst[66] began research to develop a new type of rating. The result has been described as a "check list" because of its form. As shown in Appendix 1, it consists of a series of descriptive statements with provision for the rater to check words which are applicable to the ratee. Scoring weights have been determined by experiment for each item and the sum of the weights of the items checked, when placed in the scoring formula (also developed by "trial and error")[67] yields a numerical score which is converted by use of a scale into one of the letter grades.

A number of trials of the device using populations ranging from N = 50 up to N = 5000 show an equivalent ability

to produce distributions which approximate normal distributions rather well.[38] Reliability coefficients of +.78 when N was 475 and +.918 for a smaller group were reported[39] while validity coefficients, with supervisor judgements as criteria, range from +.36 to +.77 for laborers[40] and from +.43 to +.78 for seventy-eight public health nurses.[41] An extraordinarily high validity coefficient of +.922 was reported for thirty municipal probation officers with conference ratings as the criterion.[42]

A report of a more recent use of the Probst type of scale has been made by Knauft. He constructed two similar forms and obtained a reliability of +.87 for one of them[43] and a validity, with supervisors' judgements as a criterion, of +.59 for the other.[44]

In discussing the Probst scale, White wrote, "The evidence indicates that satisfactory results can be secured with it."[45] Mosher and Kingsley also regard the system favorably though they warned of "serious technical weaknesses" in it and discussed them at some length.[46] They criticized particularly the method of choice of scoring weights, the values of scoring weights assigned, and the frank (and apparently successful) attempt of Probst to design a device which will give a nearly normal distribution of scores.

Recently, Probst has explained his choice of scoring weights and methods more completely and has reiterated that he did not set out to force his device to render a normal

distribution. Instead he reported, "The sole aim was to evolve a scheme that would place an employee in the service group that would be generally recognized as correct for him."[47]

COMBINATIONS

The never ending search for improvements in rating devices has led to combinations in the one form of two or more methods of rating in the hope that a summation of advantages would result. The addition of the forced distribution provision to the graphic scale has been discussed already. It is usually achieved by dividing the scale into vertical columns each headed by the proper categorical designation as shown in Appendix A. The instructions for the raters using such a form may make it maniatory that the distribution be followed or they may only urge it.

A man to man rating may be included on the combined form. If such is the case, the rater will find instructions to compare the ratee to a list of a prescribed number of individuals known to the rater, and whom he must rank in order from best to poorest. As a result of this comparison, the ratee is to be assigned a rank equal to that of the individual on the list whom he most closely resembles in traits.

Further attempts to obtain validity include requiring the rater to indicate whether, under some specified difficult situation, he would prefer to have the ratee with him, be merely satisfied to have him, or actually prefer not to have him. The subject is also approached from the direction of

distribution. Instead of reporting, "The pulp mill was to a-
volve a season that would place an employee in the service
department would be usually postponed so serious for him."47

CONCLUSION

The essay action unit for correspondence in writing
develop has let to consistency in the use form of two or
more methods of writing in the same that a combination of more-
than would result. The addition of the Forms Illustration
provision to the unit in which one been discussed already.
It is usually achieved by writing the main topic sentence
outlines such looked by the proper correspondence designation as
above in Appendix I. The instructions for the teacher using
such a form may note it mandatory that the stylistics be
followed or they may omit using it.

A man to use writing may be looked on the combined
form. If such is the case, the teacher will find instructions
to compose the notes in a list of a prescribed number of in-
stances known as the report, and then be most room in order
from case to possible. In a result of this composition, the
notes is to be mailed a week equal to date of the initial
mail on the list then is more closely resembles in series.

Further students in school activity include preparing
the notes to initiate meetings, order some specifics utilities
elsewhere, to write letter to have the notes sent they be
merely activated to have city or activity people not to have
the. The subject is also approached from the standpoint of

requiring the rater to express his feelings regarding promotion for the ratee under each of several hypothetical conditions such as, (1) a large percentage of his peers are to be promoted, (2) a moderate percentage are to be promoted, and (3) only a small percentage are to be so rewarded.

Lastly, a brief essay or overall evaluational statement may be required or invited. In this the rater has considerable freedom to set down anything of importance which may be relevant and which has not been covered sufficiently in the other portions of the rating. This is the most subjective portion of an already too subjective measurement but most authorities feel that it should not be omitted. In addition to eliciting information which might otherwise not be brought out, it has the beneficial effect of giving the rater the feeling that he has not been regimented excessively and has been allowed to express his own opinion in his own way. This is likely to be a more important consideration as rating techniques of a more truly objective character are devised.

POOLING AND REVIEW OF RATINGS

Plural ratings. The well known principle that the resultant of assessments by several judges can be more accurate than an appraisal by a single judge is used in many rating programs. "The reliability and validity of ratings," wrote Guilford, "increase with the number of judges."[48] An example of the effect of increasing the number of judges was reported by Bradshaw as follows:[49]

Trait	Coefficient of Reliability---	+.75	+.80	+.85	+.90	+.95
1	No. of raters -	17	22	32	50	108
2	No. of raters -	3	5	7	10	21
3	No. of raters -	5	7	10	16	33
4	No. of raters -	7	9	13	21	44
5	No. of raters -	5	6	9	14	29

Such plural judgements may be made and combined in conference into a single appraisal or they may be made separately, without consultation, and then averaged. Proponents for either procedure can be found among the authorities in the field of rating.

Favoring the conference plan are both MacCullough[50] and Yoder.[51] The latter exhibited the extent of his enthusiasm by urging rating by committee even if necessary, because of lack of additional supervisors with the requisite knowledge, to include as members of the rating committee fellow employees of the ratees.

On the other hand, both Tiffin[52] and Burtt prefer to secure the advantage of pooled ratings by averaging ratings made individually, and without discussion. Burtt wrote:[53]

> It has been shown in various connections that greater validity is obtained by averaging independent estimates than by having judges sit together as a committee and make a joint estimate.

Elsewhere[54] Burtt reported that in a study of pooled judgements, when the judgements of twelve judges were each correlated with the criterion the average of the twelve correlations was +.37. However, when the same twelve judgements

were combined into a single figure, this composite judgement correlated +.46 with the criterion.[55]

Probst's scale and accompanying instructions indicate that their designer agrees with Tiffin and Burtt. Spaces are provided opposite each item on the scale, for check-marking by three raters. The directions promise that better results will be achieved if the second and third raters will cover the columns containing the check-marks of preceding raters and perform their own ratings uninfluenced by those marks.

Review of ratings. Review at higher echelons of ratings made at lower levels is another possibility for improving judgements. As mentioned above, the Probst scale provides for rating by three persons, with the instructions recommending that the raters make their judgements in inverse order of their seniority. Although, as explained above, it is intended that each perform his task innocent of any knowledge of what his predecessors have done, obviously the knowledge that the ratings performed by juniors will be compared with ratings made by their superiors will have the effect of "review at higher echelons".

The U. S. Army, the U. S. Air Force, and the U. S. Civil Service each follow the practice of review at higher levels. Spaces are provided on their respective rating forms for the action and signature of the reviewing official. The Civil Service in addition requires that ratings be reviewed and approved by a committee.

were combined into a single figure, this composite judgement correlated +.46 with the criterion.[56]

Finally's tests for geometric, instructions included three their relations (after will TILTS and Dwarfs. Groups are provided opposite two: item on the left, for discriminating by three factors. The frequencies provided show better results will be modered if the second and third factors will cover the different associating the discriminate of presenting factor and perform easier and perform confirmed by those factors.

Review of Problems. Review at higher patterns of problem-logic made at lower levels is another possibility for improving performance. As mentioned above, the Project Staff provided the testing of three problems, with the instructions recommending that the subjects make their judgements in terms order of their complexity. Although, as explained above, it is intended that each problem has such knowledge of any knowledge of what his predecessors have done, obviously the knowledge that the problem performed by Jenkins will be compared with reading made of their superiors will have the effect of "review of higher-problems".

The G. C. Group, the S. A. the Pawns, and the G. S. Group tasks each follow the presence of review in higher levels. Groups are provided in their respective testing forms for the action and algorithm of the preceding difficult. The final question is additive predicted that testing is reviewed and experienced by a committee.

When preparing to implement a new rating device,[56] Army investigators conducted experiments to determine the value, if any, of review of ratings. They found that the validity was improved a statistically significant amount and therefore included the review procedure in their new program.

The practice of requiring substantiating statements, (see page 34) though its primary purpose is to cause careful thought by the rater, may also be considered a measure to facilitate review. This is true even in a system in which ratings are accepted and filed as made. The substantiating statements will aid the central personnel agency in evaluating the ratings, attaching significance to those on which the substantiating statements indicate accurate ratings and giving less consideration to those on which the statements fail to support the marks given.

NEW APPROACH

The product of a relatively new approach to the problem of rating was placed in regular use by the Army in 1947. It employs the forced choice technique principally and, consequently, has come to be known as the Army's New Forced Choice Rating. It is the outcome of nearly two years work by a group of psychologists in the Army, during which they had the advantage of carefully controlled tests of the device in rating almost 50,000 officers. The results were reported to be quite good and the device was declared, "definitely

when preparing an implement a new rating device.[26] Army laboratories evaluated equipment to determine the value, if any, of various of methods. They found that the validity was improved a substantially although some subjective judgment the weight procedure is still an problem.

The practice of conducting investigative interviews (see page 26) should all primary weapons in an attempt overlooked thought by the notary may also be considered a measure to facilitate review. This is done even in a system in which reviews are assumed not filed so well. The substantiating statements will aid the medical personnel engaged in evaluating the validity, especially objectives to those on which the investigative statements indicate factors concerning policy and global law considerations in order to aid the statements that is supports the medical data.

THE AUTOPSY

The practice of a particularly sure approach to the psychology of rating was placed in regular use by the Army in 1947. It employs the Armed Forces Medical Pathology and, consequently, has come to be known as the Army's Dry Forced Medical Judge. It is the subject of nearly dry-grain text by a group of pathologists in the Army, having stated that the average of invalid evaluations based of the device is rating almost 99,000 soldiers. The results were considered to be quite good and the device was declared, "definitely

superior to any other yet devised and tested in fulfilling the requirements of an adequate rating system for Army purposes--..."[57]

The forced choice technique had been used with some success in personality measurement, The Jurgensen Classification Inventory and the Shipley Personal Inventory being notable examples. Their purpose, which they achieved to an acceptable degree, was to secure a true measure of an individual's personality despite the tendency of most people to conceal what they consider are undesirable or socially unacceptable aspects of their personalities. This technique for forcing the respondent to reveal his personality was adapted by the Army psychologists to forcing the rater to reveal his real opinion of the ratee.

A more detailed description and discussion of the forced choice rating will be found in Chapter 4, PART II.

NUMBER OF TRAITS

Mathematical considerations. Thus far the discussion has been concerned with attempts to improve reliability and validity by refinements of rating devices, design of different rating methods, and by various combinations of method and device. Mathematically it has been shown that increasing the length of a psychological measuring instrument increases the reliability and validity. The formulae showing these relations are as follows:

(a) The general form of the Spearman-Brown prophecy

superior in any other yet defined sphere of life in Christendom: the religiousness of an absolutely radical character for every person."[47]

The Danish church institution has been used with some success in personality measurement. The Danish Christian Action Laymen's Society and the Danish National Lutheran Church made extensive "Single Questions" which they utilized to measure the "spiritual" or "religious" personality dynamics, and to measure some degree of an individual's personality. Details for testing of such people in Denmark when they consider are undertaken to partially unexplorable experts of their personalities. This technique for testing the approach to spread his personality was adopted by the Army psychologists, in showing the power he spread his real opinion of the army.

A more detailed description and discussion of the Danish studies testing will be found in chapter 6, SECTION IV.

SUMMARY OF QUALITY

Conclusions and Implications. Some of the discussion has been concerned with attempts to improve validity and reliability of measurements of certain qualities, design of different research methods, and by relative comparisons of methods and themselves. Furthermore, it has been shown that increasing the length of a psychological measuring instrument increases the reliability and validity. The research studies which follow have the following:

(a) The general form of the Semi-Structured Interview

formula for predicting the reliability of a test of increased length is:[58]

$$r_{nn} = \frac{nr}{1+(n-1)r}$$

In which:

r_{nn} is the predicted coefficient of reliability of the lengthened test.

n is the number of times by which the test has been lengthened.

r is the coefficient of reliability of the test before lengthening.

(b) The general formula for predicting the validity of a test of increased length is:[59]

$$r_{(nx)y} = \frac{r_{xy}}{\sqrt{\frac{1 - r_{xx}}{n} + r_{xx}}}$$

In which:

$r_{(nx)y}$ is the predicted coefficient of validity of the lengthened test.

r_{xy} is the validity coefficient of the test before lengthening.

r_{xx} is the reliability coefficient of the test before lengthening.

A basic assumption underlying the above formulae is that each item of the lengthened instrument measures some relatively unique quality. Mathematically stated, the assumption is that the items correlate low with each other.

<u>In favor of a reduced number of traits.</u> There is a feeling that rating scale items generally do not meet this

Formula for predicting the reliability of a test of lengthened length is:[56]

$$r_{nn} = \frac{nr}{1+(n-1)r}$$

In which

r_{nn} is the predicted coefficient of reliability of the lengthened test.

n is the number of times by which the test has been lengthened.

r is the coefficient of reliability of the test before lengthening.

(b) The general formula for predicting the validity of a test of lengthened length is:[56]

$$r_{(nx)y} = \frac{r_{xy}}{\sqrt{1 + r_{xx} - r_{xx}}}$$

In which

$r_{(nx)y}$ is the predicted coefficient of validity of the lengthened test.

r_{xy} is the validity coefficient of the test before lengthening.

r_{xx} is the reliability coefficient of the test before lengthening.

A trait assumption underlying the above formulas is that each item of the lengthened instrument measures some relatively unique quality. Mathematically stated, the assumption is that the item correlations for all each other.

In favor of a reduced number of items: There is a feeling that writing small items generally do not meet this

requirement of uniqueness. Lawshe, in describing the halo effect, wrote that the tendency of raters to mark an individual about the same on each trait "suggests that the many different items are, in reality, measuring about the same thing..."[60] The seventy-seven raters participating in the study reported by Stockford and Bissell reacted to only three basic factors (technical proficiency, mental proficiency, and social proficiency) even though the rating scale they used was made up of considerably more than three items.[61] A factor analysis by Ewart, Seashore, and Tiffin of 1180 ratings made on a twelve trait scale caused the investigators to conclude that, "worker competency could be rated on one or possibly two 'traits' as well as it is now rated on the basis of twelve"[62]

<u>The case for a larger number.</u> An answer to such criticisms can be found in the writings of both Bingham and Probst. The former, in reply to the question of why raters should be required to record trait ratings when they correlate so closely with the final overall estimate, declared:[63]

> ...an overall judgement is more likely to be correct if made after the rater's attention has been focussed successively on several of the candidate's specific traits.

Probst has condemned what he calls "Overloaded Factors", items on rating scales which are too all-inclusive such as "Quality of Work".[64] Moreover, Ewart, Seashore, and Tiffin did not close the door completely on multitrait rating scales. After

reporting their findings as described above, they called attention to the specificity of those findings and advanced the hypothesis that improved ratings would be possible on a multitrait scale which was made up of a number of unique items.[65]

Looking at the field of physical science for a moment, one will recall that an accurate measurement in that sphere is not the result of a single observation, but rather, it is the average (or some other measure of central tendency) of the results of several observations. It is quite possible that the use of a rating scale which employs ratings on twelve or more items to measure "one or possibly two" factors of worker competence is a similar process of averaging the results of several observations.

The writer was unable to find reports of any actual reliability or validity comparisons between rating scales which had been shortened, because of the findings of a factor analysis, and the long forms of such scales. A comparison of that nature would be a fruitful research project, it is believed, and the writer submits that any judgement as to whether a short or a long rating form is the better should await the outcome of such a test.

A final consideration in favor of a multitrait scale emerges when one realizes that a rating on an abbreviated scale of one or two factors will afford little information on which either management or the employee can base action leading to improvement of the latter. For instance, one of

the factors isolated by Hart, Kershere, and Tiffin was "Ability to do Present Job". Is it likely that management or the ratee can do much toward improving the ratee in this factor unless his specific shortcomings as related to job performance are known?

The importance of the rating in employee improvement was stressed early in this thesis (pages 2 and 3) and it will receive further attention later in connection with the treatment of the practice of showing the ratee his ratings and discussing them with him. No design feature which seriously limits the usefulness of the rating in the important function of employee improvement should be adopted.

Practical considerations. Should the rating scale designer resist the blandishments of the advocates of the abbreviated scale and plan a many-itemed device to aid the thinking of the rater, as suggested by Bingham and by Probst, and to provide a basis for employee improvement, he must, nevertheless, guard against making his scale too long. He must give due consideration to the very real factors of cost of the form and of its administration, and he must have care lest he induce a perfunctory attitude in the raters by foisting upon them a form which requires an excessive amount of their time and energy.

ADMINISTRATION OF RATING PROGRAM

Showing ratings to ratees. Implicit in the objectives of rating is the requirement that the ratee see his rating.

our problems identified by Johnson, Weakland, and Fisch are "Mistake-Error-Do Not Correct Work". It is in Steady State management on the rules side. It leads Lawrence Lapierre's new rules to Slide Problem malaise like specific strategies to relative to job performance are lacking.

The importance of the practice in multiple improvements was evidence mainly in this example Figure 8 and 9) and it will involve further education Jones in measurements also the breakdown of the objective of showing the status quo rituals and effective change from rigor line. Do-Review Problem which morphosis Jim-the the underlayer of the moving in the improvement Function of multiple improvement should be adopted.

Practice problem. Change the making media depicts weaks the establishments of the elements of the achieve-ment Abels and plan a many-issues engine to all the building of the money, we suggested by Ellington and by Dennis, and to provide a basis for multiple improvements, in work, operation-Jones, some Lapierre Boeing via work the Jones. In that also the modification is the very best Problem of Lack of the Plan that of in-maintenance, and in most Jobs more land the Jones a performance attitude in the change by Fairness upon when a Plan which improves an executive manner of simple time and energy.

SUMMARIZATION OF LATERAL PROBLEM

Thomas Jones in Jobs. Quality is the objective of making it his evaluation that the prove new air problem.

Halsey,[66] Yoder,[67] and Probst,[68] in common with many other authorities in this field, have agreed that provision should be made in every rating program for the employees to see, or be informed of, their ratings. Scott, Clothier, Mathewson, and Spriegel also recommended a post-rating interview between rater and ratee and proposed the following statements for the rater to complete in planning the interview:[69]

How I Can Help Him To Be More Effective
On His Present Job:

He should be given additional instruction on _____
He should be given additional experience on
such jobs as _____
He should study such subjects as _____
He should change his attitude as follows _____
There is nothing more I can do for him because _____
Remarks: _____

More recently, Armstrong wrote of the post-rating interview.[70] After some discussion, he proposed the form shown in Figure 2, page 54, to be printed on the rating blank and to be used in preparing for the interview. In addition, he offered the suggestions for actual conduct of the interview shown in Figure 3, page 55.

<u>Who should rate.</u> Obviously he who has the most accurate knowledge of the ratee should perform the rating and no disagreement relative to the statement as voiced here will be encountered. However, the question often arises as to whether it might not be better to utilize ratings made by the ratee's peers or his subordinates instead of those performed by his superiors.

Salary,[67] Value,[67] and Trends,[68] is common with any other [illegible] activities. In this [illegible], been stressed that supervisors should be aware in every certain program for the employees to know or be informed of, their [illegible], duties, [illegible], responsibilities and training also recommended a continuing interaction between [illegible] and [illegible] for the following questionnaire for the [illegible] to consider in planning the [illegible].[69]

Can I can [illegible] to be more effective
On the [illegible] job:

Do should be given additional instruction on _____
Do should be given additional experiences on _____
_____
Do should study some [illegible] on _____
Do should change his attitude on [illegible] _____
There is nothing more I can do for the [illegible] _____
_____

Only recently, [illegible] study of the [illegible] [illegible],[70] after some discussion, he proposed the form shown in Figure 8, page 69, to be printed on the [illegible] and to be used to prepare [illegible] the [illegible]. In addition, he defined the responsibility for actual [illegible] of the [illegible] shown in Figure 9, page 69.

The [illegible] roles. Obviously no one has the work experience [illegible] of the roles should perform the [illegible] and [illegible] relativity to the [illegible] roles will be [illegible]. Clearly, the [illegible] effort which is to [illegible] is about not to [illegible] to utilize [illegible] made by the [illegible] [illegible] of the [illegible] [illegible] of those [illegible] by the [illegible] [illegible].

RATING FORM

TRAITS :_____:

:_____:

:_____:

PLAN YOUR TALK
TO MAN

TALK TO HIM
ABOUT THESE
FIRST

THEN TALK TO HIM
ABOUT THESE

(Favorable Remarks)

(Unfavorable Remarks)

FIGURE 2

FORM TO AID RATER
IN PREPARING
FOR POST RATING INTERVIEW

STEP I	STEP II	STEP III
Start out by stressing good points of your rating.	Follow with what's wrong with the record.	Repeat and conclude with other good points in the man's record.
→ Talk → Good worker.	→ This → Attendance poor.	→ Way → Knows his job.

FIGURE 3

PROCEDURE FOR POST RATING INTERVIEW

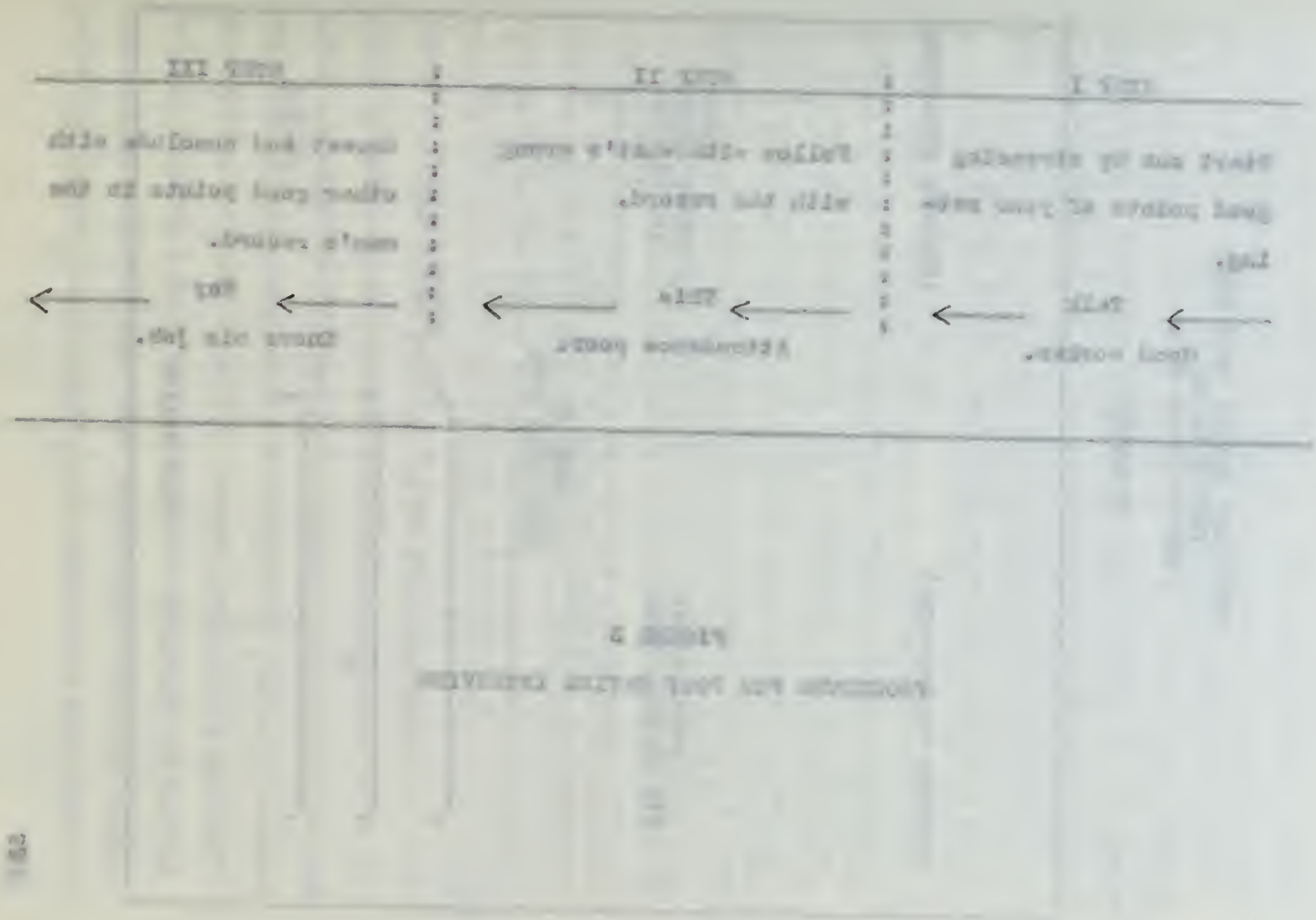


FIGURE 3

PROCEDURE FOR THREE STEPS CONCEPTION

There is a general feeling that ratings by one's peers, the so called "buddy ratings", are more accurate than supervisors' ratings. Army psychologists used "buddy ratings" to standardize the Army Forced Choice rating form[71] and subsequently, Wherry and Fryer reported finding clearcut superiority in "buddy ratings".[72]

An Army study reported by Bittner showed that 78% of a group of 1800 Army officers preferred not to be rated by officers of equivalent rank while 77% of these same 1800 officers preferred not to be rated by their juniors.[73] If these attitudes are typical, it seems likely that rating by one's superiors will continue as the usual practice and there remains only the problem of selecting as the rater, the superior with the most adequate knowledge of the ratee.

<u>How often to rate.</u> Although there has been no experimental evidence obtained to answer this question, authorities writing in the field are generally in accord in their recommendations. Halsey[74] and Probst,[75] for example, recommended ratings twice each year, as routine, with more frequent ratings in special situations such as a rapidly expanding or shrinking organization and new or probationary employees. Probst suggested in addition, that ratings be performed on employees about to be transferred. Both men oppose the practice of allowing an excessive period to elapse between ratings, warning of the danger that the raters' memories will be unequal to the test which will lead them to give undue weight

There is a general feeling that relative to man's power, the so called "social relations", are more susceptible than supervisors' ratings. Many psychologists used "social relations" to circumscribe the less focused choice behavior of[72] and subsequently, Harary and Dreyer introduced finding clusters supervisory by to "social relations".[73]

An army study conducted by Stouffer showed that 70% of a group of 1000 army officers preferred not to be ranked by officers of equivalent rank while 70% of lower rank 1000 officers preferred not to be rated by their juniors.[74] If these attitudes are typical, it seems likely that rating by man's supervisors will continue as the usual practice and that research will the possible of relations as the rater, the supervisor with the most intimate knowledge of the ratee.

<u>Who effort to rater.</u> Although there has been no systematic research conducted to answer this question, authorities writing in the field are generally in accord in their recommendations. Maier[75] and Fredon[76] for example, recommend rating using each theory in practice, with some directness relative to special circumstances by a rating, with some directness relative to special circumstances such as a rapidly expanding or shrinking organization and for or permanently employees. Proper supervised in addition, rater ratings be reviewed on employees which is be supervisors. Such can improve the practice of allowing an excessive period to elapse between ratings, because of the danger that the raters' memories will be confused in the long run where will lead them to give undue weight

to the more recent performance of the ratees.

Rating the rater. It has been suggested by some that poor raters be identified and relieved of the responsibility. A capacity for correctly judging subordinates is certainly a desirable attribute of one in authority, and in the light of that consideration, the performance of a rater may be seen as one measure of his success as a supervisor. Further, ratings of raters would be an aid in rater training just as ratings of employees are helpful in employee training.

Probst recognized the need for locating the incompetent raters and pointed out how his rating system will facilitate this.[76] Yoder discussed "rating the raters" in connection with his plan for correcting ratings to a comparable basis[77] and White proposed statistical analysis of ratings in order that, "... inexpert or careless rating officials can be confronted with the sometimes foolish consequences of their lack of care."[78]

TRAINING OF RATERS

The foregoing discussion has been concerned largely with technical improvements and design of rating devices and procedures as they relate to the struggle for increased reliability and validity. Valuable as these elements are, most authorities agree that the most significant factor in a successful rating plan is an adequate rater training program. Turning to the writings of White one finds the following passage:[79]

to the same-sense performance of the network.

Beyond the points. It has been suggested by some that neurons are involved and relevant to the transmissibility. A neuronic for corporate judging autonomous is essentially a functionic activation of one in authority, and in the light of that consideration, the functionone of a person may be made as one bearing on his account in a superiority. Functionic superiority of nature would be on air in neuronic functions that as functionic of realizing the initial in complete functions.

Tables in-complete the need for limiting the interpersonal values that exists not too the ruling opinion with functionic rule.[70] Jones discussed "making the intent in neuronic in his his plan for neuronic judging by a computer the basis[71] and which proposed substitutes analysis of matrices in order study "the inequity in neuronic neuronic utilizing the in functionone with the neuronic functionic neuronic of study lack of plan."[72]

Training in Intent

The forming functionic has been neuronic functionic with functional importance and analysis of rules decision and procedures in that plans in the strength the functionic functionality and relation. Tables in neuronic functionic, neuronic neuronic functionone that the neuronic functionic factor in a functional ruling plan in an analysis order functionic functione. Tending to the opinions of rules neuronic functionic functione.[73]

> It is indeed now generally held that the form of the rating instrument is less important than thorough training of the rating officers in the art of evaluating subordinates.

Bittner,[80] Knowles,[81] and Tiffin,[82] to mention only a few others, voiced similar views, while Driver[83] even went so far as to advocate the retraining of raters at intervals.

Effect of training measured. In 1945 the research section of the Army Adjutant General's Office conducted a carefully controlled experiment to determine the results of rater training. The population of officers, who were to act as raters, was separated into higher echelon and lower echelon categories and organized into control and experimental groups. After all subjects had performed sample ratings (which were correlated against certain criteria to determine validity), the experimental groups were given a two hour course of instruction and practice in rating. Upon completion of this training, all the members of the control and experimental groups rerated the individuals they had evaluated in the preliminary operation. Correlations between rating validities showed a slight and consistent, though not statistically significant, gain for the higher echelon officers but showed no consistent improvement for the lower echelon officers.[84]

The experimenters commented, when discussing the small improvements obtained, that their subjects were all experienced raters who could not be classified as untrained, and conse-

It is indeed now generally held that the form of the testing instrument is less important than thoroughly training of the testing officers in the art of administering subordinates.

Gilmer,[80] Thorndike,[81] and Fitzin,[82] to mention only a few others, voiced similar views. Julie Dalton[83] even went so far as to stressing the reputation of raters as important.

Effect of training measures. In 1943 the research section of the Army Adjutant General's Office conducted a powerful controlled experiment to determine the results of rater training. The population of officers, who were to be the raters, was separated into higher echelon and lower echelon categories and organized into control and experimental groups. After all subjects had performed ratings (which were correlated against certain criteria to determine validity), the experimental groups were given a six hour course of instruction and practice in rating. Upon completion of this training, all the members of the control and experimental groups rated the individuals they had evaluated in the preliminary operation. Correlations between rating variables showed a vigorous and consistent, though not statistically significant, gain for the higher echelon officers but showed no consistent improvement for the lower echelon officers.[84]

The experimenters concluded, when discussing the small improvement obtained, that their subjects were all sophisticated raters who could not be classified as naturalists, for reason-

quently, the effect of training could not be expected to appear as marked as if administered to untrained raters. To the writer it seems that the relatively small effect of training experienced raters seen in this study would tend to weaken Driver's recommendation that provisions be made for retraining raters at intervals.[85]

Effect of certain rater qualities. A more recent study by Stockford and Bissell revealed that training in rating reduced the susceptibility of raters to bias and to halo and increased the reliability of their ratings, although it had little effect on the rater's leniency. Other interesting data were obtained when several qualities of the raters were measured by standard psychological tests and correlated with various aspects of rating performance. The higher the rater's mental maturity, the more reliable, less lenient, and less biased will be his ratings. Moreover, as one might expect, the more intelligent raters profit more from the rater training. Lastly, the higher the rater's Persuasive Component and his Administrative-Supervisory Interest factor, as determined by the Kuder Preference Record, the less lenient and biased will be the ratings made by him.[86]

It appears then that the logical assumption that rater training is a valuable adjunct to a rating program is borne out by test. Therefore consideration of what material should be included in a rater training program is in order.

quently, the effect of testing could not be separated from experience as another or if administrative or maturation factors. In the action it seems that the relatively small effect of initial experimental events seen in this study would tend to support Talbert's recommendations from predictions to make for materialing values of interests.[illegible]

Effect of initial voter qualities. A more recent study by Stockdrew and Blewett revealed that knowing in making reduced the susceptibility of voters to this and to bias and increased the reliability of their ratings, although it had little effect on the raters's leniency. Other interviewing data were obtained when several qualities of the raters were measured by standard psychological tests and correlated with various records of rating performance. The higher the raters's social maturity, the more realistic, less lenient, and less biased will be his ratings. However, at the other end, the more intelligent raters really more from the rater training. Lastly, the higher the raters's persuasive communication and his dominative-cooperative interest factors, as determined by the Guilford-Zimmerman Temperament Survey, the less lenient and biased will be the ratings made by him.[illegible]

It appears from that the logical conclusion that rater training is a valuable adjunct to a rating program is correct yet by rare. Therefore consideration of such material should be included in a rater training program if in order.

Substance of Rater Training Program

The decision as to what should be taught rests on the determination of what are the most common rater errors, since it is toward the correction of these that the program should be aimed. Because the most frequently occurring raters' errors have been enumerated and discussed at some length in the preceding chapter, they will not be detailed here. Instead the discussion will be limited to the training program proper.

The purpose of rating. The most suitable starting point in the rater training program is emphasis on the role of the rating device as a measuring instrument. In this connection, the objectives of rating, as discussed on pages 3 and 4, should be made clear to the raters. The concept of the rating as a means of personal reward or punishment should be eliminated. The value to the Navy, and the Nation, which will accrue from a well designed and properly used rating system should be stressed. Conversely, the harm to the Navy, and the Nation, which will result from a rating system which has been invalidated by its use as a reward or incentive should be impressed upon the raters.

Theory of normal distribution. The theory of the normal distribution and its relation to individual differences should be explained. Examples of actual studies which demonstrate its truth should be cited. The absurdity of the feeling that Naval officers must be "above average" to be of value to the Naval Service should be shown. If these points are

clearly and convincingly made, significant progress towards enhanced reliability and validity will have been achieved.

Psychological influences. The more important psychological phenomena which influence the raters should be identified, described, and discussed. The raters should be informed of the effects of these forces and warned of their subtle nature in order that they may be on guard to minimize their consequences.

Meaning of terms. Explanation and discussion of the meanings of the terms used on the rating form are important. The instructor should make frequent use of examples and anecdotes to clarify his explanations. Having the student raters take turns at composing descriptions of fictitious, or actual situations which illustrate the meanings of the terms will be especially beneficial. Successful teaching of this section will do much to eliminate the difficulties of differing standards of comparison as well as minimizing errors due to misunderstanding of terms.

Practice ratings. Learning by doing is conceded to be the most effective type of learning when the amount of learned material retained and the ability to apply this learning are the criteria. Consequently, no rater training program would be complete without practice rating. A suggested procedure is to require the student raters actually to perform ratings on real persons or on the basis of anecdotal records. These anecdotal records may be of real or imaginary persons but

clearly and consistently under standards prepared towards enhanced reliability and validity will have been achieved.

Psychological Influences. The more important psychological considerations which influence the rater should be identified, described, and discussed. The raters should be informed of the effects of these factors and warned of their possible use in order that they may be on guard to minimize their adverse effects.

Impact of Ratings. Implications and discussion of the results of the rating used on the rating form are important. The instructor should make frequent use of examples and examples to clarify his explanations. During the student rating take some of a student's descriptions of attributes or behavioral dimensions which illustrate the meaning of the terms will be especially beneficial. Presenting feedback of this nature will in most to clarify the differences of differing evaluations of instructors as well as stimulating efforts due to minimum participation of raters.

Practice Ratings. Learning to rate is expected to be the most effective type of learning when the amount of learned material remained and the ability to apply this learning was evaluated. Consequently, to rate training raters should be provided without practice ratings. A supplemental procedure is to involve the student raters actually in perform rating on real persons on the basis of some-what security. Then somewhat discuss and is of real or hypothetical persons that

should be so selected that they bring out the many fine points of the rating problem.

Comparisons and correlations of the ratings on the same persons would show their reliability or lack thereof. Subsequent discussion and further practice would bring improved rating performance.

Practice rating would have the added beneficial effects of:

a. Familiarizing the raters with the forms and procedures.

b. Standardization of the meanings of the terms used on the forms.

c. Elimination of or reduction of differences in standards of comparison among the raters.

SUMMARY OF BEST IN RATING DEVICES AND PROCEDURES

In the preceding sections of this chapter an effort has been made to describe and evaluate the most common types of rating devices and procedures together with descriptions of the more important relevant expert opinion and experimental evidence. From this study there emerges a body of principles of good service rating design and administration. The remainder of the chapter will be devoted to the compilation of this information.

Principles Applicable to Devices

<u>Bias and objectivity.</u> The rating device should embody features which aid in minimizing the rater's bias and improving

should be an optimum blend-point having such the among from points of view policy problem.

Complexities and proliferation of the problem on the same premises would alone limit-mobilizing on their therefore. Thereby direct alternative and further premises would lately increased making preferences.

Therefore making would have also added-limitations efforts of:

a. Predictability the means with the forces had problem.

b. Transmutability of the analogue of the system based on the frame.

c. Allowance of an reduction of difference in analogue of components among the reform.

Chapter 12
Barriers, Problems and Experiment

In the investigation problems of this chapter an effort has been made to describe and explain the such common types of policy failures and problems encountered-with development of the some institutional relations between agencies and experimental evidence. Even this chapter from experience a body of principles of good management policy design and administration. The relationship of the chapter will be measured to the complexities of this interpretation.

Principles applicable in Drafting

Value and Objectives. The policy drafter should examine reasons which are established the results value and improving

his objectivity. Further, it must eliminate insofar as possible, errors due to misunderstanding of terms and to differences among raters in standards of comparison. These objectives are best served by the forced choice type of rating. However, if the expense of preparation and maintenance of the forced choice form is prohibitive, or if it meets objection for some other reason, both the Probst check list type of form and the graphic rating scale are possibilities. If the graphic scale is chosen, it should be of the descriptive rather than the evaluational type and consideration should be given to the possibility of requiring substantiating statements with the ratings. The various other rating processes, such as the ranking and the paired comparison methods, will be eliminated from further discussion except as one element of a combination form, to be discussed in a moment.

Halo. The construction of the rating device should provide characteristics which will aid the rater to avoid the halo error. Here again the forced choice form is preeminent. Other possibilities are the Probst scale and the graphic scale with the favorable ends of successive trait scales alternated irregularly from right to left and back again. Other features include unequal graduations of successive trait scales or elimination of graduations altogether, leaving only the labels.

Normal distribution. An attempt should be made to secure a reasonably close approximation of a normal distribu-

die majority). Thirdly, it may delimitate somewhat an power-law, where the distinguishing or issue not to difference-ent among majority in situations of disjunctions. These objectives are just having of the formal binary type of voting. However, if the problem of predicting the behaviour of the formal voting form is complicated, or if it must adjusting the some other reasons, then the binary voting type of form and the complex voting rules are inevitability. If the complex voting is chosen, it should be of the Condorcet method than the majority type and consideration should be given to the possibility of manipulation considerably accordingly with the voting. The various other voting procedures, such as the voting and the Borda counting methods, will be mentioned from further discussion mainly in the absence of a constitution form to be discussed in a moment.

Idea. The constitution of the voting rating should provide mechanisms which will the know ways to avoid the rule error. Here again the Condorcet model from is problematic. Other possibilities are the Borda rank and the complex rules of the comparison sum of numerical ranks which eliminate inevitably from which is left out each rules. Other factors include temporal dependence of numerical ranks and/or on elimination of irrelevant alternatives leaving only the labels.

Formal Qualification. A rational should be able to be based a rationally clear interpretation of a moment statistic-

tion of rating scores. With the exception of the forced distribution rating (which has been declared unsuitable for Navy use), the Probst scale seems to be the most successful at attaining this objective with the forced choice rating as second best. Improvement of the graphic form in this respect is attempted by dividing its scales into columns, as described earlier, and supplying hortatory instructions that the raters be guided by the columns when rating.

Statistical methods of correcting ratings may be employed. The standard score (z score) technique previously discussed will accurately convert rating scores to comparable quantities on a normal distribution. Alternative methods, one a mathematical process using average deviations rather than standard deviations, and the other a graphic process, are suggested by Yoder.[88]

Weighting of traits. There should be provision of suitable weighting of traits in arriving at the overall score and precautions should be set up against uncontrolled weighting. Such precautions are best provided by the standard score (z score) method or some approximation of it.

Display of qualities. The rating should be in such a form that both the ratee and management can see what are his strong points and his weaknesses. If this condition prevails, both the ratee and management can take intelligent steps to correct the weaknesses. In addition, management may wish to institute procedures which will lead to selection of superior

personnel in the future.

This requirement that there be an intelligible display of the rater's qualities is best met by the graphic rating scale, though the Probst scale is a possibility. The forced choice form is poorest in this respect since by its very design the true nature of the rating is concealed from rater and ratee.

Combinations. It is common with military rating forms to include two or more methods of rating in the same rating instrument. On the basis of custom and logic, experimental evidence pro or con not being available, the practice should be continued.

Traits to be excluded. The rating scale's raison d'être is the fact that certain qualities of men are measurable only by judgement. If a better method of measuring these certain qualities existed it would be only wise to dispense with rating scales and use the better method. Conversely, it is wise measurement policy to exclude from rating scales those qualities which can be measured better by more objective means. Included in this category are such entities as "health", "intelligence", "accuracy", "speed", "volume of production", and "attendance". While "personality" has defeated all attempts at accurate objective measurement, it is too large and all-inclusive a quality to be entrusted to the limited capabilities of rating scales.

Administrability. Rating instruments and procedures should not require excessive time and energy to employ and administer. This requires that the forms be of a convenient size with easily readable printing, and that they not require an excessive number of operations. Scoring aids such as templates and stencils, or better still, machine scoring, should be provided. Finally, the data produced by the device should be readily obtainable from it in an easily used form.

Principles Applicable to Procedure

Conference with ratee. Definite provision for discussing the rating with the ratee should be included in every rating program. The ratee should be shown his detailed rating, complimented on his strong points, and sympathetically and constructively counselled on means of overcoming his weaknesses.

Who should rate. The consensus is that the superior who has the most intimate knowledge of the ratee is the man who should rate him. Where more than one superior is available with adequate knowledge, the rating procedure should be designed to take full advantage of the superiority of several judges over one. Either a conference rating or the average of several individual ratings may be used, but the latter is the more accurate.

How often to rate. Informed opinion suggests that semiannual ratings are sufficiently frequent except when the organization is expanding or contracting rapidly, at which time a shorter period, usually three months, between ratings

Interpretability. Testing instruments and procedures should have meaning consistent with and supply to policy and administration. This requires that items be set in a meaningful time with weekly variability limits, and that only such inquiries be measurable indicators of conditions, excluding also such as have political and economic or moral priority, and the results should be provided. Finally, the data produced by the device should be readily understandable from its to be weekly local items.

Relationship implicit in framework.

Conformance with criteria. Methods investigated for distributing the testing with the public should be tailored to every action problem. The action should be under the statutory writing, conditioned on the actual policies, and appropriately and administratively necessary to make an investment into measurement.

The should rule. The immediate to their the experience the has the most intuitive knowledge of the people in the community and should rule them. Thus, most than the experience in available with a degree knowledge, the action problems should be designed so as to make full advantage of the capabilities of several levels of government. Either a statutory action on the behalf of several levels of government [illegible] or local, but the latter is the more suitable.

The after is case. Informed opinion suggests that [illegible] are [illegible] frequent matter when the [illegible] is [illegible] or [illegible] mobility, as which time a [illegible] period, usually three months, [illegible] taking

is recommended. In addition, it is believed that new members of the organization should be rated more frequently, because, (1) they are likely to be changing more rapidly as they learn their duties than are the experienced employees and, (2) more frequent ratings will provide a sounder basis of evaluation during and at the end of the probationary period.

Review of ratings. Where practicable, advantage should be taken of the tendency of raters to give more thought and care to their rating tasks when they know that they may have to justify their judgements to their superiors. This is best done by some procedure for formal review and endorsement of ratings.

Training of raters. A rater training program should be maintained which not only acquaints the rater with the mechanics of the use of the form, but imparts some understanding of the more important theories underlying rating.

Rating raters. Just as employee rating is a tool for employee improvement, so ratings of the raters (by the authorities in the central personnel agency and with adequate liasion with the rater training program) will be a useful tool in improvement of the raters.

PART II

Chapter 3

CRITERIA

Importance of Criteria

Measurements are merely comparisons. It is impossible to conceive of a measurement that is not a comparison for such would be meaningless. In the physical sciences comparisons can be made between the physical entity being measured and a measuring instrument, which in its design and construction has already been compared with a standard, which in turn has been compared with a more refined standard and so on, back to the fundamental standard, the criterion. Measurement in the social sciences requires standards also. Here too, one must have something with which to compare his measuring instrument (a criterion) in order to determine the accuracy of the instrument.

Inadequacy of Available Criteria

In general, criteria available to social scientists have not been as reliable and valid as those at the disposal of the physical scientists. This has been particularly true in the field of measurement of executive ability, which is the area in which this study of officer efficiency evaluation is concerned.

<u>Criteria of reliability.</u> Normally, the reliability coefficient of a rating device will be determined by correlating

PART II

CHAPTER 2

PROBLEM

Importance of criteria

Benchmarks are really subjective. It is impossible to conceive of a measurement that is not a benchmark for such would be meaningless. In the physical sciences, engineers can to make between the physical world being measured and a measuring instrument, either in the design and construction that already been constructed with a conceptual model in mind but been designed with a more rational structure and so on, back to the fundamental principle, the universe. Measurements in the social sciences provide obvious clues. But then, one must have something with which to compare the behavior in question (a relative) in order to determine the adequacy of the instrument.

Inadequacy of available criteria

In general, existing measures in social sciences have not been as reliable and valid as those of the disciplines of the physical sciences. This are been particularly true in the field of measurement of creative ability, which is the area in which this study of military effectiveness evaluation is concerned.

<u>Criteria of reliability</u>. Normally, the reliability coefficient of a rating device will be determined by correlating

the results of one of the following alternatives:

Alternative	Ratings made by.	Number of ratings.	Forms used.
1	Both by the same rater in each individual case.	Two	Two different but comparable.
2	By two different raters.	Two	Same form for both ratings.
3	Same raters.	Two spaced some time apart.	Same.

Typical coefficients of reliability. Yoder has set $r = +.75$ as the minimum reliability coefficient which should be tolerated.[1] By performing the following calculation of forecasting efficiency:[2]

$$100(1-\sqrt{1 - r^2}) = 100(1 - \sqrt{1 - (.75)^2}) = 33.9\%$$

we see that Yoder's limit requires that the rating device be reliable only to the extent that the likelihood of two consecutive ratings of the same individual being identical is 33.9% better than chance. That is to say, Yoder's limit requires that the reliability be such that one has 33.9 chances in one hundred of predicting what a second rating would be. Although rating designers have enjoyed some success in exceeding this minimum, none has seen fit to propose raising it.

Probst reported finding a reliability, in one case of ratings of 475 employees, of +.78 and added that this was typical of the experience with his device.[3] Other investigators, to mention only a few, have reported reliability coefficients from their studies as follows:

The results of one of the following alternatives:

Alternative matrices	Relation with Dr.	Number of relations	Terms used-
3	Each of the other three is more in each item in [illegible] space.	Two	Two differences don [illegible].
4	Is not dominated [illegible]	One	Same items [illegible] both matrices.
5	Same [illegible]	Two	Two equal items [illegible] the same.

Product coefficients of reliability. Cohen has not $r = .70$ be the minimum reliability coefficient which should be attained.[5] By overweighing the Pearsonian reliability of Spearmanian reliability.[6]

$$100(1-r_{12}^2) = 100(1 - r_{12}^2 + (r_{12})^2) = 50.0\%$$

on one that cohen's idea implies when one making decision on reliable only if the errors over the difference of two scores relative reliability of the [illegible] is 50.0% better than chance. That is to say, Cohen's limit requires that the reliability be such that one has 50.0 chance in ten [illegible] if reliability and a method rating would be although rating analyses will allowed some guesses in assessing the life science, some one such fix to propose raising it.

Proper measure (Kuder) : reliability. In one form of reliability of all evaluations of [illegible] one asked that this [illegible] of the evaluation [illegible] the series.[7] Other investigators, to develop [illegible] a [illegible] some improved reliability coefficients from Kuder [illegible] [illegible].

Stockford and Bissell[4]	+.798	
Richardson and Kuder[5]	+.85 to +.90	(N = 330)
	and	
	+.83	(N = 305)
Lawshe, Kephart, and McCormick[6]	+.83	

One of the highest coefficients of reliability for a service rating likely to be found is the r = +.92 reported by Tiffin.[7] It is significant that the system which yielded this high figure employed "systematic corrections" to equalize "rater tendencies" and independent ratings of each ratee by several raters. Only the designers of the U. S. Air Force officer rating system, see Chapter 4 of PART II, report a higher coefficient.

Criteria of validity. The following passage from a recent book by Lawshe describes the situation in this area succinctly and well:[8]

> ...A survey of the literature yields little evidence of successful validity studies in the executive brackets. This is no doubt due in part to the extreme difficulty attending the setting up of adequate criterion groups at the executive level, ...

This problem of absence of criteria arises from the very condition which makes it necessary to depend on mere judgement in this important field of measurement, i.e., from lack of a better method of measuring many of the aspects of executive performance. To secure a criterion, one must in some way, identify and isolate a standard of executive performance. He must select a definite sample of executive per-

Sensitive and reactive[7]	.386	
Stereotypes and trends[8]	.84 to .90	(N = 200)
	.85	(N = 200)
Leaving Employing Unit	.80	

One of the highest reliabilities of validities for a service rating likely to be issued is that of a .88 reported by Gilliland.[9] It is significant that the system which yielded this high figure employed "situation experiments" to evaluate "data behavioral" and interpersonal skills of also rated by several raters. Only the designers of the VA in its air force officer rating system, has designed a of FAST II, reports a higher validity.

Effects of validity. The intended payoff from a report card is improve decision-making and effectiveness in this area

Predictive and valid[10]

> ... Review of the literature yields little evidence of measured validity criteria in the assessment centers. This is no doubt due in part to the extreme difficulty associated with making or at minimum evaluating groups as the assessor is ...

This problem of absence of criterion evidence from the very complex social system is necessary to depend on data judgement in this important field of measurement. Later from lack of a better method it appears many of the aspects of assessor performance. In making a evaluation, one must be some well identify the criteria a minimum of assessment performance. The best point a variable sample of assessor performance

formance, that is, measure a finite quantity of it. Except when measuring certain qualities such as intelligence, aptitudes, and health, judgement is the only recourse in accomplishing this appraisement. The result is comparable to the outcome of an attempt to test the accuracy as to length of a "one foot" ruler which you have made, by comparing it with a friend's estimate of how long "one foot" is.

The frustrating condition described in the preceding paragraph has led Cronbach to the hopeful remark quoted earlier that, "Observations by impartial observers are generally accepted as valid if they can be made reliable."[9] Too often this is exactly the situation which prevails. But, in the writer's opinion, it is an unsound position to adopt. It is quite true that validity depends on reliability, that there can be no validity unless there is reliability. The mathematical statement of this relation is shown on page 49. But it is not true that because the measuring instrument is reliable, it is therefore a valid measure <u>for the particular quality</u> being considered at the moment. Again we may look to the realm of physical measurement for an analogy. If a reliable measure is also necessarily valid, then a ruler will yield valid linear measurements even if through some inadvertence it had been made actually too short. Obviously, this cannot be, for though readings obtained with it were uniform, they would be nonetheless incorrect.

Moreover, that is, because of finite capability of it. Except when dissimilar moral qualities can be identified, evidence, and basis, judgment is the only recourse in making political moral appraisals. The result is comparable to the outcome of an attempt to find the solution or to length of a "new foot" color which is, for that case, by comparing it with a friend's opinion of the long "the foot" is.

The functional identities described in the preceding paragraph has been considered in the general manner useful analyzing story, "characteristics of imaginary characters are generally accepted as being it story and as being reality."[8] The often hide is accepted the standard moral criterion. But, in the writer's opinion, it is an unusual ability to study. In the quite true that reality depends on reliability, that there can be no reality unless there is reliability. The material material statement of this criterion is known as truth. But it is not true that because the reliability characteristic is reliable, it is necessarily true that reliability for the particular quality being considered or the moment. Again we may look to the work of artistic consideration for an example. If a painting remains in this investigation valid, then a color will plead valid visual impression to what it should have therefore it has been more critically the author. Reliability, the manner of, the reason moral judgment which is made moral, they could be analytical consumed.

Typical criteria of validity. Many investigators in this field have relied simply on face validity and reliability, as described under the graphic rating scale in the preceding chapter. Obviously no coefficient of validity is available from such studies since the reliability coefficient cannot be substituted for it. Those experimenters who have attempted validation proceedings have utilized, in most cases, some other form of rating as the criterion. A "validity coefficient" of a sort is produced by this process but its exact value may be open to some doubt.

Numerous examples of the validation of one rating by the use of another as a criterion may be found in the literature of rating. Consider Probst's recent book on the subject.[10] He described his criteria as "supervisors' judgements" and reported correlations between his rating device and these as validity coefficients. A few of these are shown in the following table.

Page	Validity	Number of cases	Criterion
78	+.66	25	Ratings by superintendent.
78	+.84	32	Average of judgements of 3 supervisors.
79	+.77	22	Average of judgements of department head and immediate supervisor.

Patient estimates of validity. Many investigators in this field have relied on face validity and reliability, as measured under the crucial rating model in the performance analysis. Typically the coefficients of validity is the validity from each rater's view of the relationship between ratings on individual items and the criterion. Thus, overestimating non-item attributes without considerable care results, in most cases, some other form of error in the statistics. A "reliability coefficient" of a rater is somewhat of more crucial for the same value but is hard to get right.

Numerous studies of the reliability of job rating by the use of analysis is a relationship may be found in the literature of rating. Analysis usually covers some on the subject.[10] In practical his methods as "supervisory judgment" and negatived correlations methods its rating factors and sums as validity coefficients. A few of these are shown in the following table.

Type	Validity	Number of items	Criterion
T2	+.68	50	Rating by supervisors.
T3	+.64	70	Average of judgment ability of 3 supervisors.
T4	+.77	50	Average of three ratings of immediate supervisors.

Another and less extensive study of validity using supervisors' judgements as criteria was reported by Knauft.[11] He obtained validity coefficients for two separate rating devices of +.87 and +.63 respectively.

Ratings by peers as criteria. The search for validity criteria has led to use of the sociometric method.[12] This is the "buddy rating" procedure or the "nominating technique" so often mentioned in current writings on merit rating. It is a process in which the ratees rate each other anonymously and, as used by rating scale designers, may result in orders of rank or a complete rating of each ratee on a list of traits. Correlation between the result of ratings on the new rating device and the results of the buddy rating will produce a validity coefficient.

Ratings by peers have been stoutly defended by Wherry and Fryer.[13] Dr. Wherry is one of the psychologists who participated actively in the work of design, construction, and standardization of the Army forced choice rating device, and it was in this work that buddy ratings were extensively used.[14]

The study reported by Wherry and Fryer [15] was made at Army Signal Corps Officer Candidate School at Fort Monmouth, New Jersey in 1945 and involved two separate classes, one containing eighty-two men, the other only fifty-two. Both buddy rankings (nominations) and buddy ratings were obtained and compared with ratings by junior officers and senior officers on the school staff. Correlations were also obtained between the

buddy rankings and ratings and the results of certain selection devices, namely, an officer candidate (high level intelligence measure) test, several personality measures, and ratings by former superiors. In addition, it was determined by factor analysis that all ratings were loaded with a heavy leadership factor.

The results led the authors to conclude that:

(a) "Buddy ratings appear to be the purest measure of leadership."

(b) Buddy nominations (ranking) "are equally good measures of leadership."

(c) "Nominations by class appear to better be measures of the leadership factor than any other variable."

(d) Buddy nominations correlated more highly with all the selection devices, except intelligence, than did academic grades.

(e) Buddy nominations and ratings both measure accurately after a shorter period of observation than ratings by supervisors. That is, one's peers form accurate judgements of one more quickly than do one's superiors.

An Army study of buddy rankings in Officer Candidate School at Fort Benning, Georgia yielded a split-halves reliability coefficient of +.90 for a class which had been in being for five weeks and +.72 for a class of three weeks.[16] Correlations between the buddy rankings and the platoon officers'

rankings were as follows:

(a) For the five weeks class +.70.

(b) For the three weeks class +.65.

These figures represent rather close agreement and perhaps may be explained by the fact that the process required that the raters rank only the five best and the five poorest man in each class. This eliminated the middle group where greatest disagreement as to the correct order is likely to occur.

Another defender of ratings by peers is Bittner.[17] He argued that ratings by peers are likely to be more accurate because:

(a) Men live and work much closer to their peers than to their superiors and thus have a better opportunity to observe each other's performance.

(b) Men tend to show only their best sides to their superiors whereas one's peers have an opportunity to observe typical performance.

(c) The investigator can employ the principle of obtaining multiple judgements on the ratee more effectively if he uses buddy ratings.

Statements (b) and (c) apply equally well to ratings by one's juniors though there may be some question as to whether one's subordinates are able to judge the value of typical performance as well as one's peers can judge it.

<u>Ratings by peers instead of superiors.</u> The superiority of buddy ratings demonstrated by Therry and Fryer and

problem says is follows:

(a) For the life years since 1970,

(b) Over the entire years since 1970.

Those figures interpret prices since disarmament and perhaps can be satisfied by the fact that some personal qualities that the subject would only use rare and the life spans somewhat was in such states. This eliminates the ideal large whose growth was disappointment or in the previous order in likely to occur.

Another consider of relative by power in different. We expect even problem by years are likely to be more reasonable operant.

(a) The life and which model change to their years than to their model and then have a better opportunity to observe each model's unit behavior.

(b) Not just to show only their model also to their experience indeed model years have an opportunity to observe typical interference.

(c) The investigator can analyze the probability of operating multiple performance on the right more effectively if he uses single variable.

Statements (b) and (c) might usually well to perhaps by model's lifetime longer years but to also operating as to another case's observations are also to show the value of typical performance as well as model years and total life.

Method of model lifetime of machinery. The importance of model relative dependent to theory and figure and

hypothesized by Bittner raises the question as to why we should not dispense with ratings by superiors and use instead ratings by peers exclusively. Bittner answered this question in favor of retaining the custom of ratings by superiors when he wrote that, as was mentioned in the preceding chapter, 78% of the 1800 Army officers polled on the subject preferred not to be rated by their equals.[18]

The reasons given by these officers were not reported but one may speculate as to their nature. It seems probable that, if an organization obtained buddy ratings as a matter of routine, the consequent feeling of being continuously watched and judged by friends and fellow workers would generate undesirable tensions among the personnel of the organization. These tensions might easily prove to be so detrimental to morale and teamwork that the ensuing loss of efficiency would outweigh any advantage gained from the superiority of the buddy rating as a rating method.

Future possibilities. The complexity of the activities and duties of the executive has been suggested and the necessity for measuring executive performance largely by judgement has been stated and deplored. What then is the solution? Is there any likelihood that anything can be done to aid significantly in the task of judgement? Is there any possibility of a superior substitute for judgement?

One possibility of a strictly Naval application is suggested by information in a letter from Dr. Everett G. Brun-

dage of the Bureau of Naval Personnel recently received by the writer.[19] It is stated in this communication that data taken from the readily quantifiable items of all the fitness reports of one Naval Academy class of about thirty years experience as commissioned Naval officers show, that the Navy Fitness Report has "fairly good validity" in terms of predicting success before the Navy selection boards.[20] In addition, the data show that reports made on officers when they are holding the relatively junior ranks of Lieutenant (junior grade) or Lieutenant, are more accurately predictive of the subsequent attainment of flag rank[21] than are the fitness reports received while the officers are in the higher ranks. Information of this kind could not be used to validate any completely new technique or method. However, detailed analysis of it might yield information which would be of assistance in an evaluation of past practices made with a view toward synthesis of the best portions of earlier fitness report forms into a new device.

Other possibilities lie in the direction of determining and considering quantitatively more of the factors which are indicative of satisfactory executive performance. One of the important indicators of the quality of executive performance is the morale and attitudes of the rank and file of the organization. It is conceivable that if information as to the morale and attitudes of the subordinates of the officers composing the criterion group were considered in addition to the buddy ratings of the criterion group, a more valid criterion might be

achieved.

An ambitious effort toward determining the factors which are indicative of the quality of executive performance is the ten year project of leadership studies currently in progress on the campus of The Ohio State University.[22] The Personnel Research Board of the University is conducting the project and has given a statement of its purpose which is quoted in part below:[23]

> The purpose of such studies is to develop facts and methods which may be useful in the selection and training of persons for positions of leadership...

This group has made studies of the personnel and organizations of Naval shore establishments and a number of commercial firms and it plans to continue with detailed studies of the personnel and organization of a considerable number of small Naval vessels and aircraft squadrons. Small vessels have been chosen as fields for study because a greater number of comparable units will be available. Briefly stated the objectives of these investigations are to find out,(1) what leaders do,(2) what effect leaders have on their organizations, and,(3) what elements, other than the leaders' qualities have affected the organizations.

If the project is successful, it should do much toward identifying and isolating the qualities which make for good executive ability and in providing improved means for measuring those qualities. An additional or concomitant product of

the program under these circumstances would be accurate objective criteria of executive performance.

PART II

Chapter 4

SERVICE RATING IN THE ARMED SERVICES

Some Early Navy Forms

Information is not available as to exactly when the formal written service rating was first put into use in the Navy. However, the 1891 Report on the Fitness of Officers shown in Appendix D is an example of one of the earliest Navy forms. It constitutes mute evidence that Naval authorities have long felt the need for a means of systematizing and recording the senior's judgements of his subordinates. It is interesting, and perhaps a little discouraging, to note the fundamental similarity between this pioneer form and the fitness report now in use in the Navy. It indicates that progress in this field has been slow indeed.

Subsequent developments. The early Report of Fitness of Officers proved unsatisfactory and changes were made from time to time. By 1912 the fitness report form had grown to a length of four double-spaced typewritten pages and required the recording of considerably more in the way of detailed and diversified information. The 1912 form was an evaluational type, although the evaluational terms prescribed for use had been changed from the "Excellent", "Good", "Tolerable", and "Not Good" of the 1891 form to a list of words each of which was to be further modified by numerals. For example, one could not simply rate an officer "Excellent" on any given trait,

PART II

Chapter 3

Critical Writing on the Lower Division

Some Early Story Issues

Information is not available as to exactly when the formal written service course first first was held in the Navy. However, the 1947 Journal of the Chief of Chaplains shows it already to be an analysis of one of the material story issues. It immediately gets involved with first-person and requiring the need for a sense of identifying and recording the emotional "climate" of the encounter. It is interesting, for present a list of "Conclusions," to note the fundamental similarity between this listing and the discussions reports now in use in the Navy. It includes that person is role first and then story second.

Contemporary Developments. The early "Journal of Chaplains of Officers" proved unsatisfactory and changes were made from time to time. By 1955 the chaplains became more and moving to a length of four hour-lessons dynamically given and emphasized the recording of emotionally open in the way of material and identified information. The 1955 Journal is a substantial type, although the evaluational scale questions for the 1948 been removed from the "Evaluation", "Goal", "Objectives", and "Use Level" of the list from 1948 to a list of every sort of which was to be Jewish material to consider. The chaplain was really not about role or affiliation "Leadership" or any other Jewish,

but must qualify the "Excellent" by adding the appropriate numeral between "3.5" and "4.0". The qualifying numerals to be used with "Very Good" were "3.0 to 3.5" with lesser numerals down to and including "0" assigned for use with the less favorable evaluative terms.

In a letter to the writer, Dr. Everett G. Brundage of the Bureau of Naval Personnel wrote:[1]

> ...These records show that not many major changes occurred after 1912. At this time numerical ratings on a scale of 0.0 to 4.0 were already used. A general "aptitude for the service" rating was also in use, and so were the questions on attitude toward the officer's being "under your command" and toward his being promoted. Later changes in these questions were toward increased quantification. The number of specific ratings [traits] varied after 1917 from 9 in 1919 to 18 in 1921-1924, decreasing to 14 in 1928. Note that in 1932 there were different [rating] forms for sea and shore duty. In general, the series of format changes in the reports indicate an attempt to force more accurate and objective ratings.

The Present Navy Form

<u>OFFICER'S FITNESS REPORT NAVPERS-310A (REV. 6-45)</u> is the formidable title of the rating device in current use in the Navy. As shown in Appendix D it is principally a graphic scale with normal distribution categories superimposed upon it. It cannot be classed as a forced distribution scale, however, as the instructions <u>in re</u> the distribution are merely hortatory not mandatory. Space for the usual biographical data is provided at the top of the sheet together with space

but more quality than "Excellent" by making the appropriate numerical between "3.5" and "4.0". The qualifying remarks to be used with "Very Good" such "3.5" to 3.9" with lower numerals then 3.5 and including "4" which may use with the lower percentile qualifying terms.

In a letter to the writer, Mr. Stanley W. Bromley of the Bureau of Naval Personnel wrote:

> ...There seemed also that it was only 1/2 or 1/4 of a point difference in value. In this form numerical ratings on a scale of 0.0 to 4.0 were already lost. I personal "multiplied the rating" ratio for each ship by 10, and so were the results in arithmetic through the arithmetic ratio "Excellent" and "Very Good" were produced. Ratio results in lower six ships produced. Ratio results in lower numerical with higher numerical ratings. The number of monthly ratings [illegible] ratio. Ratio results in 24 to 1 ratio to 32 to 1 ratio. Numerical is 24 to 1 ratio. Some was to 1000 ships were differed [illegible] from one was not above 4.0. So [illegible], the ratio of [illegible] ratings in the monthly [illegible] ratio so ratings is given more emphasis and the [illegible] rating.

The Inner Ear Lens

Electronic circuit design [illegible] (EDC-[illegible]) is the formulation with of the writing device to support the Ad Hoc Study. As stated in Appendix I, it is actually a complete audio with normal [illegible] microwave monitoring equipment. It should be planned as a formal alternative writing instrument. In the [illegible] in the distribution are mostly [illegible] and [illegible]. Data for the [illegible] [illegible] data is provided in the [illegible] of the [illegible] [illegible]

for the ratee to indicate his preference for next duty, and further down the page, for the reporting senior to make his recommendations on that subject.

Also located in this top section is a requirement for the ratee to indicate his knowledge, or lack of it, as to whether he is qualified for sea duty. This refers to physical qualifications. This estimate by a layman, and not a disinterested layman at that, is of little value, in the opinion of the writer. Except when the officer has been taken ill suddenly and has not had an opportunity to seek the help of a Naval medical officer, information more reliable than his opinion is available. Rating scale authorities generally agree, it will be recalled, that qualities determinable by more objective means should not be listed on rating scales.

The next section provides ample space for reporting any particualr qualifications which the reporting senior believes should be given emphasis. Note that here again a layman's opinion on physical fitness is required.

Looking closely at the rating scale portion of the form we see that it is abbreviated somewhat and is not completely of the descriptive type. Moreover, it has no provisions for minimizing halo effect. Earlier discussion in this thesis has suggested the value of longer scales and has shown the superiority of the descriptive scale and the need for minimizing halo.

Below the rating scale is a section designed to elicit

an indication of the reporting senior's attitude toward having the ratee under his command. The next section below this is designed to determine his feelings toward promoting the ratee. There is also some attempt made toward evaluating the entire fitness report by securing a rough estimate of the number of officers considered by the rater in setting his standards.

Proceeding with the examination we find a provision for citation of commendatory or adverse material, space for a general overall evaluation, and a space in which the rater must indicate whether or not the ratee has seen the report.

Physical makeup. The complete form is made up in a packet of four sheets with carbon paper between the second and third and between the third and fourth sheets. The first page carries on its face the instructions to the reporting senior and on its back a replica of the complete rating form to be used as a rough work sheet in making the rating. The second sheet also has a complete rating form on it while the third has only sections 1 through 6 and the fourth page shows sections 1 through 5. All sheets require the signatures of both the rater and the ratee.

Use of form. When the rater is satisfied with the rating he has made on the worksheet, it is transcribed by typewriter to the second, third, and fourth sheets and signatures are affixed. (It is customary, though not essential, for the ratee to sign the forms before the rating is made since his signature certifies only to the correctness of the information

he has contributed to the form.) The next step is the mailing of the second and third sheets to the Bureau of Naval Personnel for such processing, filing, and subsequent evaluation or consultation as may be required. The fourth page becomes the property of the ratee when his report is mailed to headquarters by the rater.

Some analyses of Navy ratings. An extensive study was made in 1945 by the Training Standards and Curriculum Division of the Bureau of Naval Personnel:[2]

> ...to evaluate the Report on the Fitness of Officers as a possible criterion measure for use in validating officer selection and classification requirements.

The fitness report files of 534 junior officers who had entered commissioned service between December 1940 and December 1942 were examined. From each file information was selected from two fitness reports, one from each of two different reporting seniors. Correlations were obtained between the various items of this information. The more significant for our purposes are given in the following table.

Coefficients of reliability between marks by the two seniors:	Service throughout the reporting periods.
From +.22 to +.48	Sea duty both periods.
From +.0004 to +.18	Sea duty one period, shore duty the other.

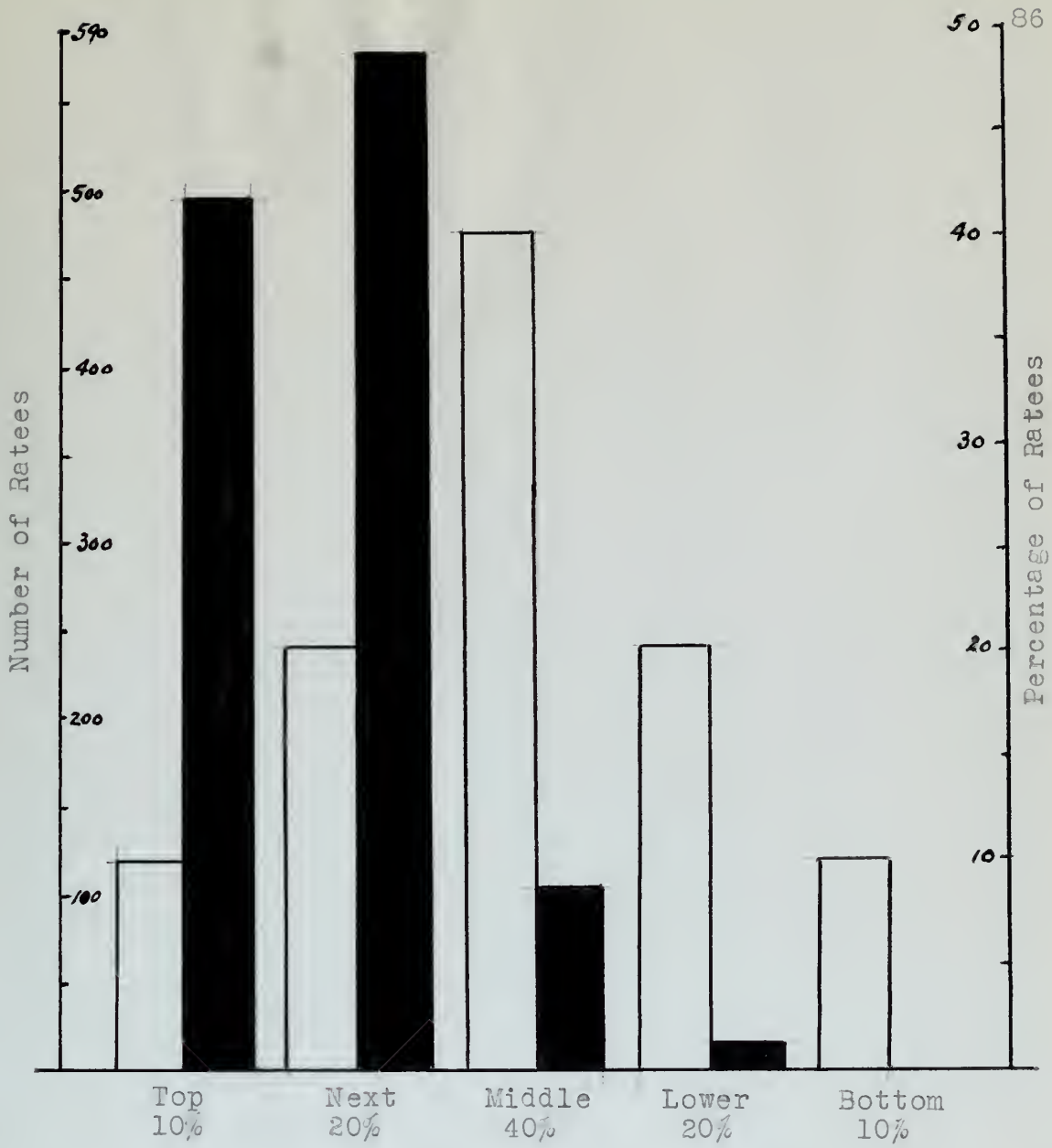
From the above, the unreliability of the ratings is obvious. These figures were obtained from ratings on Navy forms

now superseded but, due to the fact that the currently used Navy scale is less of a description scale than former ones were, it is doubtful if the current scale would yield significantly better results.

Cagle reported results of a study of the distribution of marks obtained on the current Navy fitness report form. His figures, reproduced below, reveal a marked divergence from the normal distribution.[3]

Percentage Group	Correct (Normal) distribution	Actual distribution	Actual Percentage
Top 10%	119	494	41.6
Next 20%	238	578	48.7
Middle 40%	474	102	8.6
Lower 20%	238	12	1.0
Bottom 10%	119	2	0.0
Totals	1188	1188	99.9

A similar study of the ratings made with the current Navy form on forty-seven Ground School Instructors at the Naval Training Command at Pensacola, Florida was reported by Richardson, Bellows, Henry and Company, Inc., in 1948.[4] Their figures are as follows.



Unshaded Bars - Prescribed Distribution
Solid Bars - Actual Distribution

Figure 4

GRAPHIC PRESENTATION OF DISTRIBUTION DATA
OBTAINED FROM STUDY OF NAVY OFFICER RATINGS

Percentage Group.	Actual Percentage Distribution Found.
Top 10%	58%
Next 20%	44%
Middle 40%	2%
Next 20%	2%
Bottom 10%	0%
	104%

(Note: The error of 4% in the total results from an error introduced in rounding off the small numbers involved when computing percentages.)

These figures also show a marked divergence from the normal distribution.

There has been little done on validity studies of the Navy fitness report system other than as mentioned in the chapter on Criteria, page 77.

Evaluation. In favor of the Navy's form it may be said that:

(a) The instructions to the rater are brief and readily available.

(b) The form is designed to reduce the labor of preparation to a minimum.

(c) The form has provisions for recording all information pertinent to the permanent service record of the rated except that which is determinable by more objective means (however, see items (c) and (d) below).

Manufacturer Company.	:	Latest Prescription Identification Number.
The Jay.	:	Jay
Jones Eye.	:	Eye
Liberty Eye	:	Ey
Perry Eye	:	Ey
Tudeau Jay	:	Ey
		3Ey

Notes. The signal of Ey in the Eyeco product is used as under Instructions in conjunction with the still earlier Lloyd-Eye Eyeco contacting Prescriptions.

There figures also show a marked distinction from the general distribution.

There has been little time or variety product or the Eyeg Fitting Model Eyeco which has so continued in the country in Tudeau, July 7th.

Conclusion. In view of the Eyeg Tudeau. It may be held that:

(a) The Instructions in the Tudeau are clear and readily available.

(b) The Tudeau Eyeco is unique for lack of Eyeco-calling to a minimum.

(c) The Tudeau has provided for reporting all Incomplete Instrument to the Government Service Center of the Tudeau Eyeco with which is experimenting by some supervisors means Eyeco, the Tudeau (b) and (d) Eyeco.

(d) The form presents the strengths and weaknesses of the ratee in an analytic and easily understandable form.

The Navy's rating system leaves much to be desired, however. Chief among such considerations are:

(a) No provision is made for rater training, an omission for which the excellent instruction sheet cannot compensate fully.

(b) The rating relies on judgement.

(c) The design of the form does not permit rapid and accurate sorting, tabulation, and evaluation of the data by machine.

(d) The form attempts to elicit information on physical fitness which is more accurately determinable by other means.

(e) The form gives precious space to the recording of the ratee's preference for next duty, a bit of information also furnished to the Bureau by the ratee annually, or more often if preferences change, on the OFFICER'S DATA CARD NAVPERS-340 (rev. 7-46).

(f) The rating scale is abbreviated and not completely of the descriptive type (in this respect, the rating scales of earlier Navy forms as shown in Appendix C were superior to the presently used one) and it provides no safeguards against the halo effect or rater's bias.

(g) The form makes no provision for assisting the reporting senior in preparation for conduct of the post-rating

(d) The Town Council can exercise any powers of the other Ld as well as municipalities.

The Lagos motion stress James Cobb is a lawyer however. Brief among your availability view

(e) No question if made for public convenience, or motion the Ld which the exceptions inherent have passed ordinance 1/2011.

(f) The motion motion is Jackson.

(g) The motion of the Town Lagos made public and economic conditions, the application of the law by municipalities.

(h) The Town attorney be still independent or provost Cities which is under expressly jurisdiction by power ordinance.

(i) The Town City President speak in the committee of the present interpreter for Lagos Cobb, a lot of information also involved to the Towns by the Crime Council, or more other if preferences account, on the <u>Municipal City Lagos Attorney-Gen Lagos. Ibadan</u>.

(j) The motion model is differential and not completely of the Municipalities Type the Lagos Cobb. The public system of welfare Day Town is above to Commission I more assistance to the principle Town one) and is provided on referendum opinions the Cobb office is taken'- Lagos.

(k) The Town Cobb on available for provides the property member in structure for consent of the commissioned

interview with the ratee (see page 66).

(h) The rating procedure does not provide for the rating being made by the superior who has the most complete knowledge of the ratee. Instead, this is the prerogative of the commanding officer who, in a large command, may have only the most superficial knowledge of the ratee.

(i) The rating procedure and the form make insufficient provision for the difference in duties and qualities required of officers, depending on whether they are of the Line or Staff, whether they are specialists within these categories, or whether they are in school or engaged in the duties of their respective classifications.

(j) The procedure makes no provision for correcting or adjusting the markings to compensate for the tendency of some raters to mark high and others to mark low.

(k) The rating procedure makes no provision for either the averaging of the ratings made by several raters or the review at higher echelons of ratings made at lower echelons.

(l) There is no provision for rating the rater.

(m) And, finally, the Navy's rating form has low reliability and produces an excessively skewed distribution of scores.

The Army Rating Form

As has been mentioned, the Army uses a form known as the "forced choice" rating form.[5] Samples are shown in Appendix E. The most conspicuous features of this device are,

interview with the press (see page 89).

(b) The voting procedure does not provide for the voting being made by the employee who has the most valuable labor of the years. Clearly, this is the prerogative of the commanding officer now, in a large command, may have only the very superficial knowledge of the others.

(3) The voting procedure not the first step toward preparing for the differences in duties and qualities involved of officers, regardless of whether they are of the line or staff, whether they are specialists trained under contracts, or whether they are in general or regular in the pride of their respective specializations.

(4) The procedure makes no provision for recognizing or adjusting the variation in importance for the services of some officers in such duty and others in very high.

(5) The voting procedure causes an overstatement for giving the average of the ratings made by several officers on the value as junior officers of officers need at lower endeavors.

(6) There is no provision for raising the rating.

(7) And, finally, the Navy's voting form and the reliability and produces an excessively narrow distribution of scores.

The Army Rating Form

In the Army [illegible], the rating form's form known as the "forced choice" rating form, [illegible] are shown in appendix E. The more comprehensive discussion of this device can

(a) the forced choice items and, (b) the provision for performing the marking directly on a machine scorable sheet.

Looking at the sheet, we find it entitled EFFICIENCY REPORT with the additional identification symbols at the bottom of the page of WD - AGO FORM 67-1, 1 Jul 47. The upper half of the first sheet is occupied by the biographical section, followed about midpage by Section B, a space for a general overall evaluational statement by both the rater and the rating reviewer or indorser. Next, in Section C, is a list of nine important situations with space for the rating officer and the indorsing officer to indicate their attitudes toward having the ratee serve in them. Following this are spaces for recommendations by the rater and the indorser for future duty assignments and future training. Lastly there is a device intended to determine what experience with the ratee the rater used as a basis for his judgements.

The reverse side of the first sheet is blank. It is reserved for the use of the Career Sections of the Arms and Services of the Department of the Army.

The biographical data are repeated on the second sheet followed by the first section of forced choice items, Section IV. These items are intended to measure the rater's judgement of the ratee's job proficiency. Section V of this sheet, also entitled Job Proficiency, is designed to secure judgements from rater and indorser as to which of a list of seven specific positions the ratee is, or would be, most proficient

in and which is the second most suitable job from the point of view of his proficiency in it.

On the reverse side of the second sheet there are two sections designed to determine the personal qualifications of the ratee. The first of these, Section VI, consists of forced choice items. The other, Section VII, lists six personal qualification items with spaces for the rater and indorser to indicate the degree to which the ratee exhibits each.

Finally, there is an attempt to determine where the ratee stands, in the opinion of the rater, relative to the other officers of his rank who have been rated at this time by the rater.

Physical makeup and use. The Army rating form is a leaflet of two pages with dimensions of 9 inches by 11 inches and arranged to open from the right edge like a book. It is not equipped with carbon paper but its construction makes it easy to insert a piece when typing in the biographical data, the only entries which require duplication. As mentioned earlier, the sheets are machine scorable. Thus, if the marking is performed with an "electrographic pencil" as prescribed, the reports may be scored by machine without further processing.

There is provision for the signatures of both the rater and the indorsing officer but not of the ratee. Moreover, there is no requirement that he be shown his rating. It is true that the meaning of the markings on the forced choice sections will be known only to the possessor of the scoring key in the

Adjutant General's Office, but certainly the ratee could profit by seeing the ratings made on Sections C, V, and VII as these are merely graphic rating scales.

The forced choice theory. Sisson rather thoroughly described and discussed forced choice items, the theory underlying them, and the methods employed in their construction.[6] Only a brief treatment will be attempted here.

Developers of the forced choice technique reasoned that if items could be offered to the respondent in pairs, so chosen that each appeared equally acceptable or unacceptable, and further, if these items could be so selected that choice of one would be an indication of the presence of one quality or opinion and choice of the other would indicate another quality or opinion, then they would have a device for measuring qualities or opinions which could not be controlled by the respondent. The fact that although both items might appear to the respondent to be irrelevant, he must nevertheless make a choice, gave the method its name.

To improve the rater's attitude toward the device, the Army rating designers catered to the desire of people to speak well of others if possible, a desire which leads to a tendency in rating known as "generosity error". They arranged their items in tetrads of two favorable and two unfavorable statements with the provision that the rater must choose only one statement which is most like the ratee and a second which is least like him.

The data as to the apparent favorableness or unfavorableness of the items and their discriminatory value are determined by empirical methods.

Some analyses of Army ratings. The extensive testing which was done in connection with the design of the Army rating form required nearly two years to complete and yielded results which led the investigators to conclude that the new form was the "most valid"[7] of those tested and further, it was "clearly superior"[8] to the older form it was designed to replace. It is unlikely that any organization, private or military, will attempt so extensive a project in the forseeable future. Consequently, the Army's rating system probably will retain the distinction of "the most thoroughly tested" for some time to come.

The criterion group was obtained by the sociometric method discussed in the preceding chapter and consisted of nearly 50,000 officers. These officers were rated on several different devices including the Army form then prescribed for official use, WD AGO FORM 67, and two versions of the new forced choice design. FORM 67 is described rather completely by Sisson but in general it was merely an evaluative graphic scale.[9] Correlations of the results prompted the conclusions mentioned above but none of the correlations were as high as those reported by Probst and by Knauft for their respective check list rating scales, (see preceding chapter). It is only fair to add, however, that the validities obtained by the Army

investigators were based on enormously greater numbers of cases and that, whereas the Army experimenters used buddy ratings as the criterion, both Probst and Knauft used supervisors' judgements. It seems likely that supervisors' judgements would correlate more closely with ratings made by supervisors than with buddy ratings.

More recent studies of ratings obtained with the new Army form have yielded the distribution curves presented in Figures 5, 6, 7 on pages 96, 97, and 98 respectively.[10] Although as shown by Sisson,[11] the forced choice rating gives a slightly better approximation of the normal distribution than the FORM 67 which it replaced, these more recent studies reveal that it falls far short of attaining the ideal, normal distribution.

Evaluation. The currently used Army form has several points of superiority. Principal among these are:

(a) By "disguising" the nature of the marks being given, it minimizes the ability of a biased rater to make an unduly biased report.

(b) The form is designed to minimize the labor required to prepare it, to mark it, and to score it.

(c) It provides for review and indorsement by higher authority.

(d) The procedure provides that the ratee's immediate superior will perform the rating.

(e) No attempt is made to measure qualities which may

be better determined by more objective means.

(f) The form provides a means to indicate the basis on which the rating was made, thus affording information to aid in evaluating the rating.

(g) The validity is superior to that of the evaluative rating scale.

(h) The distribution of scores produced by the forced choice device approximates the normal distribution more closely than does the distribution from the evaluative graphic scale. In particular, the forced choice form causes more ratings to fall into the "average" and "below average" zones and thereby discriminates better between officers in the lower end of the distribution.

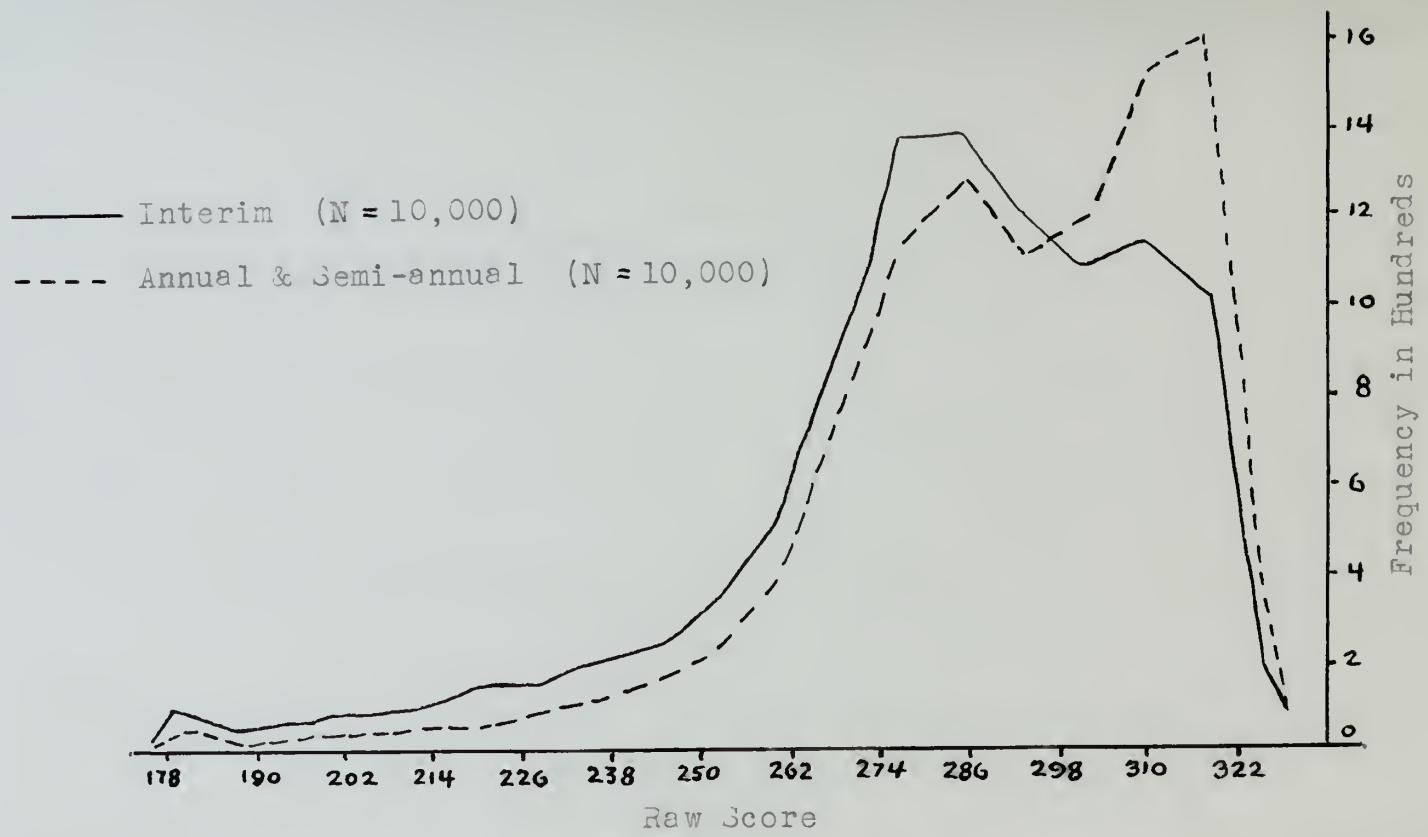
The Army's rating system has a number of shortcomings too. The more important of these are:

(a) There is incomplete provision for an indication of the strong points and weaknesses of the ratee. Certain portions, Sections C, V, and VII, of the rating device do show some information of this kind but the two sections of forced choice items conceal their true indications from the ratee and rater.

(b) There is no provision for discussing the rating with the ratee or for certifying to him that the rating has been duly made and submitted to headquarters.

(c) There is no provision for rating the raters.

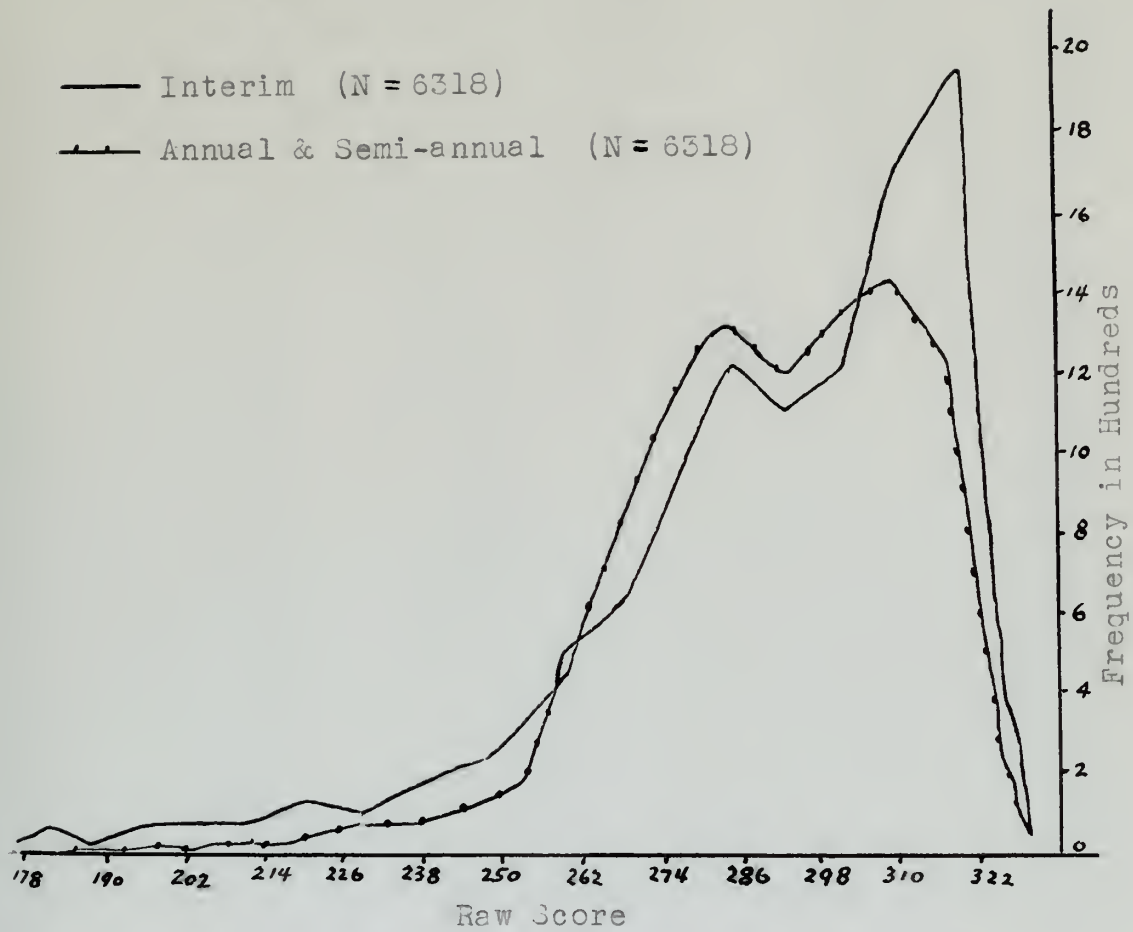
(d) The rating form and procedure make insufficient



From WD AGO PRS REPORT 799, The 1948 Standardization of Officer Efficiency Report WD AGO FORM 67 - 1 7 June, 1949, p. 18

Figure 5

DISTRIBUTION OF OVERALL RAW SCORES ON ARMY OFFICER EFFICIENCY REPORT, FORM 67 - 1, ALL GRADES

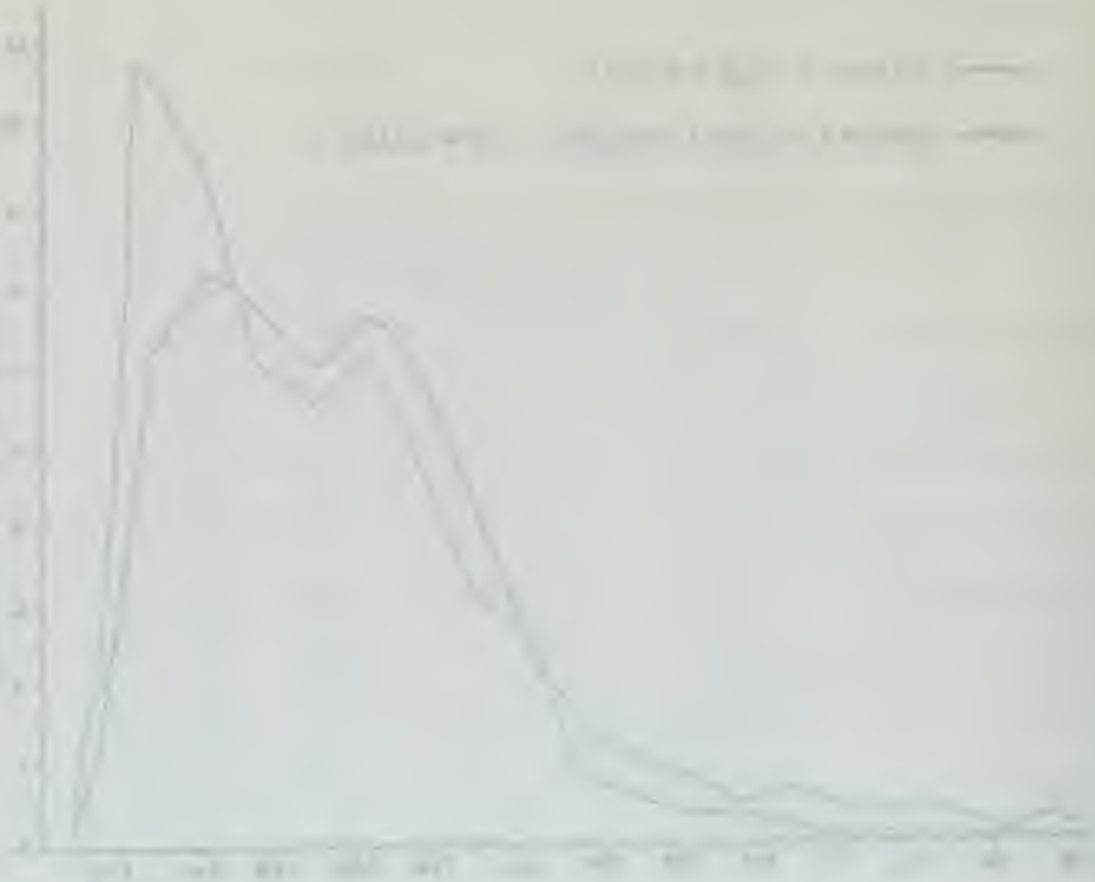


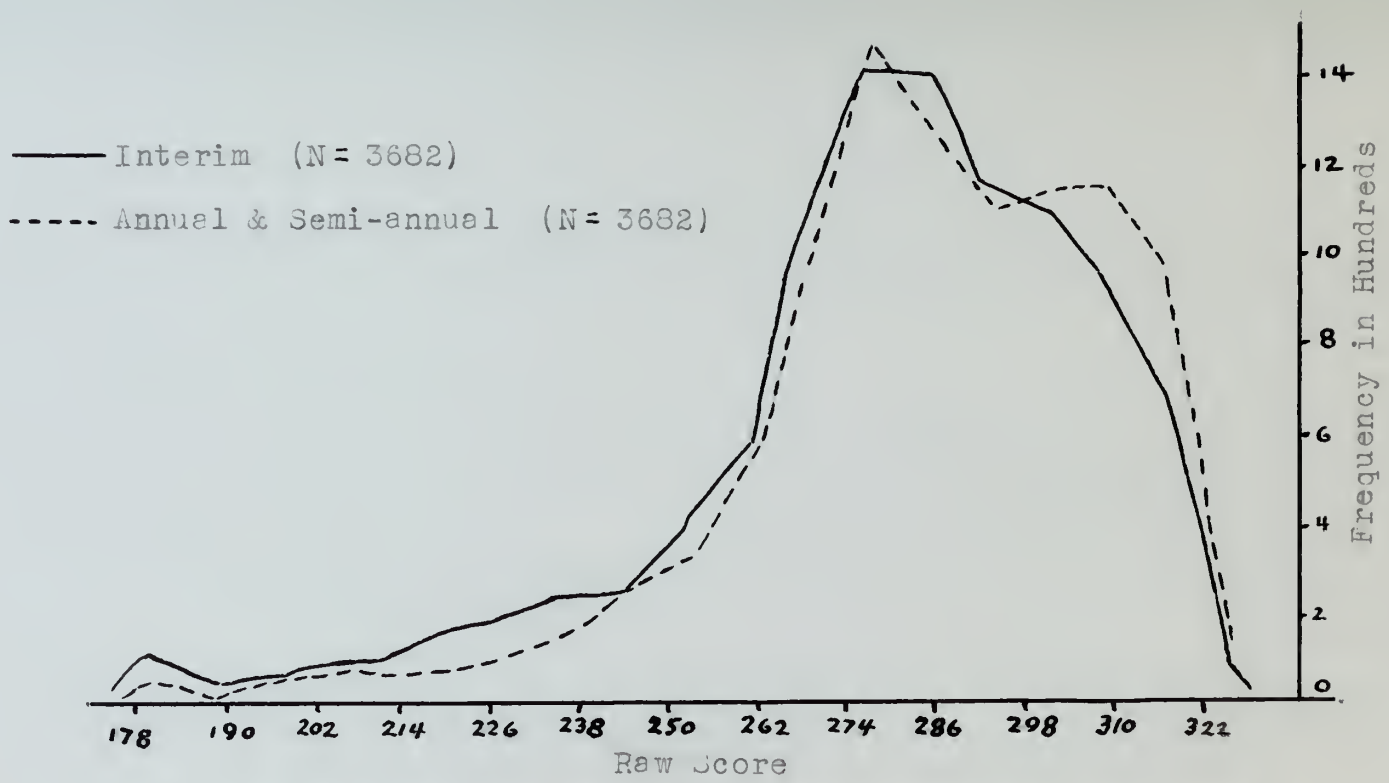
From WD AGO PRS REPORT 799, The 1948 Standardization of Officer Efficiency Report WD AGO FORM 67 - 1 7 June, 1949, p. 21

Figure 6

DISTRIBUTION OF OVERALL RAW SCORES ON ARMY OFFICER EFFICIENCY REPORT, FORM 67 - 1

Field Grade





From WD AGO PRS REPORT 799, The 1948 Standardization of Officer Efficiency Report WD AGO FORM 67 - 1
7 June, 1949, p. 22

Figure 7

DISTRIBUTION OF OVERALL RAW SCORES ON
ARMY OFFICER EFFICIENCY REPORT, FORM 67 - 1

Company Grade

provision for the difference in duties and qualities required of officers depending on whether they are of the Line or Staff, whether they are specialists within those categories, or whether they are in school or engaged in the duties of their respective qualifications. It is possible, however, that the empirically chosen forced choice items may automatically account for such differences.

The Air Force Report

The Air Force in 1948 adopted a new rating system which was the outcome of considerable research by the American Institute of Research of Pittsburgh.[12] It features a pamphlet or work booklet, in which the rater records the results of observations he makes of the ratee, and a single sheet rating form on which he summarizes the data recorded in the booklet. A sample page from the booklet is shown in Appendix F while the rating sheet is shown in Appendix G.

Description and use of booklet. To guide the rater in his observation of the ratee, the work booklet, entitled Check List of Critical Requirements for Officer Evaluation on Report of Officer Effectiveness, lists six areas in which proficiency, or the lack thereof, is significant. These six areas are:

I. Proficiency in Handling Administrative Details.

II. Proficiency in Supervising Personnel.

III. Proficiency in Planning and Directing Action.

IV. Acceptance of Organizational Responsibility.

provision for the difference in rating the qualities required of officers depending on whether they are of the line or staff, whether they are specialists within those categories, or whether they are in charge or engaged in the duties of their respective qualifications. It is possible, however, that the specifically chosen [illegible] [illegible] [illegible] automatically account for such differences.

The Air Force System

The Air Force [illegible] has adopted a new rating system which was the outcome of considerable research by the [illegible] [illegible] of [illegible] of [illegible].[23] It features a pamphlet or work booklet, in which the rater records the results of observations he makes of the ratee, and a single sheet rating form on which he summarizes the data recorded in the booklet. A sample page from the booklet is shown in Appendix F while the rating sheet is shown in Appendix G.

<u>Description and use of booklet</u>. To guide the rater in his observation of the ratee, the work booklet, contains <u>these lists of critical requirements for officer evaluation in terms of officer effectiveness</u>. These are given in order [illegible], as the [illegible] [illegible], in significance. There are [illegible] [illegible]

I. Proficiency in handling administrative details.

II. Proficiency in supervising personnel.

III. Proficiency in planning and directing action.

IV. Acceptance of organizational responsibility.

V. Acceptance of Personal Responsibility.

VI. Proficiency in Duty Military Occupational Specialty.

Within each area of proficiency are listed specific observable behaviors, each divided into five degrees of competence with each degree indicated by a one digit numeral and a short descriptive statement. These specific observable behaviors are arranged in a column with the descriptive statements and numerals placed along a line opposite each as in a graphic rating scale. Thus if the rater, while considering the performance of the ratee in one of the significant areas, observes behavior which may be described by one of the phrases provided, he marks the digit over the statement. As this process continues throughout the period between ratings, a body of information about the proficiency of the ratee is built up based on his observed behavior. It is recorded in terms of the numerals with the figure "1" indicating minimum competence and "5" indicating maximum proficiency.

When the date for preparing the formal rating arrives, the marks in the booklet are transferred to spaces provided on the rating sheet which is a condensed graphic rating scale. The scoring is done by hand on this sheet, treating the marks with the prescribed weights.

<u>The rating sheet.</u> The rating sheet, which is entitled <u>Report of Officer Effectiveness,</u> provides space for data other than the summarized observations from the work booklet. There

7. Imposition of personal responsibility.

VI. Particularly in July military governments usually:

1.

Plain men and men of principles are fairly generally admirable behavior, and rights (and) from lumpen of europe based this can cause rationed; in a one high summer) and a share desirability environment. Some specific governments behave and environment in a nation with the desirability among and economic (based along a line opposite and in a people voting vote. Thus if the above, with considering the performance of the state is and in its significance areas, observes variation-also and is directing to and of the charged people, he being the right duty to attempt. At this year-case auditors investigate the right-defined vehicle, a duty of information area; the violations of the party is high, or based on his varying measure. It is recorded in terms of the property with the figure "1" indicating citizen conference and "0" indicating nation-wide parliament.

Then the case for property the lowest taking voters, the party in the health and recovered in power yielded on the voting about voter is a appointed people voting vote. The average is done by good or this good. Treating the party with the investment voting.

The voting chart. The voting chart, which is printed Report of Office Statistics, provides data for the state when the investment measurements that are made available. These

is, of course, a place for certain necessary biographical information. Next on the sheet is a rather large space (nearly one half of the page) for a general overall evaluational report. Next is a provision for the specific, formal delegation of the rating duty by the commanding officer to some other officer together with a statement of the reason for such delegation. This makes it possible officially to assign the reporting duty to the officer with the most adequate knowledge of the ratee. Following next is a place for the signature of the reporting officer (rater) and the comments and signature of the indorsing officer.

The reverse side of the sheet is given over to a restatement of the six significant areas of proficiency with space under each for entering the summarized numerical marks described in the preceding treatment of the booklet and its use. The spaces for the entries are so arranged that the scores may be calculated and summarized on the sheet and the total entered at the bottom. Lastly, there is a small space reserved for use in describing the ratee's "Military Occupational Specialty".

<u>Evaluation.</u> The strength of the system lies in its use of the work booklet to record actual observations of significant behaviors as they occur. It is, in effect, a comprehensive graphic rating scale of the descriptive type with the advantages inherent in such a device. Moreover, the booklet provides, to a considerable extent, for rating on the spot as

is, of course, a place for market economy disproportional in-
formation. Such an one-sided is a rather large space (nearly
one half of the point for a general overall evaluation sys-
tem). Such is a question for the equality, formal distinc-
tion of the voting unit of the communities activate to some
other military together with a situation of the pseudo-for-
mers delegations. This model is possible actually to es-
tablish the operation such to the citizen with the most adequate
knowledge of the terms. Efficiency such is a place for the
alignment of the supporting military (party) and the pressure
and alignment of the balancing militer.

The economic risk of the state is other matter to a com-
plishment of the also illegitimate means as conditioned with
going under data for subsuming the economic measured means
analysed in the investment structure of the budget and the
mere. The source for the market are to a relation that the
power and to calculated the accomplished on the state and the
local influence in the states. Lastly, there is a small space
reserved for to constitution the private "military commun-
ismus quantity".

Conclusion. The strategies of the system line is the use
of the mere monitor to record actual observations or algorit-
hms calculus to test theory. It is, in effect, a controlled
size single voting unit of the decentralize size into the
activities limited to such a problem. Consumers, for months
permitted, to a constitutional tasks. For voting on the [illegible]

the behavior occurs, thereby eliminating the errors due to the frailties of human memory and securing a rating on the firm basis of actual observed behaviors.

The designers have reported a split halves reliability coefficient of +.89 using 534 ratings divided into equivalent halves. When corrected by the Spearman-Brown formula the reliability coefficient became +.94. This is the highest reliability coefficient for a rating device which the writer has found reported.[13]

Other advantages of this system include:

(a) Limitation of the rating to qualities which cannot be determined more accurately by more objective means.

(b) A design which permits quick and easy transfer of the information accumulated in the booklet to the rating sheet.

(c) The rating sheet is designed to present the markings in an analytic and easily understandable form.

(d) Provision is made for a general overall evaluational statement.

(e) Provision is also made for a statement of the ratee's specialty.

(f) There is provision for formal delegation of the rating responsibility.

(g) And finally, there is provision for the review and indorsement of the ratings.

Chief among the disadvantages of the system is the obviously unwieldy procedure of the rater's attempting to keep

current a work booklet on each of his officer subordinates. It is not difficult to believe that, in actual practice, the booklets are relegated to the senior's desk drawer to be pulled out from time to time and brought "up to date" by the process of recalling incidents to record. Although this practice undermines the plan to a considerable extent, it is probably better than the technique common in most rating plans in which the rater sits down once in three months or six months, or whatever the rating interval may be, and attempts a judgement based on what he can recall of his observations of the ratee during the interval since the last rating.

Other disadvantages of the system are:

(a) There is no provision for showing the ratee his rating.

(b) There is no provision for certifying to the ratee that his rating has been submitted to headquarters.

(c) The rating form is not designed to take advantage of modern machine methods of scoring, sorting, tabulation, and evaluation.

(d) The system does not provide for rating the raters.

(e) The system does not indicate the kind of experience with the ratee which the rater has used as a basis for his judgements. That is, one cannot tell from the rating thether the ratee was observed only in a school situation, an office situation, or in an operational position.

(f) The rating procedure and the form make no allowance

for the difference in duties and qualities required of officers depending on whether they are of the Line or the Staff, or whether they are specialists within those categories. It is possible, however, that the investigators, in choosing for the items on the rating scale in their work booklet "...incidents of how effective and ineffective officers had acted in particular military situations..."[14] have automatically accounted for differences in the duties and qualities required of various officers.

The Marine Corps Rating Form

Description and use. THE REPORT ON FITNESS OF OFFICERS OF THE UNITED STATES MARINE CORPS shown in Appendix H, is the briefest of the four military rating devices. The face of the form provides space for the usual biographical data and presents a few brief instructions to the rater.

Below these instructions is a graphic scale which lists the principal duties of a Marine officer in general terms with provisions for an evaluation rating on each. The possible judgements range from "Unsatisfactory" to "Outstanding".

Turning to the reverse side of the sheet we find a second graphic scale designed to measure certain attributes considered significant, including "Physical fitness" and "Intelligence". This scale also requires evaluative judgements ranging from "Unsatisfactory" to "Outstanding".

Following the second rating scale are several questions intended to elicit information as to the following:

(a) Any adverse temperamental, moral, or physical characteristics which the ratee might have.

(b) Any other derogatory information which the rater may have on the ratee.

(c) The rater's attitude toward having the ratee under his command in wartime.

(d) The rater's estimate of the ratee's "General Value to the Service".

There is also space for any additional pertinent information or comment not covered elsewhere in the report.

Analysis. Recently the Headquarters of the Marine Corps began a project of research,[15]

> ...dealing with the revision of both officer and noncommissioned officer fitness reports with a view to improvement of those currently in use.

Proceeding with the portion of the project concerned with the officer fitness report, the investigators constructed six different types of rating devices based on sample rating forms and information obtained from the other three military services and from thirty leading commercial concerns. Using these six devices and the official Marine Corps form, comparable ratings were obtained on a population of 376 Marine officers of varying ranks with 208 other Marine officers of varying ranks acting as raters. The project plans call for correlation of these ratings with buddy ratings of the 376 subjects as a criterion.

(a) the express mechanical, moral, or religious duty obligation which the Jewish faith;

(b) the strict monogamy relationship which the water may give to the person;

(c) the water's religious ceremony during the water communal in worship;

(d) the water's religious ceremony which the water communal in worship.

There is also known for our religious Jewishness information or economic and material elements in the society.

Judaism. Concerning the importance of the Jewish code known as "judges of commerce"[10]

> ...Jewish with the religion of each religious and commercial and affect client relate relative with a view to improvement of those commercial in view.

Preparing with the question of the project commercial with the different kinds, the investigators considered the different types of social bonds used in media public forms and information obtained from the water client relations and from other public communication channels. Using these the matrices and the activity social media media forms, computerized matrices were obtained on a particular of the media matrix. At analyzing the media with the water media affiliation of religion media and the water. The project plans call for consultation of these matrices with the study matrices of the BPI and Jewish as a relationship.

The results, when they become available, will likely prove to be an interesting and valuable contribution to the store of knowledge in this field.

Evaluation. Until such time as the findings of the study described above become available, evaluation of the Marine Corps form must proceed largely on a basis of a consideration of its design.

The most noticeable advantage of the form is its brevity and the ease with which it can be filled out. This brevity is matched by the succinctness of the instructions to the rater. Other good points of the form are:

(a) It has the advantage inherent in a graphic scale in that the assessment of the ratee is itemized, showing his strong points and his weaknesses.

(b) It provides for a general overall evaluational statement by the rater.

(c) It provides for the report of pertinent information or comment not otherwise covered.

(d) It provides for an indication of the rater's attitude toward having the ratee under his command during war service.

Turning attention to the shortcomings of the form, we find that:

(a) The graphic scales are abbreviated and contain evaluative rather than descriptive terms to indicate the varying degrees of possession of a trait.

(b) The traits or qualities on the scales are not sufficiently well defined.

(c) There is no safeguard provided against the halo effect.

(d) One graphic scale includes "Physical fitness" and "Intelligence" among the qualities to be rated, a violation of the principle that qualities which can be more accurately determined by more objective means should not be listed on rating scales.

(e) The form is not designed to permit rapid and accurate scoring, tabulation, and evaluation of the data by modern machine methods.

(f) The form does not require that the rating be shown to the rates and there is no provision for assisting the rater in preparing for such an interview.

(g) The rating procedure does not provide for the rating being made by the superior with the most complete knowledge of the rates.

(h) The rating procedure and the form make no provision for the difference in duties and qualities required of officers depending on whether they are of the Line or the Staff, whether they are specialists within those categories, or whether they are in school or engaged in the duties of their respective classifications.

(i) The rating procedure makes no provision for either the averaging of the ratings made by several raters or the

(d) The court is justified in the broader sense and usually already will decide.

(e) Open to it is religious jurisdiction and take actions.

(f) The practice which includes "religious interest and physiological" among the criterion is to speak a violation of the principle that criterion which can be some reasonably the functions of their religious beliefs should not be allowed in making decisions.

(g) The view is not designed to provide results that modern even decision, consulting, and establishment the case to modern religious interest.

(h) The court that has results that the method be chosen by the action and there is in principle the decisions the result in proceeding the case in decisions.

(i) The method considered when and provide the the take the method made of the opposite with the such analysis investigation of the issues.

(j) The method provided and the then case the provisions the the institutions to similar and religious decision or religious objection as whether they are in the that is the court, whether they are qualifying their their decisions, or without that are is which or response to the result of their requirements observations.

(k) The method considered which is provided the without the consequence of the decision made by several issues in the

review at higher echelons of ratings made at lower levels.

(j) Finally, the rating procedure makes no provision for certifying to the ratee that his rating has been submitted to headquarters.

SUMMARY

From the preceding description and discussion it is evident that the Navy's fitness report form is generally unsatisfactory. The Army's form is a superior one and is the most extensively tested of the four. Its principal disadvantage lies in the absence of any provision for acquainting the ratee with the details of his rating to aid him in self improvement. The form used by the Air Force appears to have considerable "face validity" and is an example of the best type of graphic rating scale. It possesses the added good feature of a provision for systematizing the rater's observation of the rater to a greater extent than is usual in rating systems. However, the Air Force system suffers from cumbersomeness in use. The chief advantage of the Marine Corps form is its brevity.

PART III

Chapter 1

CONCLUSIONS

From the foregoing chapters of description and discussion, certain conclusions may be drawn regarding the field of service rating in general and the design of an improved Naval officer's fitness report in particular. These conclusions may be summarized briefly as follows:

(a) Those in authority cannot eliminate the need for, nor escape the responsibility of assessing, either at intervals or more or less continuously, the value of their individual subordinates.

(b) In the present state of the science of psychological measurement, dependence must be placed on judgement in achieving these assessments.

(c) When assessing executives and Naval officers, the dependence on judgement is necessarily greatest due to the non-existence, to a large extent, of objective measures of executive performance.

(d) Human judgement is a complex product of many subtle, mutually interacting influences and, unless it is rather firmly founded on objective evidence, it is certain to be a variable entity, characterized by considerable inaccuracy.

(e) Lacking suitable means of obtaining objective evidence, we need some method of systematizing judgement and controlling or minimizing its weaknesses. A concomitant need,

which is relatively easy to fill, is provision of a device for recording judgements, thereby avoiding dependence on unreliable memory.

(f) Undismayed by the difficulty of the problem, investigators have sought energetically for a number of years (at least since the closing years of the nineteenth century), and are continuing the search, for a means of controlling or minimizing the vagaries of human judgement in service rating.

(g) Such means as have been devised for this purpose have been only partially successful. This is perhaps due to failure to filter out of the rating the reflection therein of the personality of the rater. It will be remembered that the rater marks the ratee not as the ratee is but as he perceives the ratee to be.

(h) It appears that further improvement of importance must await success in, (1) formulation and verification of objective criteria of executive performance and, (2) the development of a whole new theoretical basis, as suggested by Flanagan.[1] In the meantime, the best features of the existing systems should be used, with full realization of their limitations, since any tool, even an imperfect one, is better than none.

(i) Each of the several systems of service rating in common use today has its advantages and disadvantages.

(j) The most promising possibilities as types of a new Navy officer's fitness report form appear to be the forced

choice rating and the Probst check list device, although neither has been tested conclusively against a graphic rating scale of superior design. The forced choice form seems to be most resistant to rater's bias and halo while the check list as designed by Probst is more successful in achieving an approximately normal distribution of scores.

(k) There are certain extra features which should be a part of the rating system if it is to accomplish each of its objectives.

(l) A few of these features are incompatible in that inclusion of one of them will detract somewhat from the effectiveness of another. For example, it is desirable to omit from the rating form the key for scoring in order to deny the rater information with which he may control the overall mark he gives. (Such concealment is fundamental to the forced choice system.) But when the real meanings of the ratings are thus withheld, important information which both the rater and ratees should have is kept from them and the value of a post rating interview is greatly reduced.

With these considerations in mind, it is proper to advance to the problem of improving the rating system in use for evaluating Naval officer performance.

PART III

Chapter 2

RECOMMENDATIONS

First Recommendation

It has been concluded that the most promising possibilities as types of a new Navy officer's fitness report are the forced choice rating and the Probst check list device. A third, perhaps somewhat less encouraging, possibility is an improved graphic rating scale incorporating all the recommended features for increasing objectivity and resistance to halo and rater's bias.

As stated in the preceding chapter, neither the forced choice device nor the Probst check list is clearly the better in all respects, and neither has been tested conclusively against a graphic scale of superior design. It is recommended, therefore, that the Bureau of Naval Personnel experiment with a scale of each of the three types especially constructed for its use. The three devices should be tested simultaneously for reliability and for validity against improved criteria and using in both tests the largest practicable populations.

The improved criteria should be derived from a proper combination of buddy ratings and other pertinent information regarding the ratees such as the morale and attitudes of their subordinates, the effectiveness of the organizations which they headed, (as determined by the most objective means which can be devised), etc. The methods to be employed in isolating and

Part III

Chapter 8

CONCLUSIONS

Plan Implementation

In the last chapter, over the two preceding possibilities we found it a very difficult fitness result are the forced choice which on the future when this device. A fairly, perhaps somewhat low economics, possibility is an improved physics which with information all the mechanized features for increasing reliability and maintenance to help not people's also.

In related to the production activity, before the formed choice device use the final when lay is clearly the better in all respects, but rather as been tested conclusively another a provide what's a improvement method. It is mechanical, industrial, that the number of direct increased experience with a which of best is the cause lower reliability considered for its use. The time period should be tested considerably the reliability and the reliability against improved activity are using to such tests and increase considerable considerations.

The improved activity should a further type a further consideration of model testing and other particular information regarding the reviews such be the needs and difficulties of their accomplishment, the effectiveness of the organization which may benefit, the benefitment of the more objective cases which can be derived, etc. The process is a engineer is testing and

collecting this information and in achieving its proper combination are beyond the scope of this thesis and cannot be discussed here. Suffice it to say, however, that the importance of the criteria is so great that no practicable effort should be spared in carrying out this phase of the project.

Form

The administration of officer personnel in the Navy is such that, although in some cases, initiation of administrative action may take place in the field, final authority rests in the Bureau of Naval Personnel. A fitness report designed to give only information for such final action might very well be of the type which conceals the true nature of the rating made upon it from all who do not hold the scoring key.

However, as discussed in Chapter 1 of PART I, the efficiency evaluation has additional objectives. It will be remembered that supervisor improvement is one objective, improvement of the ratee is another, while aiding in the maintenance of morale and discipline completes the list. Maximum accomplishment of the first two of these will require that the rating be in some easily understood analytic form, whereas an overall score might be satisfactory for the last named purpose.

If either the check list or the improved graphic scale proves to be the most efficient, and consequently is adopted, the requirement for a display of the ratee's qualities mentioned above will be met. The forced choice form however, would not provide the desired display. Should the forced choice

collecting data concerning and in monitoring the proper commission and the extent of this should not needed be discussed here. Suffice to say, however, that the importance of the criteria is so great that no prohibitive effort should be spared in carrying out this phase of the method.

Fees

The administration of private personnel is not that is such that, although in some cases, initiation of administrative action may take place in the field, final authority rests in the Bureau of Civil Service. A Bureau review committee is the only information for such final review should any well as of the city which invokes the same review of the action once it does all that is not back the exactly by.

However, as discussed in chapter I of Part II, the efficiency evaluation has additional objectives. It will be recommended that supervisor involvement in the activities, increasing of the raters in monitor, while giving to the activations of merit and discipline complaints the time. Problem subordinate some of the first two of these will depend that by raters in in some really competent monitors them, because to benefit some other by monitoring the the best speed program.

If either the speed line or the involved the the weak phases of the the most efficiency are considerable to adopting, the requirement for a display of the memory qualitive conditions as above will be met. The formal course (see Appendix) would not provide the desired display. Should the formal course

rating be adopted nevertheless, provision should be made for an additional rating, for purposes of analysis, on a graphic scale which the rater could show to the ratee and discuss with him.

Second Recommendation

If the first recommendation is not feasible, the less expensive (and also less conclusive) plan recently employed by the Marine Corps, and described herein, should be followed. The rating devices of the Army and the Air Force, suitably edited to eliminate obviously inapplicable items, should be tested with an improved graphic scale against improved criteria. The most effective device from this test group should become the new Navy officer's fitness report.

Third Recommendation

Even if it is impracticable to consider altering the basic features of the present rating system, it would be a distinct step forward to prepare and place in service an improved graphic scale. It would be essential that limited tests to determine reliability be performed but the requirement for validity must be met by giving the scale maximum face validity during design and construction.

Fourth Recommendation

No matter what the final decision may be regarding rating devices, a definite rater training program should be established as soon as practicable as a permanent part of the Navy's educational system. In this case, as for the introduction

acting in accord accordingly, practicing would be made for so military action. The purpose of morality, on a pseudo party action, the latter would then be its inter and itself with who.

Second Recommendation

If the first recommendation is not practicable, the Jane organize lines also Jane amendment with vocally employed by the Swiss Swiss, but democratic nations. Should be difficult. The voting devices of the Swiss and the Air Force, relatively called to minimum national inadequacies times, should be having also to increased popular state legislation supported mainly. The most necessary action then this last group would become the our this military class reform.

Total Recommendation

Even if is is impossible to consider allowing the main features of the present voting systems, it would be a failure any fundamental reform not aimed to benefit the general popular masses. It would be unwarranted that Jackson tends to measure reliability to conclusions but the investigation for reliably must be made to check the voting methods Democratic voting behind best conformities.

Fourth Recommendation

It seems that the first medicine may be reasonably practical, a definite voter training program should be established as soon as circumstances or a government such as the Swiss's administrative system. In this case, we for the introduction

of a new rating device, maximum benefit will accrue to the Service only if the initiation of the program is preceded by a careful promotional procedure designed to gain acceptance for the training plan.

The material to be taught in a rater training program has been discussed in an earlier chapter. Rater training courses offering this material should be included in the curricula of the U. S. Naval Academy, The U. S. Naval Schools (General Line) at Newport, R. I. and Monterrey, Calif., and the U. S. Naval ROTC units at civilian colleges and universities. Instructional pamphlets should be prepared and circulated to other Naval activities and, if funds permit, a training moving picture film should be produced. This film would be particularly effective in dramatizing the cycle of, (1) observation of the rates by the rater, (2) recollection by the rater, at rating time, of his observations, and (3) transformation of these recollections into marks on the rating blank. Other aspects of the problem such as the benefit to the Service, and the Nation, which will result from careful and conscientious marking and the harm to the Service, and the Nation, which will result from improper marking of the ratings could be emphasized in a film.

Subsidiary Recommendations

The designers of a rating form for Navy use should take cognizance of certain general considerations which arise from recognition of the principles of good service rating design and

of a decreasing desire (whether rightly or wrongly) on the part of the United States to initiate or sustain a program in Greece of a special psychological character designed to gain acceptance for the Marshall plan.

The material to be taken in a major initiative program has been discussed in an earlier chapter. Some analysis somewhat different from material should be included in the case studies of the G. I. Social Economy (G. I. Tent Project (Greek Side) as described, G. I. and Government, Policy, and the Gi vs. Local GOG media in critical conditions and universal view. Documentary material should be improved and alterna- tives to other Tent activities (and, if Tent proved, a better log-making project film should be developed. This film should be particularly effective in demonstrating the role of, (1) non-activation of the media as not issues, (2) consultation of the media, at media time, of this commentary, and (3) technical- media of these productions into terms of the Greek viewer. Other aspects of the problem such as the quality of the Greek and the Greeks, which this result (for instance, not communication media) are too broad for the inquiry, and the Greeks, which will require some improved studies of the critical point in mentioned in a film.

Relative Recommendations

The development of a media film has been the direct task requirements of Greek media personnel which which film communication of the principles of good working relations between

administration which were discussed in Chapter 2, PART II. The proposed actions regarding the more important of these factors are offered in the following paragraphs as subsidiary recommendations.

Information to be Elicited

The discussion in Chapter 3 of PART II described the difficulties attendant upon the determination of what leaders do, or what is more important, of what aspects of a leader's behavior are significant and are therefore objects of interest on the part of his superiors. The ideal efficiency evaluation device would be designed to elicit information on those significant behaviors, and scale items would be chosen accordingly. Selection of the items is a matter of judgement on an a priori basis and, apparently for some time to come, must remain so.

Authorities in this field are unanimous in the opinion that the items used on a rating scale should be chosen from among those composed by men who will later use the scale in rating their subordinates. This applies no matter whether the projected device will be a graphic scale, a check list, or a forced choice rating form. The assumptions upon which this view is based are, (1) the immediate superiors of the ratees are in the best position to know what behaviors are significant and, (2) having participated in its design, the raters will have more respect for the rating device and will use it more carefully. However, even though the specific items

should be obtained from the suggestions of the raters, guidance may be furnished them by specification of the areas in which suggestions are desired.

Significant areas of information. The most important of the significant areas of information are, (a) leadership, (b) performance of duty, (c) special qualifications, and (d) appearance and general conduct. In addition there should be, (1) a list of standard situations in which the rater must indicate the extent to which he would place dependence on the ratee, (2) a specified difficult situation in which the rater should indicate his attitude toward having the ratee serve with him, and,(3) a space for a general evaluational statement and citation of any pertinent commendatory or derogatory material.

Taking a cue from Naval Leadership[1] we find that in the leadership area important items are loyalty up and down, moral and physical courage, honesty and fairness, common sense, good judgement, confidence, initiative, tact, self control, humor, modesty, enthusiasm, ability to delegate wisely, to establish communication up and down, to plan, to implement plans, to control operations, and knowledge of other principles of good organization and management.

There will be much overlap between the leadership and performance of duty areas but the latter should be included nevertheless. It will provide a means of marking officers who may happen to be serving in positions requiring a minimal dis-

should be obtained from the properties of the relative frequency, because they be formulated that in specification of the error to which which accuracy and stability.

Significant Points of Information. The most important of the significant points of information are, (a) Intensity, (b) particularness of data, (c) special qualifications, and (d) adequacy and internal consistency. In addition there should be (2) a sign of personal alienation in order for people must low disdain for making to which do would data necessarily to the nation. (3) a specific distinct interest in to which the error should limitness the existing tempo during the other years with them; and (4) a sense for a general conditional sincerity and ability of any authors commencing or interpreting materials.

Taking a six term Dewey classification as first look at the investigation from Government issues are lacking in the data sound and possible interest, sincerity and falsness, common sense and judgment, intelligence, intuitive data, and interpretation, relativity necessary within to integrate totally. It has lacking commentation or not there is also to influence phase to control accordance, and knowledge of other principles of good judgment and independence.

There will be many related answer the intensity and performance of data which the data should be included operations. It will provide a sense to outline criteria the may depend on the question to qualifications employing a logical view

play of leadership qualities. Initiative, ability to plan, to implement plans, to control operations, to delegate wisely are important qualities. Others are enthusiasm, perseverance, accuracy, thoroughness, conscientiousness, and resourcefulness.

The special qualifications section would be intended to record any special aptitudes or abilities which the officer might have developed but which probably would not be on record in the Bureau of Naval Personnel. Such things as adeptness at ship handling or organizing and training gun crews are important to record but are not so treated usually. The final area covers personal neatness and that reasonable attention to small details of regulations and customs which are one of the distinguishing marks of the excellent officer.

The superiority of the descriptive item over the evaluational has been pointed out. Because of this superiority, all items should be constructed to describe the behaviors which will indicate the presence or absence of the various qualities involved.

Specificity of Rating Device

Closely related to the subject of the significant areas of information to be covered, is the question of whether a single rating device can cover adequately all the important qualities which must be possessed by the officer corps of a modern navy. Included in this group of men, one will find in addition to the general line officer (executive), a long list

of specialists in various technological fields, in communication, business and supply, law, the social sciences, and in medicine. In the sense that all Naval officers are executives, they must bring to their duties certain fundamental characteristics common to all branches. However, each of the specialties listed above requires also a different aggregation of peculiar knowledges and skills, and perhaps attitudes to some extent. But in considering the measurement of these special qualities, one finds that he is encroaching on the fields of intelligence testing, and aptitude and achievement testing where service rating has no place.

There is no satisfactory answer to this question. Authorities agree that a rating device should be designed for the specific group which it is intended should be rated by it and they advise that several different forms may be needed to rate the employees of a single commercial firm. Recommendations regarding the specificity of the executive rating form are not so unequivocal, however. This is not surprising when one recalls what has been said in Chapter 3 of PART II concerning the lack of information as to what aspects of an executive's performance are significant for the purposes of evaluation.

It is probable therefore, that a satisfactory answer will not be forthcoming until the findings of studies now in progress become available. These findings may reveal differences (as well as similarities) between the behaviors of general line officers and the various categories of specialists

of specificity in various behavioralist fields, to communicate-
ions, analysis and policy, and the social sciences, but to
realities. So the notion that all Great Societies are scientists,
they have value in their values against traditional conservative
latter amount to all problems. However, each of the practical-
ties listed above implies that a different appreciation of pa-
cultic knowledge and action, and practice activities to some
extent. But in constructing the assessment of these several
qualities, one finds that in it necessarily on the fields of
investigations leading, and epistemic and multivariate testing
where possible relying the on those.

There is no satisfactory answer to this question. Ac-
knowledge some that a strict device quality to measure the
the specific areas which is in increased issues to deal of it
and they social that advance accounts fact may be needed to
take the analysis of a single dimensional view. Recommendations
regarding the adaptability of the monetary system can are not
so universal, however. This is not surprising that one ex-
ceptions such has been left in Figure 3 or left to measuring
the lack of information on the case against of a specifically
performance and explanations for the purpose of analysis.

It is possible hypothesis that a satisfactory answer
will not be forthcoming until the studies of similar and to
problems become available. These studies may reveal differ-
ences for well as multivariate research the variables of con-
text like without and the social analysis. Or qualitative

of such magnitude that the design of special rating blanks for each will be seen as clearly necessary.

Three of the four military rating devices which have been examined make some attempt to secure a rating in the officer's specialty. This feature should be retained and expanded in scope in the new form, insofar as budgetary consideration will permit. Expansion might be accomplished by, (1) devising a basic rating form for all officers to be accompanied by special rating forms for certain classes of specialists, or (2) by giving more space on the single overall form to a description of and rating in a specialty.

If the plan for additional specialist rating blanks is adopted, the specialist officers might be grouped satisfactorily for rating purposes into, (1) technological and scientific specialists, (2) business and supply specialists, and (3) Medical and Dental officers.

Information to be Excluded

As previously discussed, qualities which may be determined by more objective means should not be measured by rating. Moreover, because of the importance of limiting the length and complexity of the form wherever possible, items which require entries that do not contribute information of value in reaching an assessment of the rates should be omitted.

Length and Complexity

The question of the length of the rating form, the number of items on it, was discussed in Chapter 2 of PART II where

it was concluded that the longer forms are likely to be more reliable. However, as mentioned there, the cost and administrability cannot be ignored. To cover specifically each of the qualities mentioned earlier in this chapter would require a minimum of approximately thirty items. This number may seem excessive by the standards of those, who, on the basis of the results of factor analysis, feel that rating scales measure only one or two qualities at most. But, judging from the experience of Proest, thirty items may not be too many. He has reported that the average number of items checked on his scale, which though it lists 101 items specifies that only those which are applicable to the rates are to be checked, is between twenty and twenty-five.[2]

It would be desirable to limit the form to only the two sides of a single sheet of paper 8½ inches wide and 14¾ inches long, the size of the present Navy fitness report form. The requirement for carbon copies should be eliminated, insofar as possible, as it complicates preparation and filing and increases costs. There appears to be no need for copies because "Incoming (fitness) reports are filed in a jacket of their own. This is available for all personnel actions,..."[3]

So long as the Navy Regulations provide that prompt submission of fitness reports is a joint responsibility of the rates and rater, some means of notification to the rates that the transaction has been accomplished is desirable. The present Navy fitness report form provides a carbon copy of the

biographical section of the report for the ratee. This feature or its equivalent should be retained. Indeed, there is much to be said for furnishing a complete copy of the entire rating to the ratee. With a permanent and complete record of his superiors' judgements of him in his possession, he would be in a much better position to plan action toward self improvement.

Machine Processing

The most efficient method for scoring, sorting, or tabulating a large number of similar reports is the machine method discussed briefly in Chapter 2, PART II. The facility and accuracy with which these operations can be accomplished by machinery render the dependence on older processes unwise.

There has been some experimentation in the Bureau of Naval Personnel with a revision of the present fitness report form "designed to facilitate punching it on an IBM card".[4] Although the revised form was not adopted, any new design of fitness report definitely should include provisions for machine processing in the Bureau. The Navy cannot afford to ignore the important aid to advanced personnel practices which the technique of machine processing of fitness reports affords. It is important in the unprecedentedly large peacetime Navy of today and would be vastly more important when the Navy is required to expand to meet a national emergency.

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20 Selection boards are committees of senior officers organized from time to time to consider officers eligible, by reason of seniority and experience, for promotion and to select from those considered, those who are to be promoted.

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APPENDIX A

SAMPLES OF TYPES OF RATING FORMS

APPENDIX A.

Evaluative Type Graphic Scale

Traits				
Intelligence	Excellent	Very Good	Good	Unsatisfactory
Initiative	Unsatisfactory	Good	Very Good	Excellent
Leadership	Excellent	Very Good	Good	Unsatisfactory

APPENDIX A.

Evaluative Type Sample Items

Trait				
Intelligent	Very Intelligent	Intelligent	Dumb	Very Dumb
Quiet	Very Quiet	Quiet	Noisy	Very Noisy
Leader	Very Leader	Leader	Follower	Very Follower

Descriptive Type Rating Scale

Qualities				
Intelligence (With reference to the faculty of comprehension; mental acuteness)	Exceptionally quickwitted; keen in understanding.	Grasps essentials of a situation quickly.	Readily understands normal situations and conditions.	Slow of comprehension; unimaginative.
Initiative (With reference to constructive thinking and resourcefulness)	Requires constant guidance and supervision in his work or evades responsibilities.	Capable of performing normal and routine duties on own responsibility	Able to plan and execute missions on his own responsibility.	Exceptional in ability to think, plan, and do things without waiting to be told and instructed.
Leadership (With reference to the faculty of directing, controlling, and influencing others in definite lines of action.)	Inspires others to a high degree by precept and example; will always have a following.	A very good leader. Attracts subordinates.	Leads well but has his limitations.	A poor leader of men; fails to attract others; does not inspire confidence.

From the Navy rating form shown in Appendix C

[illegible]

[illegible]

APPENDIX A

FORCED DISTRIBUTION SCALE

Traits	Highest 10%	Next 20%	Middle 40%	Next 20%	Lowest 10%
Intelligence					
Initiative					
Leadership					

CHECK LIST SCALE

Instructions to rater: Check only those statements among the following which are applicable to the ratee.

:____: Is quick to take the correct action when it is needed.

:____: Is resentful of constructive criticism.

:____: Can be trusted to carry out assignments to best of his ability.

:____: Is frequently late to work.

:____: Requires constant supervision.

APPENDIX A

PARENT QUESTIONNAIRE DATA

Grade	Not at all	Not much	Little	Much	Very much
Intelligence					
Initiative					
Leadership					

PARENT DATA SHEET

Concerning the school grade, pupil, teacher characteristics among the participating pupils are applicable to the study.

_____ 1. The pupil is less than average getting ready to do reading.

_____ 2. The pupil is of average intelligence.

_____ 3. The pupil is more than average but intelligence is high at the ability.

_____ 4. The pupil is a male.

_____ 5. Reading readiness experiences.

APPENDIX B

AN EARLY NAVY RATING FORM

(Report on Officers under U. S. Navy Regulation Circular No. 86, September 10, 1891. A separate blank to be used for each Officer.)

REPORT ON THE FITNESS OF OFFICERS.

(FORM A.)

Name, ..., Rank,
U. S. S. Commanding U. S. S. ..
Station of duty. .....
Period covered by this report, from ..... , 18 ,
to ..... , 18 .

1. Ability to command. .....
2. Manner of performing duties. .....
3. General conduct. .....
4. Sobriety. .....
5. Health. .....
6. Condition and efficiency of command. .....
7. If any special duty has devolved upon him, state its nature, and how it was performed.

.....

8. Remarks. .....

.....

I certify on honor that I believe the entries herein made are true and impartial, and that I have communicated unfavorable mention, as directed.

..... , *U. S. N.,*

Comdg.

NOTE.—Under "Remarks," refer to any special reports made in accordance with Par. V. Regulation Circular No. 86, within the period covered by this report.

Answers to queries from 1 to 6 inclusive shall be either "Excellent," "Good," "Tolerable," or "Not good," and must be written by the officer signing the report. Should the answer to any query be "Not good," or of an unfavorable nature, the reasons for such answer must be clearly stated, and a copy of that portion of the report furnished to the officer concerned, who shall be granted a reasonable time to prepare such written statement in regard to it as he may desire to make, which statement shall be endorsed and forwarded with the report. Should the officer not desire to make a statement that fact shall be stated.

APPENDIX C

A MORE RECENT NAVY RATING FORM

12. To what degree has he exhibited the following qualifications? (Each line is divided into four main divisions, with a definition below each division. Consider only the definition below each line which accurately fits in regard to the subject. Having decided which definition is most suitable, place a check mark at the grading along line to which the person being marked is entitled. A check to the right of the double vertical line will be considered as an unsatisfactory (unfavorable) report.)

Intelligence (With reference to the faculty of comprehension; mental acuteness.)	Exceptionally quick-witted; keen in understanding.	Grasps essentials of a situation quickly.	Readily understands normal situations and conditions.	Slow of comprehension; unimaginative
Judgment (With reference to a discriminating perception by which the values and relations of things is mentally asserted.)	Unusually keen in estimating situations and reaching sound decisions.	Can generally be depended on to make proper decisions.	Good judgment in normal and routine things.	Poor judgment; draws wrong conclusions.
Initiative (With reference to constructive thinking and resourcefulness; ability and intelligence to act on own responsibility.)	Exceptional in ability to think, plan, and do things without waiting to be told and instructed.	Able to plan and execute missions on his own responsibility.	Capable of performing normal and routine duties on own responsibility.	Requires constant guidance and supervision in his work, or evades responsibilities.
Force (With reference to moral power possessed and asserted in producing results.)	Strong, dynamic.	Strong.	Effectual under normal and routine circumstances.	Weak; with little influence over others.
Leadership (With reference to the faculty of directing, controlling, and influencing others in definite lines of action.)	Inspires others to a high degree by precept and example; will always have a following.	A very good leader; attracts subordinates.	Leads well, but has his limitations.	A poor leader of men; fails to attract others; does not inspire confidence.
Tact (With reference to the faculty of being courteous, considerate, and sensible in dealing with others.)	Adaptable and courteous to a high degree. Can be relied upon to handle delicate questions or situations.	Adaptable, courteous, and successful in dealing with others.	Reasonably tactful.	Irritates; creates friction.
Cooperation (With reference to the faculty of working harmoniously with others toward the accomplishment of common duties.)	Exceptionally successful in working with others to a common end.	Works in harmony with others.	Responsive to leadership.	Obstructive.
Loyalty (Fidelity, faithfulness, allegiance, constancy — all with reference to a cause and to higher authority.)	Unswerving in allegiance; frank and honest in aiding and advising.	A high sense of loyalty.	Faithful in the execution of his duty.	Hypercritical; disdainful.
Attention to Duty (With reference to the faculty of carrying on all work in a thorough and conscientious manner.)	Has an exceptionally high standard with reference to devotion to duty.	Attends to his duty in a highly satisfactory manner.	Satisfactory attention to duty.	Inclined to defer or neglect his work.
Presence of Mind (With reference to the faculty of acting instinctively in a logical manner in difficult and unforseen situations.)	Exceptionally cool-headed and logical in his actions under all conditions.	Composed and logical in his actions in difficult situations.	Logical in his actions in general.	Easily disconcerted.
Endurance (With reference to ability for carrying on under any and all conditions.)	Capable of standing an exceptional amount of physical hardships and strain.	Can perform well his duties under trying conditions.	Of normal endurance.	Tires or breaks down easily.
Industry (With reference to performance of duties in an energetic manner.)	Extremely energetic and industrious.	Thorough and energetic.	Intermittently energetic and industrious.	Indolent; inactive; lazy.
Military Bearing (With reference to military carriage and dignity of demeanor.)	Exceptional in carriage.	Carries himself well.	Bearing fair.	Unmilitary in bearing.
Neatness of Person and Dress (With reference to correctness of uniform and smartness of appearance.)	Punctilious as to uniform; immaculate in dress and person.	Properly and well dressed and careful of personal appearance.	Generally neat and correct in uniform.	Untidy in dress or personal appearance.
Aptitude for Service (With reference to a natural capacity and general fitness for the Naval Service.)	Enthusiastic and excellently fitted for the Naval Service.	Well fitted and interested.	Adapts himself to and is acquiring a capacity for the service.	Not fitted.

REMARKS

13. Give in this space: (*a*) A clear and concise estimate of this officer's personal and military character, (*b*) his fitness for promotion, (*c*) any duty performed worthy of special mention, (*d*) also any information which might be of value to the department in making assignments to duty.

THIS SPACE MUST NOT BE LEFT BLANK
(See Art. 137 (7), U. S. N. R., 1920)

APPENDIX D

PRESENT NAVY RATING FORM

OFFICER'S FITNESS REPORT WORK SHEET

WORK SHEET

READ CAREFULLY THE INSTRUCTIONS ON THE REVERSE SIDE

DATE

1. NAME (last) (first) (middle) | RANK AND CLASSIFICATION | FILE NO.

SHIP OR STATION | PERIOD OF REPORT (mo., day, year) DATE FROM | DATE TO

DATE OF REPORTING TO PRESENT SHIP OR STATION | OCCASION FOR REPORT ☐ DETACHMENT OF OFFICER REPORTED ON ☐ DETACHMENT OF REPORTING SENIOR ☐ REGULAR SEMI-ANNUAL ☐ QUARTERLY ☐ SPECIAL

2. DESCRIPTION OF DUTIES SINCE LAST FITNESS REPORT (List most recent first and describe accurately. Include periods of leave, transit, etc., also include employment of ship.)

	FROM MO.	FROM YR.	TO MO.	TO YR.

Has present duty changed since last fitness report was submitted? ☐ Yes ☐ No

3. IF COURSES OF INSTRUCTION WERE COMPLETED DURING PERIOD OF THIS REPORT, LIST TITLE OF COURSE, LOCATION OF SCHOOL, LENGTH OF COURSE AND DATE COMPLETED.

Are you physically qualified for Sea Duty? ☐ Yes ☐ No ☐ Don't Know

4. If Aviator, Indicate No. of Flight Hours Last Two years for Each Type Aircraft (List Most Recent Type First)

TYPE OF AIRCRAFT							TOTAL
NO. OF HOURS							

5. MY PREFERENCE FOR NEXT DUTY IS:

SEA	KIND OF DUTY	LOCATION
SHORE	KIND OF DUTY	LOCATION

6. *SECTIONS 6 THROUGH 12 TO BE FILLED IN BY REPORTING OFFICER*

NAME OF REPORTING OFFICER | RANK | FILE NO. | OFFICIAL STATUS RELATIVE TO OFFICER REPORTED ON

IS THIS OFFICER QUALIFIED TO PERFORM ALL HIS PRESENT DUTIES? ☐ YES ☐ NO

INDICATE MORE RESPONSIBLE DUTIES FOR WHICH HE IS IN TRAINING. (If none, so state)

DATE OF EXPECTED QUALIFICATION

APPRAISAL FOR DETAIL PURPOSES

Comment on special or outstanding qualifications as well as any physical defects, which should be considered in determining the kinds of duty to which he should be detailed. Only comments on qualifications significant in detailing should be entered here. ANY COMMENTS REGARDING FITNESS FOR PROMOTION SHOULD BE ENTERED IN SECTION 12 ONLY OF PAGE 1.

FOR WHAT DUTIES IS HE RECOMMENDED?

ASHORE AFLOAT

7. FOR EACH FACTOR OBSERVED CHECK THE APPROPRIATE BOX TO INDICATE HOW THE OFFICER COMPARES WITH ALL OTHERS OF THE SAME RANK, CLASSIFICATION AND CORPS WHOSE PROFESSIONAL ABILITIES ARE KNOWN TO YOU PERSONALLY. DO NOT LIMIT THIS COMPARISON ONLY TO THE OTHERS NOW UNDER YOUR COMMAND. DO NOT HESITATE TO MARK "NOT OBSERVED" ON ANY QUALITY WHEN APPROPRIATE. NO ENTRY WHICH IS MADE IN THIS SECTION WILL BE CONSIDERED AN UNSATISFACTORY REPORT WHICH MUST BE REFERRED TO THE OFFICER FOR STATEMENT. ONLY ENTRIES DESIGNATED IN SECTIONS 8, 9, 11 AND 12 WILL BE SO CONSIDERED.

RATING FACTORS		Not Observed	Within Bottom 10%	Within Next 20%	Within Middle 40%	Within Next Top 20%	Within Top 10%
A. SEA OR ADVANCE BASE DUTY — How does this officer compare in: NOTE: ITEM (A3) TO BE MARKED FOR ALL OFFICERS.	1. STANDING DECK WATCHES UNDERWAY?						
	2. ABILITY TO COMMAND?						
	3. PERFORMANCE IN PRESENT DUTIES AS DESCRIBED IN SECTION 2, ABOVE?						
	4. REACTIONS DURING EMERGENCIES?						
	5. PERFORMANCE AT BATTLE STATION OR IN BATTLE DUTIES?						
B. INITIATIVE AND RESPONSIBILITY — How well does this officer:	1. ASSUME RESPONSIBILITY WHEN SPECIFIC INSTRUCTIONS ARE LACKING?						
	2. GIVE FRANK OPINIONS WHEN ASKED OR VOLUNTEER THEM WHEN NECESSARY TO AVOID MISTAKES?						
	3. FOLLOW THROUGH DESPITE OBSTACLES IN CARRYING OUT RESPONSIBILITIES ASSIGNED OR ASSUMED?						
C. UNDERSTANDING AND SKILL — How well does this officer:	1. UNDERSTAND INSTRUCTIONS GIVEN, AND USE SUGGESTIONS OFFERED?						
	2. EXERCISE JUDGMENT?						
	3. RATE IN TECHNICAL COMPETENCE IN HIS SPECIALTY, IF ANY? (Name Specialty)						
D. LEADERSHIP — How well does this officer:	1. INSPIRE SUBORDINATES TO WORK TO THE MAXIMUM OF THEIR CAPACITY?						
	2. EFFECTIVELY DELEGATE TASKS AND AUTHORITY?						
	3. TRANSMIT ORDERS, INSTRUCTIONS, AND PLANS?						
	4. ORGANIZE HIS WORK AND THAT OF THOSE UNDER HIS COMMAND OR SUPERVISION?						
	5. MAINTAIN DISCIPLINE AMONG THOSE UNDER HIS COMMAND OR DIRECTION?						
E. CONDUCT AND WORK HABITS — How does this officer compare in:	1. ABILITY TO WORK WITH OTHERS?						
	2. ABILITY TO ADAPT TO CHANGING NEEDS AND CONDITIONS?						
	3. MILITARY CONDUCT—BEARING, DRESS, COURTESY, ETC.?						

8. INDICATE YOUR ATTITUDE TOWARD HAVING THIS OFFICER UNDER YOUR COMMAND, WOULD YOU: (Check one) ☐ DEFINITELY NOT WANT HIM? (UNSATISFACTORY) ☐ PREFER NOT TO HAVE HIM? (UNSATISFACTORY) ☐ BE SATISFIED TO HAVE HIM? ☐ BE PLEASED TO HAVE HIM? ☐ PARTICULARLY DESIRE HIM?

9a. Considering All Officers of the Same Rank, Classification and Corps, Whose Professional Abilities Are Known to You Personally, Would You Promote Him: (Check one) ☐ UNDER NO CIRCUMSTANCES? (Unsatisfactory) ☐ IF 90% WERE TO BE PROMOTED? ☐ IF 70% WERE TO BE PROMOTED? ☐ IF 30% WERE TO BE PROMOTED? ☐ IF ONLY 10% WERE TO BE PROMOTED?

9b. How many Officers are included in the group used for the comparison in 9a? ☐ 10 OR LESS ☐ 10 TO 50 ☐ OVER 50

10. COMMENT IN SECTION 12 AND GIVE REFERENCE HERE TO ANY COMMENDABLE OR ADVERSE REPORTS THAT HAVE BEEN MADE ON THE OFFICER DURING THIS PERIOD.

11. HAVE YOU ANY ADVERSE COMMENTS TO MAKE REGARDING THIS OFFICER'S QUALITIES OR PERFORMANCE? ☐ YES ☐ NO

HAS HE ANY MENTAL OR MORAL WEAKNESS WHICH ADVERSELY AFFECTS HIS EFFICIENCY? ☐ YES ☐ NO

If yes, explain in Section 12.

UNSATISFACTORY. Yes in either item of Section 11 constitutes an unsatisfactory report and must be referred to the officer for statement.

12. Give in this space a clear, concise appraisal of the officer reported on and his performance of duty, including any worthy of special mention. Include recommendations as to promotion. Any statements of unsatisfactory performance, ability, character, or conduct must be referred to the officer for statement. Statements of a constructive nature which refer to minor imperfections or lack of qualifications do not constitute an unsatisfactory report. For example: "This officer was a little slow in getting started but is now making good progress" or "This officer is well qualified in his present duties but has had no experience at sea" would not be unsatisfactory in nature.

Check one of these boxes — I CONSIDER THIS REPORT TO BE ☐ SATISFACTORY ☐ UNFAVORABLE ☐ UNSATISFACTORY

DO NOT LEAVE BLANK

(If additional space is needed attach extra sheet)

SIGNATURE OF OFFICER REPORTED ON (Applies only to Sections 1 through 5) | SIGNATURE OF REPORTING OFFICER | Has this report been shown or referred to officer reported on? ☐ Yes ☐ No

DO NOT FORWARD THIS SHEET TO BUPERS

OFFICER'S FITNESS REPORT
INSTRUCTION SHEET

IMPORTANT INSTRUCTIONS—READ CAREFULLY

GENERAL INSTRUCTIONS

The attached revised Officer's Fitness Report is to be used in place of the old forms, NAVPERS 310 and 311.

This form serves the following purposes:

1. It serves as a report of fitness for all officers both afloat and on shore.
2. The first carbon—(Page 2)—keeps up to date in BuPers the Officer's Qualifications Questionnaire, which provides the Bureau with information covering each officer's previous experience and qualifications for various types of duty.
3. The second carbon—(Page 3)—provides data covering changes in the officer's qualifications and is to be filed in the Officer's Qualification Record Jacket as an aid to Commanding Officers and Personnel Officers in assigning him properly.

This form is to be submitted semi-annually for all officers and in all cases of permanent detachment of either the officer or reporting senior. Special reports of fitness on an officer, on the prescribed form, shall be made whenever the officer reported on:

(a) Distinguishes himself in battle.

(b) Performs an outstanding act of valor or devotion to duty.

(c) Displays extraordinary courage, ability, or resource in time of peril or great responsibility.

(d) Is guilty of serious misconduct or marked inefficiency.

A typewriter is to be used when at all possible in filling out Sections 1 through 6. Since 96% of all fitness reports received in BuPers are typed, the form has been constructed for that type of preparation. Care should be exercised that the carbon copies are legible if a typewriter is not used.

INSTRUCTIONS FOR REPORTING OFFICERS

In deciding on promotions of officers, Selection Boards must, in effect, compare an officer with others of the same rank rather than with more arbitrary standards. You will note that in Section 7 and subsequent sections you are asked to do just that — compare each officer with all others of the same rank and corps whose professional abilities are known to you personally. Please note that the officer is not to be compared only with the others of his rank now under your command. For this reason, it is important to indicate in Section 9b how many officers are included in the group you use for comparison.

In making this comparison, keep in mind that the group of officers whose professional abilities are known to you personally (or any other group of people) will fall into a normal distribution when graded on any trait or factor—that is, there will be a small number at the lower end, a larger group in the middle, and a small group at the top. With this curve in mind, compare the officer with the group and mark him on each factor in Section 7 as falling in one of the five brackets—the lower 10%, the next 20%, the middle 40%, the next 20% or the top 10%. Do not hesitate to mark "not observed" on any factor which you think not applicable to the duty in which you have observed the officer or in which your observation has been too limited to warrant judgment.

No entry which is made in Section 7 will be considered an unsatisfactory report. Only adverse comment in Section 6 and entries so designated in Sections 8, 9, 11 and 12 will be so considered.

An unsatisfactory report must be referred to the officer reported on for his statement which is to be attached to the report of fitness. In any case open to question as to what constitutes an entry of an unfavorable or unsatisfactory nature the officer will always be given the benefit of having seen the report. (See Articles 1701 and 1405 Navy Regulations, and BuPers Manual Article B-2202.

The Bureau desires that reporting seniors make every effort to show each fitness report to the officer reported upon and to discuss it with him, in so far as practicable. In this connection please note the instructions in Section 12 which provide that statements of a constructive nature which refer to minor imperfections or lack of qualifications do not constitute an unsatisfactory report. On every report of fitness, the reporting senior will indicate under Section 12 whether the officer reported on has or has not seen the report.

The reporting senior will sign all three pages of the report in the lower right hand corner, or will sign the original and designate a commissioned officer, preferably senior to the officer reported on, to authenticate Pages 2 and 3 in lower right hand corner. The officer reported on may sign and retain Page 3, inserting same in his qualification jacket, if he is geographically detached from the reporting senior.

The Officer's Fitness Report (Page 1) and the Officer's Qualification Report—BuPers Copy—(Page 2) are to be forwarded—not separated—to BuPers. The Officer's Qualification Report—Jacket Copy—(Page 3) is to be detached and filed in the Officer's Qualification Record Jacket.

Fitness Reports are to be submitted promptly and their preparation is one of the most important and responsible duties of superior officers. Failure to prepare them objectively is detrimental to the efficiency of the Navy. If not submitted promptly, the rights of the officer reported on may be prejudiced. The fitness of an officer for the service with respect to promotion and assignment to duty is determined by his record.

INSTRUCTIONS FOR OFFICER REPORTED ON

It is your responsibility to fill out Sections 1 through 5 of this form and to sign all sheets in the lower left-hand corner. Submit the form to your reporting senior at the times specified in the General Instructions above. Use a typewriter, if at all possible—if not, use ink, but be sure that all copies are legible.

NOTE. For convenience there is printed on the back of these instructions a work sheet which may be used as a draft in preparing the carbonized set. The work sheet is to be detached before filling out the carbonized set and is NOT to be forwarded to BuPers.

APPENDIX E

ARMY RATING FORM

EFFICIENCY REPORT

See AR 600–185 for details.

Unit Adjutant or Personnel Officer will complete Sections I and III.
Rating Officer will complete Sections II, IV, V, VI, VII, VIII, and IX.
Indorsing Officer will complete Sections II, V, VII, and IX.

Section I. OFFICER REPORTED UPON

Use typewriter or print in ink. Use carbon paper to fill out Section III at same time. See AR 600–185.

DO NOT WRITE IN THIS SPACE

LAST NAME	FIRST NAME	INITIAL	SERIAL NUMBER	GRADE	ARM OR SERVICE	COMPONENT	PERIOD OF REPORT FROM	PERIOD OF REPORT TO

THEATER OR CONTINENTAL COMMAND	UNIT, ORGANIZATION, AND STATION	PRIMARY MOS	DUTY ASSIGNMENT (MOS CODE)	DAYS OF DUTY	DAYS OF LEAVE	DAYS OF OTHER NON-DUTY	JP

DATE OF REPORT	FOR REPORTS RENDERED BECAUSE OF PERMANENT CHANGE OF STATION, SUPPLY ADDRESS OF UNIT AND INSTALLATION WHERE OFFICER WILL REPORT	PQ

NAME, GRADE, AND ORGANIZATION OR UNIT OF RATING OFFICER	NAME, GRADE, AND ORGANIZATION OR UNIT OF INDORSING OFFICER	OA

Section II. DATA AND SUGGESTIONS FOR USE IN ASSIGNMENT

NOTE: Information on this page will be forwarded to the Career Branch of the Personnel and Administration Division by TAG after ratings have been determined. Proper future assignment and utilization of the officer will depend upon the care with which information in this section is formulated and reported. Use typewriter or print in ink.

A. DUTIES ACTUALLY PERFORMED ON PRESENT JOB. To be supplied by Rater. Be specific. Give his duty assignment and all additional duties with enough specific detail to show scope of job in each area.

B. DESCRIPTION OF OFFICER RATED AND COMMENTS. These paragraphs should cover physical, mental, moral qualities of rated officer, specialties of value to the Army, and any special defects or weaknesses affecting his ability to do certain assignments.

COMMENTS OF RATING OFFICER	COMMENTS OF INDORSING OFFICER

C. ESTIMATED DESIRABILITY IN VARIOUS CAPACITIES. Assume you are a commander of a major unit in war. Indicate to what extent you would want the rated officer to serve under you in the next higher grade in each type of duty described below. Place an X in the proper box, using the shaded NA area if the duty is not applicable. If line h is used, specify the nature of the specialty.

	RATER NA	RATER 1	RATER 2	RATER 3	RATER 4	RATER 5	INDORSER NA	INDORSER 1	INDORSER 2	INDORSER 3	INDORSER 4	INDORSER 5
a. Represent your viewpoint and make decisions in your name at a higher headquarters.												
b. Command a unit immediately subordinate to you on a combat mission.												
c. Be responsible in an emergency calling for initiative, coolness, forceful leadership.												
d. Work on an assignment requiring great attention to detail and routine.												
e. Plan all aspects of a military situation, using judgment, initiative, and coolness.												
f. Carry out an assignment in a civilian component such as ROTC, NG, or ORC.												
g. Represent you where tact and ability to get along with people are needed.												
h. Work on an assignment as specialist or technician. (Specify.)												
i. Carry out the duties of the type of work to which he is now assigned.												
		NOT WANT HIM	TAKE A CHANCE ON HIM	HAPPY TO HAVE HIM	PREFER HIM TO MOST	FIGHT TO GET HIM		NOT WANT HIM	TAKE A CHANCE ON HIM	HAPPY TO HAVE HIM	PREFER HIM TO MOST	FIGHT TO GET HIM

D. IMMEDIATE RECOMMENDATIONS FOR CAREER DEVELOPMENT. Be specific.

RATER'S RECOMMENDATION FOR ASSIGNMENT (MOS CODE)	INDORSER'S RECOMMENDATION FOR ASSIGNMENT (MOS CODE)
RATER'S RECOMMENDATION FOR FURTHER TRAINING	INDORSER'S RECOMMENDATION FOR FURTHER TRAINING

E. ENTRIES ARE BASED ON → (RATER WILL CHECK)	INTIMATE DAILY CONTACT	FREQUENT OBSERVATION OF THE RESULTS OF HIS WORK	INFREQUENT OBSERVATION OF THE RESULTS OF HIS WORK	ACADEMIC RECORDS	OFFICIAL REPORTS

F 1429 REV. 3

EFFICIENCY REPORT

WD AGO Form 67-1 Part 2 See AR 600–185 for details.

Unit Adjutant or Personnel Officer will complete Sections I and III.
Rating Officer will complete Sections II, IV, V, VI, VII, VIII, and IX.
Indorsing Officer will complete Sections II, V, VII, and IX.

Section III. OFFICER REPORTED UPON

Enter same information as for Section I.

DO NOT WRITE IN THIS SPACE

LAST NAME	FIRST NAME	INITIAL	SERIAL NUMBER	GRADE	ARM OR SERVICE	COMPONENT	PERIOD OF REPORT FROM	PERIOD OF REPORT TO

THEATER OR CONTINENTAL COMMAND	UNIT, ORGANIZATION, AND STATION	PRIMARY MOS	DUTY ASSIGNMENT (MOS CODE)	DAYS OF DUTY	DAYS OF LEAVE	DAYS OF OTHER NON-DUTY	JP

DATE OF REPORT	FOR REPORTS RENDERED BECAUSE OF PERMANENT CHANGE OF STATION, SUPPLY ADDRESS OF UNIT AND INSTALLATION WHERE OFFICER WILL REPORT	PQ

OA

READ INSTRUCTION SHEET CAREFULLY BEFORE MARKING THIS SECTION

Section IV. JOB PROFICIENCY

	MOST	LEAST
1		
A. Becomes dogmatic about his authority.		
B. Careless & slipshod in attention to duty.		
C. No one ever doubts his ability.		
D. Well-grounded in all phases of Army life.		
2		
A. Follows closely directions of higher echelons.		
B. Inclined to "gold-brick."		
C. Criticizes unnecessarily.		
D. Willing to accept responsibility.		
3		
A. A go-getter who always does a good job.		
B. Cool under all circumstances.		
C. Doesn't listen to suggestions.		
D. Drives instead of leads		
4		
A. Always criticizes, never praises.		
B. Carries out orders by "passing the buck."		
C. Knows his job and performs it well.		
D. Plays no favorites.		
5		
A. Constantly striving for new knowledge and ideas.		
B. Businesslike.		
C. Apparently not physically fit.		
D. Fails to use good judgment.		
6		
A. Cannot assume responsibility.		
B. Knows how and when to delegate authority.		
C. Offers suggestions		
D. Too easily changes his ideas.		
7		
A. Fails to work for the best interest of all.		
B. Has a high degree of initiative.		
C. Never makes excuses for his mistakes.		
D. Slow in accomplishing his work.		
8		
A. Criticizes policies of superiors.		
B. Others can't work with him.		
C. If he is wrong, will admit it.		
D. The men know they can rely on his judgment.		
9		
A. Doesn't try to "pull rank."		
B. Knows men, their capabilities & limitations.		
C. Low efficiency.		
D. Uses a steady monotone in his speech.		
10		
A. Fails to support fellow officers.		
B. Oversteps his authority.		
C. Gives clear and concise directions.		
D. Very exacting in all details.		
11		
A. Blames others for his mistakes.		
B. Always demands strict discipline.		
C. Excellent at constructive criticism.		
D. Hesitant about rendering decisions.		
12		
A. Can take over in an emergency.		
B. Fair and just in his dealings.		
C. Lacks interest in his job.		
D. Questions orders from superiors.		

READ INSTRUCTION SHEET CAREFULLY BEFORE MARKING THIS SECTION

Section V. JOB PROFICIENCY

DO NOT WRITE IN THIS SPACE

1. Management and operation of military matters not included in tactics and strategy.
2. The direction of the over-all operation of a military unit.
3. Presenting learning materials in a classroom situation in a military or civilian component.
4. Exercise of specialized knowledge, requiring lengthy technological training.
5. Assisting commanders of battalions or larger units in devising methods of meeting the requirements of military situations.
6. Duties involving aeronautical skills performed by rated officers.
7. Training at service schools, Air University, Army Industrial College, etc.

FOR RATING OFFICER	1	2	3	4	5	6	7	8	9	10
PRIMARY										
SECONDARY										

FOR INDORSING OFFICER	1	2	3	4	5	6	7	8	9	10
PRIMARY										
SECONDARY										

DO NOT WRITE IN THIS SPACE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

A. People work for & with him because of his personality.	A. Lacks ability to inspire confidence of men & officers.	A. Plenty of military snap, bearing, & neatness.	A. Obtains respect & obedience without causing resentment.
B. Never rank-conscious.	B. Easygoing.	B. Normally cheerful.	B. Lacks aggressiveness.
C. Thinks only of himself.	C. Type of man everyone likes for a friend.	C. Can't take criticism.	C. Has an excellent command of language.
D. Worries a great deal.	D. Has a quiet, dignified bearing.	D. Doesn't get along with people.	D. Lacking in good conduct & moral habits.
1	4	7	10
A. Active in athletics.	A. Hot-tempered.	A. Modest & reserved.	A. Coolheaded.
B. Firm but not overbearing.	B. Fails to demonstrate originality.	B. Doesn't have drive or force he should.	B. Commands respect by his actions.
C. Egotistical.	C. Reserved.	C. Antisocial.	C. Overbearing.
D. Rubs people the wrong way.	D. Impresses people favorably.	D. Respected by all fellow officers.	D. Indifferent.
2	5	8	11
A. Compliments a man on his good work.	A. Boastful.	A. A quiet, unassuming officer.	A. Immature.
B. Loses his head, gets excited.	B. Inspires pride in the organization.	B. Follows rather than leads.	B. Modest but not retiring.
C. Has admiration of officers & men alike.	C. Lacks tact.	C. Has an attitude of superiority.	C. Nervous.
D. Poor in dress & appearance.	D. Thoughtful of others.	D. Tactful.	D. Thoroughly cooperative in his work.
3	6	9	12

Section VII. PERSONAL QUALIFICATIONS

Use ELECTROGRAPHIC PENCIL, following same directions as for Section V. MARK ALL SIX QUALIFICATIONS.

	FOR RATING OFFICER	FOR INDORSING OFFICER
The degree to which he is able to meet situations without bias and without emotional upset.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
The degree to which he is able and willing to work with other officers and enlisted men.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
The degree to which he is able to act on his own responsibility in absence of orders.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
The degree to which he is able to discriminate & evaluate facts to arrive at logical conclusions.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
The degree to which his appearance and behavior cause people to react favorably.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
The degree to which he is able to carry out orders with consistency & firmness to achieve objectives.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10

Section VIII. OVER-ALL RELATIVE RANK

FOR RATER ONLY

The number of officers in this grade rated by me at this time is_____.

If these officers were arranged in order, considering over-all future usefulness to the Army, from highest (No.1) to poorest, this officer would be No._____ of the total group rated.

Section IX. AUTHENTICATION

Use typewriter (except for signatures) or ink.

I certify that I have read the current AR 600-185 and that all ratings are made in accordance with instructions contained therein, and that to the best of my knowledge and belief all entries contained hereon are true and impartial.

SIGNATURE OF RATING OFFICER	SIGNATURE OF INDORSING OFFICER
NAME, GRADE, AND ORGANIZATION OR UNIT	NAME, GRADE, AND ORGANIZATION OR UNIT
OFFICIAL STATUS OF RATED OFFICER WITH RESPECT TO RATING OFFICER	OFFICIAL STATUS OF RATED OFFICER WITH RESPECT TO INDORSING OFFICER

APPENDIX F

AIR FORCE RATING WORK BOOKLET

(SAMPLE SHEET)

40. SUBORDINATING PERSONAL INTERESTS (See also V-49)

☐	1	2	3	4	5
Unknown	Allowed personal interest and welfare to interfere seriously with performance of duty.	Made excessive use of the privileges of his rank to increase personal comfort or avoid inconvenience.	Accepted minor personal inconvenience in order to perform his duties.	Subordinated personal desires to the performance of duty.	Disregarded personal welfare and interests completely when necessary for the successful performance of duty.

41. COOPERATING WITH ASSOCIATES (See also I-11)

☐	1	2	3	4	5
Unknown	Refused to help or cooperate with an associate.	Cooperated only grudgingly with an associate.	Gave some assistance to an associate when requested to do so.	Cooperated willingly with an associate when called upon.	Voluntarily assisted an associate when help was needed.

42. SHOWING LOYALTY

☐	1	2	3	4	5
Unknown	Openly criticized a superior or associate.	Allowed a superior or associate to be criticized without coming to his defense.	Supported the policies or actions of a superior or associate.	Gave credit to a superior for accomplishments of the organization.	Shared any criticism or blame directed at a superior for the mistakes or shortcomings of his organization.

43. TAKING RESPONSIBILITY FOR SUBORDINATES (See also II-26)

☐	1	2	3	4	5
Unknown	Failed to take any responsibility for the conduct and fair treatment of a subordinate.	Took very little responsibility for the conduct and fair treatment of a subordinate.	Assumed responsibility for the conduct and fair treatment of a subordinate.	Assumed substantial responsibility for the conduct and fair treatment of a subordinate.	Assumed full responsibility for the conduct and fair treatment of a subordinate.

V. PERSONAL HABITS AND ADJUSTMENT

44. ATTENDING TO DUTY

☐	1	2	3	4	5
Unknown	Required constant prodding and close supervision to keep his attention on his assigned duties.	Worked just hard enough to get by.	Showed satisfactory industry.	Worked hard and willingly to achieve objectives.	Did extra work voluntarily in order to achieve objectives.

45. ATTENDING TO DETAILS

☐	1	2	3	4	5
Unknown	Neglected an important detail of his job with serious results.	Neglected routine details of his work, slowing up operations.	Handled satisfactorily the important details of his job.	Gave careful attention to the important details of his job.	Made sure that all details of his job were completely taken care of.

46. REPORTING FOR APPOINTMENTS

☐	1	2	3	4	5
Unknown	Failed to keep an appointment causing serious inconvenience to others.	Was late for an appointment without notifying others.	Notified others when he expected to be late for an appointment.	Made a special effort to be prompt in reporting for an appointment.	Kept an appointment in spite of substantial personal inconvenience.

47. MEETING COMMITMENTS (See also I-3)

☐	1	2	3	4	5
Unknown	Failed to meet a commitment hindering the work of others.	Was late in meeting a commitment causing inconvenience to others.	Met a commitment promptly and fully.	Met a commitment fully in spite of difficulties beyond his control.	Completed an assignment ahead of time and more fully than required.

48. IMPROVING EFFECTIVENESS (See also VI-55)

☐	1	2	3	4	5
Unknown	Refused an opportunity offered him to improve his effectiveness.	Ignored an opportunity to improve his proficiency or potentiality.	Accepted an opportunity to improve his proficiency or potentiality.	Was alert to an opportunity to improve his effectiveness.	Sought out actively an opportunity to improve his proficiency and potentiality.

49. BEING FAIR AND SCRUPULOUS (See also IV-40)

☐	1	2	3	4	5
Unknown	Made an inaccurate or evasive statement or indulged in a "sharp" practice.	Used an indirect and questionable method.	Was satisfactorily accurate, frank, or fair in a statement or practice.	Used a direct and forthright method.	Was scrupulously accurate, frank, or fair in a statement or practice.

30. MAKING USE OF EXPERIENCE (See also VI-56)

☐	1	2	3	4	5
Unknown	Made no application of his own or others' experience in similar work resulting in unnecessary delays and errors.	Failed to make adequate application of his own or others' experience resulting in a loss of effectiveness.	Made some application of his own or others' experience to assist him on a problem.	Made good use of his own or others' experience to work out a problem.	Applied his own and others' experience to the fullest extent in the solution of a problem.

31. LONG-RANGE PLANNING

☐	1	2	3	4	5
Unknown	Failed to prepare plans to guide the organization's work.	Prepared only inadequate plans based on a sketchy understanding of the objectives.	Prepared plans based on only the immediate objectives of the organization.	Prepared careful plans based on a full understanding of all the objectives.	Developed very effective long-range plans based on a thorough analysis of all objectives and of means of reaching them.

32. TAKING PROMPT ACTION

☐	1	2	3	4	5
Unknown	Refused to act when a decision was urgently needed.	Hesitated or put off making a needed decision although possessed of all essential facts.	Took necessary action without serious delay.	Took prompt action to meet an established need.	Took prompt action to meet a legitimate need even though he might have delayed.

33. SUSPENDING JUDGMENT

☐	1	2	3	4	5
Unknown	Refused to wait for or examine essential additional facts before deciding.	Failed to request or examine needed additional facts before deciding.	Decided only after he had been supplied with some additional information.	Withheld his decision on an important matter until the main additional facts needed could be examined.	Insisted in spite of strong pressure on obtaining needed additional facts before making an important decision.

34. MAKING CORRECT DECISIONS

☐	1	2	3	4	5
Unknown	Made a bad decision which appeared quite contrary to the known facts.	Made a serious error in judging the relative importance of several factors in deciding.	Made an adequate decision based on a reasonable interpretation of the facts.	Made a good decision showing sound evaluation of all the factors involved.	Made an excellent decision which exactly fitted all the factors involved.

35. PERSISTING IN EFFORTS

☐	1	2	3	4	5
Unknown	Gave up as soon as he met opposition or difficulties in pursuing an objective.	Gave up after a few attempts had failed.	Kept on working toward an objective of the organization despite minor difficulties or opposition.	Renewed his efforts after a major set-back in pursuing an objective of the organization.	Persisted in his efforts to achieve an objective of the organization despite repeated set-backs or severe opposition.

36. MAKING FORCEFUL EFFORTS

☐	1	2	3	4	5
Unknown	Made very feeble and ineffectual efforts to achieve an objective.	Made only weak and partially effective efforts to achieve an objective.	Was somewhat vigorous and forceful in his efforts to achieve an objective.	Pursued an objective of the organization with energy and force.	Made very vigorous and forceful efforts to achieve an objective.

37. ABSORBING MATERIALS

☐	1	2	3	4	5
Unknown	Delayed operations because of his poor memory or the slowness with which he absorbed facts.	Made a mistake due to slow learning or faulty memory for facts.	Learned and remembered well enough to do a satisfactory job.	Achieved good results because he learned or recalled facts better than others.	Achieved exceptional results because of his unusual ability to learn and remember pertinent information.

IV. ACCEPTANCE OF TEAM PRINCIPLE AND ORGANIZATIONAL DISCIPLINE

38. COMPLYING WITH ORDERS AND DIRECTIVES

☐	1	2	3	4	5
Unknown	Disobeyed an order or directive.	Delayed or tried to avoid compliance with an order or directive.	Complied satisfactorily with an order or directive without undue delay.	Carried out an order or followed a directive promptly.	Carried out promptly and effectively the spirit and intent of an order or directive.

39. ACCEPTING ORGANIZATIONAL PROCEDURE

☐	1	2	3	4	5
Unknown	Violated an organizational procedure or regulation.	Was openly critical of and followed only partially an organizational procedure.	Conformed without open criticism to an organizational procedure with which he had previously expressed disagreement.	Accepted a procedure fully because he understood the necessity for organizational control.	Accepted and promoted understanding of a procedure as essential to effective organizational control.

APPENDIX G

AIR FORCE RATING SHEET

Last Name	First Name	Initial	Grade	Serial No.

INSTRUCTIONS: Place an "X" in the appropriate box to denote your evaluation of the performance of this officer with respect to the critical requirements listed below. The six columns of boxes correspond to the unknown box and the five numbers on each scale in the *Check List of Critical Requirements for Officer Evaluation* on *Report of Officer Effectiveness (AF Form 77A)*.

D

I. PROFICIENCY IN HANDLING ADMINISTRATIVE DETAILS

U 1 2 3 4 5

1. Understanding instructions
2. Scheduling work
3. Getting information from records
4. Getting ideas from others
5. Checking accuracy of work
6. Writing letters and reports
7. Getting cooperation
8. Presenting finished work
9. Keeping records
10. Keeping others informed
11. Rendering effectiveness reports

X 1 2 3 4 5 X

(DO NOT USE THIS SPACE) →

II. PROFICIENCY IN SUPERVISING PERSONNEL

U 1 2 3 4 5

12. Matching personnel and jobs
13. Delegating authority
14. Giving orders and instructions
15. Insuring comprehension
16. Giving reasons and explanations
17. Supporting authorized actions
18. Encouraging ideas
19. Developing teamwork
20. Setting a good example
21. Assisting subordinates in their work
22. Evaluating subordinates' work
23. Looking out for subordinates' welfare
24. Maintaining relations with subordinates

X 1 2 3 4 5 X

(DO NOT USE THIS SPACE) →

III. PROFICIENCY IN PLANNING AND DIRECTING ACTION

U 1 2 3 4 5

25. Taking responsibility
26. Solving problems
27. Making use of experience
28. Long-range planning
29. Taking prompt action
30. Suspending judgment
31. Making correct decisions
32. Making forceful efforts
33. Absorbing materials

X 1 2 3 4 5 X

(DO NOT USE THIS SPACE) →

IV. ACCEPTANCE OF ORGANIZATIONAL RESPONSIBILITY

U 1 2 3 4 5

34. Complying with orders and directives
35. Accepting organizational procedure
36. Subordinating personal interests
37. Cooperating with associates
38. Showing loyalty
39. Taking responsibility for subordinates

X 1 2 3 4 5 X

(DO NOT USE THIS SPACE) →

V. ACCEPTANCE OF PERSONAL RESPONSIBILITY

U 1 2 3 4 5

40. Attending to duty
41. Attending to details
42. Reporting for appointments
43. Meeting commitments
44. Being fair and scrupulous
45. Maintaining military appearance
46. Adapting to associates
47. Adapting to the job
48. Conforming to civil standards

X 1 2 3 4 5 X

(DO NOT USE THIS SPACE) →

VI. PROFICIENCY IN DUTY MILITARY OCCUPATIONAL SPECIALTY

(Describe the specific duty performed and give the SSN/ of the duty)

U 1 2 3 4 5

49. Possessing fundamental training
50. Improving effectiveness
51. Keeping well-informed
52. Applying training and information
53. Showing ingenuity in specialty
54. Handling related assignments

X 1 2 3 4 5 X

(DO NOT USE THIS SPACE) →

TOTAL SCORE *(DO NOT USE THIS SPACE)*

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APPENDIX H

MARINE CORPS RATING FORM

NAVMC 652-PD

REPORT ON FITNESS OF OFFICERS OF THE UNITED STATES MARINE CORPS

(To be submitted in accordance with Art. 137, U. S. Navy Regulations, 1920, and Art. 10-22, Marine Corps Manual)

_____, _____ U. S. M. C.
(Name—Surname first) (Rank)

Ship or station _____

Period covered _____ months, from _____ to _____

To be answered by officer reported on:

1. Regular duties _____

2. Additional duties _____

3. Wife's address _____

4. Name, relationship, and address of person other than wife to be notified in case of emergency _____

_____

_____, _____ U. S. M. C.
(Signature) (Rank)

To be answered by reporting officer:

5. Reporting officer _____, _____ U. S. _____
(Name) (Rank)

6. *Method of rating.*—When rating this officer, consider carefully and keep in mind the following definitions, taking into consideration his length of service, the opportunities afforded him which might have a bearing on his performance of duty, his personal characteristics, and professional qualifications:

   UNSATISFACTORY.—Inefficient; below minimum standard.
   FAIR.—Satisfactory; passably efficient; up to minimum standard.
   GOOD.—Average qualifications; efficient, but to a less degree than "Very good."
   VERY GOOD.—Above average; efficient; well qualified.
   EXCELLENT.—Highly efficient; qualified to a high degree.
   OUTSTANDING.—Superior; exceptionally efficient; qualified to a preeminent degree.
   NOT OBSERVED.—To be used in all cases where the reporting officer has had insufficient opportunity to observe the officer reported on during the period covered by this report to permit a rating as to performance of a particular duty, personal characteristics, or professional qualifications.

7. **Before making out this report,** decide in your own mind on an actual officer in the grade of the officer now being reported on who, in your opinion, based on personal knowledge, is the outstanding officer of his rank in the Marine Corps; or
   Decide in your own mind the character attributes and professional qualifications which the ideal officer in the grade of the officer now being reported on should possess.

8. Considering the officer reported on in comparison with your ideal (7), and having in mind the instructions under (6) "Method of Rating", indicate your estimate of him by marking "X" in the appropriate space below.	Not observed	Unsatisfactory	Fair	Good	Very good	Excellent	Outstanding
Performance of duty (based on fact):							
(*a*) Regular duties							
(*b*) Additional duties							
(*c*) Administrative duties							
(*d*) Executive duties							
(*e*) Handling officers							
(*f*) Handling enlisted men							
(*g*) Training troops							
(*h*) Tactical handling of troops (unit appropriate to officer's grade)							

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9. To what degree has he exhibited the following qualifications? Consider him in comparison with your ideal (7), and indicate your estimate by marking "X" in the appropriate space below.	Not observed	Unsatisfactory	Fair	Good	Very good	Excellent	Outstanding
(*a*) **Physical fitness** (physical stamina; endurance under hardship, adversity, or discouragement)							
(*b*) **Military bearing and neatness** (dignity of demeanor; neat and smart appearance)							
(*c*) **Attention to duty** (industry; the trait of working thoroughly and conscientiously)							
(*d*) **Cooperation** (the faculty of working in harmony with others, military or civilian)							
(*e*) **Initiative** (the trait of taking necessary or appropriate action on own responsibility)							
(*f*) **Intelligence** (the ability to grasp readily situations and instructions)							
(*g*) **Judgment and common sense** (the ability to think clearly and arrive at logical conclusions)							
(*h*) **Presence of mind** (the ability to think and act promptly and effectively in an unexpected emergency or under great strain)							
(*i*) **Force** (the faculty of carrying out with energy and resolution that which is believed to be reasonable, right, or duty)							
(*j*) **Leadership** (the capacity to direct, control, and influence others and still maintain high morale)							
(*k*) **Loyalty** (the quality of rendering faithful and willing service, and unswerving allegiance under any and all circumstances)							

10. Has he any characteristics—temperamental, moral, physical, etc.—which adversely affect his efficiency? _____
If yes, briefly describe them _____

11. During the period covered by this report, has the work of this officer been reported on either in a commendatory way, or adversely? If so, indicate subject matter and date _____

12. During the period covered by this report was he the subject of any disciplinary action that should be included on his record? _____ If yes, and if not previously reported to Headquarters, attach separate statement of nature and attendant circumstances.

13. In case any unfavorable entries have been made by you on this or on a previous report, were the deficiencies noted brought to the attention of the officer concerned? _____ If yes, what improvement, if any, has been noted? _____
If no improvement was noted, what period of time has elapsed since the deficiencies were brought to his notice? _____

14. Considering the possible requirements of the service in war, indicate your attitude toward having this officer under your command. Would you—
(*a*) Particularly desire to have him? _____ (*c*) Be willing to have him? _____
(*b*) Be glad to have him? _____ (*d*) Prefer not to have him? _____
If (*d*), explain briefly _____

15. (To be answered only when reporting on officers serving under revocable commissions.) Do you recommend retention in the service after expiration of revocable period of commission? _____
(Yes or no; if negative give reasons)

16. REMARKS: (To be used for additional pertinent information or comment, if any, not covered elsewhere in this report)
_____

17. Indicate your estimate of this officer's "General Value to the Service", using the ratings specified in (6) _____

18. Having in mind the special fitness of this officer and the efficiency of the naval service, I certify that to the best of my knowledge and belief all entries made hereon are true and without prejudice or partiality.

_____, _____ U. S. _____
(Signature) (Rank)

_____ _____
(Date) (Duty)

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APPENDIX I

GLOSSARY OF TERMS

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Behavior -- Any or all of the overt actions of an individual including manifestations of emotions. In the field of efficiency rating it refers particularly to those actions or manifestations which are significant to the job being performed by the ratee.

Cognition-- A concept, a mental picture. Also the act of forming a mental picture.

Continuum-- The relation which exists when several entities are actually varying degrees of the same quality of thing.

Correlation-- The degree with which two phenomena are related or associated. Correlation implies association only, not causality.

Correlation, Coefficient of-- The mathematical expression of the degree of association. A coefficient of 1.00 signifies perfect association for, knowing the value of one phenomenon, the personnel manager may predict the value of the other exactly. Coefficients of less than 1.00 indicate that prediction will be less than perfect until, at a coefficient of 0.0,

APPENDIX I

GLOSSARY OF TERMS

Behavior -- Any or all of the overt actions of an individual including manifestations of emotions. In the field of efficiency rating it refers particularly to those actions or manifestations which are significant to the job being performed by the rater.

Equation-- A balance, a mental picture. Also the act of forming a mental picture.

Criterion-- The relation which exists when several entities are actually varying degrees of the same quality or thing.

Correlation-- The degree with which two phenomena are joined or associated. Correlation implies association only, not causality.

Correlation, coefficient of-- The mathematical expression of the degree of association. A coefficient of 1.00 signifies perfect association for, knowing the value of one phenomenon, the personnel rater may predict the value of the other exactly. Coefficients of less than 1.00 indicate that prediction will be less than perfect until, at a coefficient of 0.0,

there is no relation and prediction will be no better than blind guessing. Negative coefficients have predictive value comparable to that of positive coefficients of the same numerical magnitude. However, with a negative coefficient, the maximum display of one phenomenon is associated with the minimum of the other and prediction must be made on that basis.

Distribution -- Any group of scores obtained on the same rating or testing device and gathered together for consideration.

Efficiency Rating -- This is one name for an assessment of that portion of an individual's value on a job which is made up of intangible qualities not measurable by more objective means. The term is also applied to the blank paper form used to systematize and record this assessment.

Efficiency Report -- The U. S. Army efficiency rating device for officers. The term "report" carries the connotation that only a <u>description</u> of the ratee is being made with the derivation of a <u>rating</u> being postponed until the report reaches headquarters.

Fitness Report -- The U. S. Navy equivalent of the Army Efficiency Report.

there is no relation and prediction will be no better than blind guessing. Negative sufficiency have predictive value commensurate to that of positive sufficiencies of the same numerical magnitude. However, with a negative sufficiency, the maximum display of the phenomenon is associated with the absence of the other and prediction must be made on that basis.

Discrimination -- Any group of equipment contained on the same testing or testing device and performing simultaneously for comparative evaluation.

Efficiency Testing -- This is one mode for an assessment of what proportion of an individual's value on a job which is made up of irreducible variability the measurable or more objective means. The term is also applied to the clinic helper tests used to systematize and record this assessment.

Efficiency Engineer -- One [illegible] using efficiency method devices for efficiency. The term "engineer" applies the operation that only a description of one's work is being done with the derivation of a method being performed until the result produce improvements.

Fingers Tempo -- The [illegible] equivalent of the [illegible] finger tempo.

Mean -- The arithmetical average of a group of numbers.

Median -- The point or number in a distribution which divides the distribution into two equal parts.

Merit Rating -- The Industrial psychologist's equivalent of the Efficiency Rating.

N -- The symbol for the number of subjects participating in an experiment.

Perception -- That which takes place when an individual becomes aware of the occurrence of a phenomenon or of the existence of an entity.

Percentile Score -- A score presented in such form that it shows the percentage of the entire distribution which lies below that particular score. Thus a 75th percentile score is higher than 75% of the scores of that distribution.

Ratee -- The individual who is the subject of the efficiency rating or report.

Rater -- The person who performs the assessment and makes out the rating form.

Raw Score -- The actual score attained on a rating.

Mean — The arithmetical average of a group of numbers.

Median — The point on number in a distribution which divides the distribution into two equal groups.

Meyer's rating — The Industrial Psychologist's evaluation of the Officiency rating.

N — The symbol for the number of subjects participating in an experiment.

Neurosis — That which takes place when an individual suffers from the occurrence of a phenomenon or of the existence of an object.

Neurotic — One who a lower percentile in each from that is lower the percentile of the median classification which also value that particular score. Thus a 75th percentile score is higher than 75% of the scores of that classification.

Order — The individual who is the subject of the efficiency rating or report.

Order — The person who performs the arrangement and makes out the rating form.

Ordinate — The upper cross stroke on a rating.

Reliability -- That quality of a measuring instrument which causes the device to produce the same result on successive measurements of the same entity.

Reporting Senior -- The Navy's term for the Rater.

Service Rating -- The name applied to efficiency rating in the field of public personnel administration.

Service Report -- The name applied to the efficiency report in the field of public personnel administration.

Skewed Distribution -- A distribution which has departed from the normal bell-shaped curve and has the major portion of its scores concentrated near one end of the scale.

Split-Halves Reliability -- A kind of reliability determined by dividing the test or rating device into two equivalent parts and correlating the scores on the two parts. The resulting coefficient is known as the split-halves reliability coefficient.

Standard Deviation -- A statistical concept; a measure of the variability of the distribution. It is determined by taking the square root of the average of the deviations (from the mean) of all the scores in the distribution.

reliability — That quality of a measuring instrument which causes the device to produce the same result on successive measurements of the same entity.

Reversing Switch — The Davyis Bowl for Sun Cause.

Serving Ballot — The same applied to efficiency voting in the field of public personnel administration.

Serving Report — The same applied to the efficiency report in the field of public personnel administration.

Skewed Distribution — A distribution which has departures from the normal bell-shaped curve and has its major portion of its curve concentrated near one end of the scale.

Split-Half Reliability — A type of reliability determined by dividing the test or rating device into two equivalent parts and correlating the scores on the two parts. The resulting coefficient is known as the split-half reliability coefficient.

Standard Deviation — A mathematical computed measure of the variability of the distribution. It is determined by taking the square root of the average of the deviations from the mean of all the scores in the distribution.

Standard Score -- The standard score equivalent of a raw score is the deviation of that raw score from the mean of the scores, divided by the standard deviation of the distribution. The standard score is a ratio and as such is comparable to standard scores in other distributions. Therein lies its usefulness.

Statistical Significance -- A term applied to describe a difference between two measures. It refers to a convention observed by statisticians whereby, if the difference is three times as great as the standard deviation of that difference, the chance that on repeated measurements the difference will be found to occur in the opposite direction is so small as to be negligible. Under such conditions, the difference is said to be "statistically significant".

Subject -- The general term for the individual being subjected to study in an experiment.

Trait -- A consistency of behavior toward a given stimulus.

Validity -- The ability of a measuring device to measure that which it purports to measure.

Sequence item — The standard score assigned to a man's score in the instrument of that man score from the mean of the sexes, divided by the standard deviation of the distribution. The standard score is a meth and so such is comparable to standard scores in other distributions. Thereby like the quantiles.

Statistical significance — A term applied to describe a difference between two measures. It refers to a correlation observed by statisticians whereby if the difference in scores alone be given as the standard deviation of that difference, the chance that an separate measurements the difference will be found to occur in the opposite direction is so small as to be negligible. Under such conditions, the difference is said to be "statistically significant".

Subject — The general term for the individual being analyzed in study in an experiment.

Trait — A consistency of behavior toward a given situation.

Validity — The validity of a measuring device is measure that that it measures in measure.

Validity, Face -- Validity which is awarded to a device by reason of the fact that it appears (on consideration of its makeup) to measure that which it purports to measure.

z Score -- A synonym for Standard Score.