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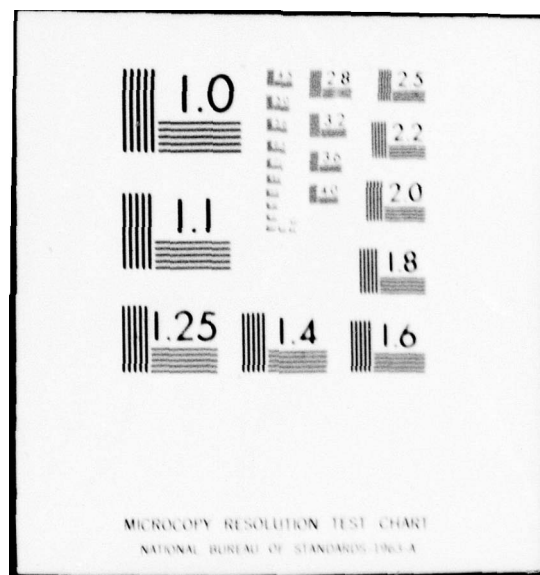
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by

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ABSTRACT

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An Analysis of the Amalgamation of the CS and SD
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ABSTRACT

This study examines the impact of the amalgamation of the Navy's former Commissaryman (CS) and Steward (SD) ratings into the Mess Management Specialist (MS) rating. Vehicles used to analyze the impact of the amalgamation include the responses of 6,594 CS, SD and MS personnel to the Navy's Human Resource Management (HRM) survey during the three-year period, 1974-76, and interview data gathered from 60 MS personnel from the San Diego area in early 1978. The amalgamation is also briefly analyzed using the Leavitt socio-technical model of organizational change. Included in the study is a historical view of the role food has played in naval operations and the role of food and food service support systems in the modern naval environment. Having examined the amalgamation from these perspectives, major conclusions are found to include: (1) food service support systems impact heavily on morale, quality of work life, satisfaction, retention and indirectly on mission accomplishment, (2) a true amalgamation of attitudes and perceptions by Filipino and Caucasian MS personnel has not occurred, (3) the HRM survey may be a potentially useful tool to assess and monitor organizational change, (4) MS personnel have a poor self-image, (5) both Filipino and Caucasian racial sub-groups are still experiencing organizational frustration, intercultural conflict and uncertainty as a result of the amalgamation. Recommendations for future direction were divided into rating-specific and Navy-specific categories.

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I. INTRODUCTION

The most disagreeable thing at sea is the cookery; for there is not, properly speaking, any professional cook on board. The worst sailor is generally chosen for that purpose. Hence comes the proverb used among the English sailors, that "God sends meat, and the Devil sends cooks." (Benjamin Franklin, 17??)

There is little argument that significant advances and improvements have taken place in food service operations aboard ships since the days of Benjamin Franklin. So good, in fact, is the food service support system aboard most U.S. Navy ships that it becomes increasingly easier to overlook the importance of the Navy's Mess Management Specialists (MS's) who are involved each day in preparing food to satisfy this basic human need. In the past, the method most often used to judge the level of satisfaction and organizational health of these key individuals involved in food service has been by the perceived quality of their product. This largely subjective approach ignored more subtle indications that a serious organizational problem was brewing in this important rating. A problem which has the potential to adversely impact on the lives of every naval member, especially those serving for long periods at sea.

Information representative of the magnitude of the MS problem is contained in recent Bureau of Naval Personnel manning figures. While the MS rating is still the third largest in the Navy (N=16,286) and has a present manning level of 96.4%, the recent negative personnel trends in the rating are

cause for great concern. Since the creation of the MS rating on 1 January 1975, there has been a growing deficit between the number of MS personnel needed annually to sustain a viable career force and the number retained. This deficit has grown from approximately 200 in FY 75 to over 800 in FY 77. During this same period, the first term reenlistment rate for eligible MS's has plummeted from 89% to only 40% while the number of ineligibles has been steadily increasing both by head count and as a percentage of total personnel coming to the end of their enlistment. The total number of ineligible personnel in FY 77 was 775, or about 45% of those completing enlistment. Current projections show no significant improvements in these trends.

What are some of the implications of the trends just mentioned? First, the MS rating is beginning to feel a real shortage of personnel at the bottom of the rating structure. This projection will result in a serious shortfall in the near future at the E-4 and E-5 petty officer level.

Second, the MS rating's current overall manning level is due in large part to the carry-over of personnel from the old Steward (SD) rating. The Stewards were combined with the former Commissaryman (CS) rating in 1975 to form the new MS rating. Over half of the overage that currently exists in the upper enlisted MS paygrades will disappear in the next two to four years as these people reach 20 years of service.

Third, the accession picture, including "on the job" (OJT) inputs from the fleet, is going to be far short of the 3,300 needed annually. This will likely occur unless the

thruput of the Navy's MS Class "A" school is significantly increased from its present level of 2,200. This predicted accession shortfall, coupled with the all-volunteer force concept and the projected decline in the number of service age males over the next few years, means the MS rating will be competing more intensely for human resources in a shrinking supply market.

With a paucity of inputs at the bottom of the MS rating, the Navy will face a serious shortage of qualified food service junior petty officers in the next three to four years. This lack of people will be further aggravated by a reduction in the present career force due to retirements. Taken together, these factors imply the MS rating will soon be severely undermanned.

This study attempts to look beyond the cold, hard figures toward a more global analysis of the Navy's food service support system. This analysis will include a discussion of the problems associated with the merger of the former SD and CS ratings. The second chapter begins with a brief historical description of food service operations and their impact on naval operations. The third chapter is concerned with a literature search regarding the role food has played in the naval warfare environment.

Following a short chapter describing the methodology used in this study is Chapter V which focuses on the impact of the amalgamation of former SD and CS personnel into the MS rating. The principal research method employs investigation of the

Human Resource Management (HRM) survey data bank and formal interviews with fleet MS personnel. These two data-gathering vehicles are used as the primary basis for the analysis of pertinent issues related to the perceptual and socio-cultural factors existing within the MS rating.

A second analytic perspective that will be utilized involves the use of a socio-technical model of organizational change. The principal intent of this analytic process is to attempt to provide additional clues concerning existing problems within the MS rating. An additional goal of the study is to offer problem solutions or alternatives arising out of the data analysis.

MS personnel are an extremely important human resource within the Navy. The viability and survival of the rating in its present form is necessary to preclude a decrease in both the combat-readiness of fleet personnel and their health and morale while serving aboard naval commands. The present situation within the MS rating is a "sleeper" and only by prompt concerted action will the Navy be able to ensure that its members are properly fed by a professional, well-trained and highly motivated group of individuals.

In light of the increasing emphasis on retention within the naval organization, the Navy cannot afford to overlook the significance of the food service support system. This system appears to have an important role in influencing naval members regarding continued service in the organization.

This study may be considered as unique both in the breadth of material covered and the use of the HRM survey data bank to analyze the perceptions and attitudes of MS personnel. The HRM survey data has been used earlier by the Naval Personnel Research and Development Center (1977) in a preliminary report to the Chief of Naval Personnel on racial attitudes. However, the report attempted to make trend comparisons between the entire Filipino and Caucasian populations within the Navy. No study has thus far been done exclusively on responses to the HRM survey from just the MS community.

Another recent study concerning Filipinos in the Navy (Szalay and Bryson, 1977) took a small sample of Caucasians and Filipinos (C=150, F=267) and did an in-depth assessment of psycho-cultural dispositions. Szalay and Bryson's method involved using spontaneous word association techniques and a questionnaire focused on service satisfaction, communication problems and interpersonal relations.

Two earlier informal sensing attempts were also conducted among MS personnel. (CINCLANTFLT, 1977; Nartea, 1977). One was conducted aboard a large east coast ship involving 63 former CS and SD personnel and the other in the Norfolk area involving 27 former SD personnel. The results of both studies highlighted significant dissatisfaction within the Filipino community with regard to the CS and SD merger.

The authors' intent in doing this study is to stimulate further interest and research into the Navy's food service support system. This research will focus special emphasis

on the personnel who provide the human resources needed to make the system function efficiently and effectively. The study is meant to be an initial effort toward identifying issues, problems and concerns that require command attention to improve the attractiveness of the MS rating and to increase the pride and sense of satisfaction of those presently serving in the rating.

II. HISTORICAL ROLE OF FOOD IN NAVAL OPERATIONS

A. THE IMPORTANCE OF FOOD

In this age of atomic energy, electronic gadgetry and sophisticated technologies, we tend to take for granted the substantiation for the need for food. We as a society are just beginning to see the impact of food on morale and human performance. Intuitively, military commanders agree that Napoleon's observation that "an army marches on its stomach" is valid. The critical attention-getter in today's Navy is fleet readiness, as it has been traditionally. Many man-hours and dollars are expended yearly ensuring that inanimate equipments have necessary fuel and spare parts in sufficient quantity and repair to ensure mission accomplishment. Can we afford to neglect human fuel and its management? A knowledge of where one's job fits into the scheme of things helps to build an esprit that serves to fulfill individual and group needs.

B. CHRONOLOGY

1. Phoenician Traders

Phoenician traders filled their round bottom boats with trade goods and provisions and mastered the Mediterranean Sea and the eastern Atlantic along the western coast of Europe by 1000 B.C. They carried dried grains and other foods in limited quantities, putting in to port or shore frequently to replenish. The Greek historian Herodotus credits the

Phoenicians with a circumnavigation of Africa that took three years to complete. [Miegs, 1924]. Provisions for this feat were accumulated by making harbor, sowing corn, and waiting until it was harvested before moving on. This may seem to have been a simple solution, but no other circumnavigation of Africa is recorded until Vasco De Gama's voyages in the 15th century.

2. Greek and Roman Military History

Early naval tactics were little more than water-borne infantry tactics. The Greeks and Romans also put in to shore frequently to prepare food and reprovision. Little room was allowed for provisions and most of what was carried was brought aboard by individuals. Thus, the fighting of early navies was limited as much by the ability to feed a crew as by navigational techniques.

Like the Phoenicians, the Vikings had a natural affinity for the sea. Their explorations ranged from Palestine in the East to what is now America in the West. Given the ranges of these explorations and the limited storage capacities of their vessels, the Vikings must have been able to master the problem of provisioning. Island-hopping and being able to both row and sail reduced the storage requirements but did not solve the problem. It is known that salted meat and fish were stocked as well as live cattle. In addition to hunting game on land, the Vikings hunted seals at sea during the voyages. Food was prepared in bronze kettles heated over fires made in ovens on the open decks.

During the Crusades, the typical provisioning periods ranged from one month to a year. As with the rest of the Middle Ages, exploration by Europeans was pretty well limited to the Mediterranean Sea and the Atlantic coast. By the end of the 15th century exploration again became a motivating force in the coastal countries of Europe. Methods of provisioning had changed little from the 12th century when the Venetians had been at the cutting edge of seamanship in the Mediterranean Sea. Continuing an early nautical practice, each crewman or passenger was expected to provide his own food, wine, and water. [Chatterton, 1913].

3. New World Exploration

When Columbus sailed for the New World in 1492, his ships were provisioned for a one-year voyage with bacon, beans, salt fish, cheese, bread, water, and wine. These foodstuffs deteriorated rapidly in the hot, damp holds. Nonetheless, they were sufficient to sustain the explorers on their seventy-day voyage.

One hundred years before the Columbian expeditions, the Chinese were constructing large sailing ships accommodating six hundred seamen and four hundred soldiers. Seamen were allowed servants and family accommodations on board. Some of the food and nutritional problems were solved by planting and growing herbs and vegetables in small plots on board ship. [Meigs, 1924].

4. English Navy

With the reign of Henry VIII in England came the genesis of what ultimately evolved into the United States Navy.

The GREAT HARRY, one of England's first large (1500 ton) warships, carried a crew of seven hundred which included three stewards, three cooks, plus three cooks' mates, to procure and prepare the food. Henry's Navy was the first English navy to stockpile stores and provisions in ports to issue to his ships. The Elizabethan Navy further refined the art of going to sea. The crews were divided into groups of five or six for messing with stewards delivering the food from the cook's pots to the individual messes. In addition to preparing the food, the cooks had charge of the store of platters, spoons, etc. This was in contrast to the Spanish custom of the same period of individual preparation of food.

How did these methods effect the operations of the Navy? The largely putrid condition of shipboard food still persisted as in Columbus's day. The result of the food deterioration and spoilage was a high incidence of death and disease which severely limited the ability of a ship to fight after but a few days at sea. Beer rations were standard but even though it often amounted to a gallon a day, it was insufficient to dull the effects of poor food. In reality, beer added to the food-induced illness level when it soured. In addition to the bad quality of rations, the custom of providing short weights in an effort to make extra money off of the provisioning contracts started on a large scale during this period. Unfortunately, these conditions became almost a tradition for nearly two hundred years. In order to attract better qualified and healthier seamen, wages were

raised by Sir John Hawkins. This action had as a primary goal an increase in the tactical capabilities of ships of the Royal Navy. It also provided more room for stores by reducing the number of sick men who took up needed space and were contributing nothing to operational performance. In light of the physical deterioration of the crews, it is amazing that the Spanish Armada was driven from the English Channel by the ships of Sir Frances Drake. Of course, it must be noted that the Spanish crews were in not much better physical condition as a direct result of bad nutrition and disease.

Lord Howard, writing to Elizabeth I three weeks after the Spanish were driven off, related that "The infection is grown very great in many ships and is now very dangerous; and those that come in fresh are soonest infected; they sicken one day and die the next." [Chatterton, 1913]. This disease was probably acute enteritis, a direct result of sour beer acting on malnourished bodies. The direct cost to the Navy levied by these food related conditions was a loss of manpower to illness and desertion. Voluntary absence of seamen often became the only alternative to further mistreatment and possible death. This drain on experienced crews greatly reduced the Navy's ability to fight effectively.

The House of Stuart was not much better at running a Navy. The reign of Charles I saw conditions worsen and mutinies become commonplace. In 1627 the crew of the HAPPY ENTRANCE refused to sail, saying "they would rather be hanged

as have them starve at sea." The unrest continued and grew until several hundred men marched on London to plead their cause directly to King Charles. [Oppenheim, 1896].

During the English Civil War, all but one of the ships of the Royal Navy deserted the King's service. These desertions were specifically related to bad food, irregular pay, and poor leadership. The end result of these facts was a serious negative effect on operations. Although the intent of the leaders of the new government was good, conditions improved little under Cromwell. Admiral Robert Blake wrote to Cromwell late in the summer of 1655 bemoaning the fact that he could not engage the Spanish because of poor and inadequate food supplies that greatly weakened his crews.

5. Eighteenth Century

The 18th century saw many improvements in the technology of shipbuilding, navigation, and gunnery, but little was done for the seaman and his food until the arrival of Admiral Lord Nelson on the naval scene. The demands of the wars of the period required the "impressment" of large numbers of landsmen. Among the prime sources of naval recruits were hospitals, sick quarters, and jails. Thus the crews characteristically started out in poor health, only to worsen with time at sea.

In 1759, a ship of 2100 tons was commissioned for building. She was destined to be the paragon of British ships-of-the-line for nearly sixty years. In 1765, HMS VICTORY was launched with a complement of between eight and nine hundred men.

Her Captain prepared placards, posters, and handbills stating that special attention had been paid to provisioning and that crewmen could expect to feed on plenty of fresh meat and grog, as an allurement to young recruits. These promises of small comforts, adventure, and prize money seem to have recruited a few men, but impressment was still the primary source of manpower. The promise of fresh meat was usually kept in the form of salted beef and pork. This was often enough so tough that it was carved into curios by sailors who tired of trying to eat it after it had been boiled to a rubbery consistency. Biscuits were often full of maggots and weevils. The grog ration often did double duty by both slaking thirst and dulling the sensitivity of the individual's palate. [Callender, 1913]. Cooking was done on a central cook-fire and food was delivered to individual messes of ten to twelve men each.

The ship's cook in Lord Nelson's time was a warrant officer appointed by the Commissioner of the Navy. He was often a pensioner who had lost a limb. The fare he prepared was rarely more inventively prepared than by simple boiling. On occasion, peas were added to the brew to reduce the effect of the salt. His pay was augmented by selling the fat residue skimmed from the boiling kettles. He normally had one or two assistants, stood no watches, and even had a guard as he prepared meals to ensure no one would attempt to steal extra rations. [Masefield, 1905].

With the advent of long sea voyages in the 15th Century, the primary cause of death became the dread disease scurvy. What we now know is a simple vitamin deficiency was

for nearly three hundred years the devastator of the fleet. In terms of naval operations, it certainly had a very deleterious effect. Commodore Anson's circumnavigation of the world in 1740-44 paid a high price in human capital when 1051 of the 1955 seamen on seven ships died of scurvy. In 1779 a Franco-Spanish fleet was totally disabled by a combination of scurvy and typhus just as they were about to attack the city of Portsmouth, England. In 1780 the Channel Fleet landed 2400 cases of scurvy at Portsmouth after only ten weeks at sea. The Spithead mutiny of 1797 was caused in part by the poor food and incidence of disease throughout the fleet. In terms of organizational inertia and change, it is interesting to note that a cure for scurvy was known in the 17th Century and lost. When Dr. James Lund conducted a controlled dietetic experiment in 1753, oranges and lemons were identified as cures for the disease, but the Admiralty took forty-two years to adopt this knowledge into policy. In 1795 authorities were persuaded to mix lemon juice with the grog ration. Sir Gilbert Blane, head of the Sick and Hurt Board, had a thumb rule stating "every fifty lemons might be considered as a hand in the fleet." [Lloyd, 1965]. Operationally, it must be considered as a major factor in the successes of Lord St. Vincent's blockading fleets (1793-1797) and the victories of Lord Nelson, since both men were firm believers in the use of lemons.

6. United States Navy

Shifting to the United States Navy, the concern for the seamen of the Revolutionary Navy seems to have been higher

than for their British counterparts. The Continental Congress established "Rules for the Regulation of the Navy of the Colonies" in November 1775. These rules covered all aspects of naval life including the ration allowance and pay scales. Each day's ration was enumerated by item and weight. Notable is the inclusion of fresh vegetables - specifically turnips and potatoes - in the weekly diet. Compared to the British fare it must have seemed a luxurious prospect to the new Colonial sailor. If the pay of sailors is used to assess the relative worth of rates to the Navy, the Steward rated with the Surgeon's mate and just below the Gunner and Boatswain. [Clark, 1966]. This relative worth is consistent with the British naval organization which was no doubt used as a model by the Colonists.

After the Revolution, the letter of the naval law related to food was honored by the Mediterranean Squadron during the Tripolitan Wars. The journal of Hezekiah Loomis, steward aboard the U.S. Brig Vixen during operations off the coast of Tripoli in 1804-1806, reveals that the practice for this force was to provision every two or three days in Mediterranean ports. Their visits to Sicilian and Maltese ports were reminiscent of the stops of the early seafarers of the Mediterranean. [Middlebrook, 1928]. This routine provisioning had the net effect of maintaining the health of the crew as well as maintaining a full larder should the need arise for the ship to embark on extended operations. Such attention to provisioning was, however, not always the case.

By 1842 nutritional conditions had deteriorated and operations were effected sufficiently to force the Secretary of the Navy, Abel P. Upshur, to seek action from Congress to remedy the situation. The result was the "Act to Establish and Regulate the Navy Ration." This act was designed to increase the quality, quantity and variety of the food ration. [Anderson, 1966]. An aid to the implementation of the new ration was the adoption of the process of canning, invented by Nicolas Appert in France in the early 19th Century. Between 1842 and the Civil War little change took place in the ration. The allowance for spirits was discontinued in 1862 but the food service messes continued as before. Food quality was not much better on long voyages and preparation was haphazard because of the tradition of "electing" a cook from each mess to prepare food and clean up after the meal was finished. [All Hands, 1958]. A technological experiment that was tried was the use of a refrigerated stores ship for carrying meats and vegetables to the Union Blockade Fleet south of Cape Hatteras. This was accomplished by the steamer RHODE ISLAND that had been fitted with large ice cooled compartments. Ultimately the system was extended to serve the West Gulf, East Gulf, North Atlantic, South Atlantic, and the Mississippi River Squadrons.

7. Twentieth Century

Little change occurred until an experiment aboard the USS INDIANA during the Spanish American War was adopted fleet-wide in 1902. It was in this year that the concept of the

general mess was adopted and institutionalized, ushering in a new era of feeding at sea. [Navy Supply Corps Newsletter, 1973]. Navy menus were written for all ships for the first time in lieu of the previous method of passing down "old favorites" verbally from cook to cook. Mechanical cooling and steam propulsion had far reaching effects on provisioning. A ship for the first time could stow foodstuffs for a period longer than the on-board fuel supply would last. The variety of food continued to increase and the Navy began to process its own food. The best example of this was the establishment of Navy coffee roasting factories in New York and Oakland.

By the onset of World War II, feeding aboard ship was ready for the next big revolutionary step - underway replenishment at sea. Stores ships were developed to supply combatant ships on the high seas, thereby enabling the combatants to pursue the enemy without regard to land-based supply depots. The first Service Force Squadron was formed in 1944 and was the first U.S. Navy unit devoted solely to logistic support on the high seas.

Between World War II and the war in Vietnam, the trend in food service was to exploit the extant technologies and utilize innovations in packaging and preservation. Ration-dense foods were developed as a means of reducing the storage problem and to further extend the times between replenishments. This is perhaps best illustrated in the submarine force. The submarine service has gained a reputation as the best feeding branch of the naval service. The Navy has prided

itself in the last fifty years on its high quality food, often using the promise of quality food as a recruiting incentive. Even in Vietnam, the Navy was tied to a two to three week replenishment schedule in order to provide fresh meats and vegetables to its afloat units. Fleet duty was often tedious, extended, and dangerous. Food was seen by crew members as necessary for holding more than body and soul together - it was considered an important factor in sustaining morale.

C. EVOLUTION OF FOOD SERVICE RATINGS

Before leaving the chronological history of food and naval operations, it will be useful to look at how the enlisted ratings evolved. Since the days of the Colonial Navy, there has been a work distinction between Stewards and Cooks. Initially, the cook prepared meals and the steward (a Warrant Officer) controlled the edible provisions and the attendant accoutrements. In 1864, the enlisted rating of Steward was created to serve in the officers' wardroom. By the early 1900's, the Steward rating had evolved by convention and regulation into the only rating open to Blacks. Shortly after World War I, the Steward rating was limited to Filipino and Guamanian enlistees. This continued until the mid 1930's when the sheer size of the Navy forced the manpower planners to enlist a small number of Blacks to fill out the ranks of the Steward rating. By 1939 and through the early years of World War II, Blacks dominated the only rating they were allowed to serve in. In 1942, Blacks were finally allowed back into the other

Navy ratings where they had served with honor and distinguished themselves from the American Revolution until after the Civil War. When Blacks no longer enlisted to serve in the Steward rating because of the stigma of racism and subservience associated with the rating in the Black community, and to assist the newly independent Philippines, Filipinos were once again recruited in large numbers as Stewards. Filipinos dominated the rating until it was abolished as a separate entity in 1975. [Wright, 1975].

The Cooks rating survived by that name from 1797 to 1948 when it was renamed the Commissaryman rating. This change recognized the roles of planning and logistics in addition to food preparation. In 1975, the Commissaryman rating was merged with the Steward rating to form a new Mess Management Specialist rating.

Operationally, the history of the ratings has shown a loss of talent and manhours attributable to racism and racist encounters during this century. Over the last seventy-five years continued racial segregation of the Steward rating helped plant the seeds that culminated in the crippling of the aircraft carriers, USS Kitty Hawk and USS Constellation, in 1972. In view of this, there can be little doubt that both the formal and informal structure of this rating have to be taken into account as they influence operational readiness.

III. FOOD IN THE MODERN NAVAL ENVIRONMENT

The historical role of food, or lack thereof, and its impact on naval operations has been addressed in the preceding chapter. But what about food and food service operations and the modern sailor? What role does food play in influencing his or her sense of well being and behavior? What are the implications and results of poor food or food service? The following section will be concerned with discussing the biological need for food, food and health, food and morale, food and the social environment, and food and retention.

Before launching into an attempt to explore the possible ramifications of food and food service vis-a-vis the modern sailor, a brief paragraph reflecting the importance of the Navy's food service operation is quoted from a recent issue of the Navy Supply Corps Newsletter (1977):

"There are currently 690 enlisted dining facilities in the Navy, of which 550 are afloat, 88 are in CONUS ashore and 52 are overseas ashore....The Navy currently feeds an average of over 187,000 persons per day, with the cost of food alone reaching \$216 million annually...which currently makes the Navy the tenth largest feeding operation in the United States."

It should come as no surprise that the quality of food service remains as much a modern concern as it was in the early history of this country as a seagoing nation.

A. BIOLOGICAL NEED FOR FOOD

Hunger, the desire for food, is one of the human organism's strongest biological drives, along with the drives relating

to the need for water, oxygen, rest and sleep. [Zimbardo and Rush, 1975]. Food and the human organism's use of it has been of great concern and importance to psychologists, nutritionists, medical doctors, anthropologists, sociologists, and others in more recent times. One can pick up almost any high school or college general psychology text and read about studies conducted concerning man's biological need for food (hunger), addiction to food (obesity), or food deprivation (anorexia nervosa).

Maslow's now famous hierarchy of human needs involves the concept of lower level needs and higher level needs with the former requiring satisfaction before a person can focus attention on the latter. At the bottom of the lower level needs are those which he calls "physiological" which include man's requirement for food, water, air and sex. [Maslow, 1970]. (See Appendix A).

Fortunately, with America's advanced technology and affluence, few people in this country are preoccupied with satisfying their physiological needs for food and water and most are free to concentrate their efforts on satisfying their higher order needs for self-esteem and self-actualization.

One exception to Maslow's need hierarchy might be sailors at sea who spend months underway thousands of miles from familiar shores. To these people, the quality and quantity of food received take on new meaning and significance since their ship is the sole source of sustenance on an otherwise watery desert. One recent technical report written by a naval architect stated:

"When individuals or groups are under stress, or when their mobility is hampered, or when their daily routine is highly standardized, the psychological and social factors surrounding eating can become as important as the biological need to subsist and be nourished."
[Rowe, 1976].

Hence, the reason the Navy places important emphasis on loading out each ship with more than adequate provisions prior to any deployment. It is not too difficult to imagine the consequences of running out of food at sea.

B. FOOD AND HEALTH

In 1951, the Chief of Naval Operations began to express concern regarding the relationship between the physical well being of his men at sea and its impact on the overall effectiveness of the fleet. As a result the Commander, Operational Development Force was directed to perform a study to evaluate living conditions aboard naval vessels. The major finding of the study was that habitability standards within the fleet, including food service operations, were not consistent with even Navy minimum standards and had a negative effect on the health and welfare of naval members. [Commander, Operational Development Force, 1955].

The relationship between the health of naval personnel and the quality of food and its sanitary preparation has long been recognized. Shortly after the completion of the study just mentioned, Captain Charles W. Shilling, MC, USN, wrote a book detailing the importance of "clean food." This publication related food to crew health as well as giving a detailed account of the various types and causes of food

poisoning and its disastrous effects on the ability of a ship to carry out its mission. [Shilling, 1965].

Even the Navy's course manuals for its cooks and stewards contained numerous references to food-borne illness and its threat to health, stressing that this type of illness was usually preventable. [Commissaryman 3 & 2, 1971 and Steward 3 & 2, 1971]. Additionally, numerous recent studies by the Naval Health Research Center [McDonald, 1970; Pugh, et al., 1975; and Harvey, et al., 1977] have clearly demonstrated that health, gastrointestinal illness, shipboard living conditions and accidents are directly proportional to the quality and sanitation consciousness of a ship's food service department. While the results of most of the referenced studies could have been predicted by intuitive or deductive reasoning, nonetheless they present clear scientific evidence regarding the connection between food and shipboard health.

Perhaps one of the earliest reminders of the connection between the health of service members and food was contained in a War Department Circular dated 1 May 1875 which reads in part:

"Remember that beans, badly boiled, kill more than bullets, and fat is more fatal than powder. In cooking, more than in anything else in this world, always make haste slowly. One hour too much is vastly better than five minutes too little, with rare exceptions." [Deane, 1969].

While the old proverb of "iron men with iron stomachs" may have been somewhat comforting in the past when food preparation conditions and food quality were at best primitive by modern standards, the fact remains that inadequately

prepared food can cause illness or even death. This is as true today as it was in 1875.

C. FOOD AND MORALE

Morale of the fighting man has been linked with numerous factors throughout the course of history, ranging from quality of leadership to quality of food. Morale has been used synonymously with "fighting spirit," "the will to win," or "what makes men fight bravely and endure the hardships of a long campaign." Organizational psychologists would probably add that morale is an important measure of the effectiveness of organizations. Napoleon is reported to have reduced morale to the following equation: "Morale in relation to material factors is as three is to one." [Barclay, 1969]. In other words, an increase in one unit of material comforts or supplies results in a three-fold increase in morale.

The U.S. Navy, even back in colonial times, recognized the relationship between good food and high morale. In 1794 the Congress passed the Navy's first ration law which provided for a fixed allowance of food items per day per man. This law was later changed in 1933 as a result of increased military pressure to provide sailors with a greater variety of nutritious food. [Davis, 1972].

During and after WWII, the Navy became more actively involved in studying habitability and its effect on morale and worker efficiency. One of the earliest studies, completed by the Commander, Operational Development Force in 1952, was classified "restricted, security information" indicating the

importance and sensitivity the Navy placed on the subject of worker morale and efficiency. In this study the following example of how food was seen as relating to morale was cited from a message sent by the USS Mindoro to her type commander:

"Less than a year ago mutterings of 'lousy chow' and 'garbage' could be heard almost any time in and around the mess deck. Though the expressions were extreme, the meaning behind the comments was justified, and a large percentage of food did become garbage as it was scraped off the trays uneaten, or only tasted. On the average, the meals for the crew were commonplace, dull, uninteresting....The way she feeds at present is sufficiently unique to warrant repeating, and it has her sailors saying, 'My ship serves shipping-over chow'....He (the young sailor) is the future 'backbone' of the Navy, and to him 'shipping-over chow' has a real meaning. To his older and more experienced shipmate, good food is just as important for his morale." [Commander, Operational Development Force, 1952].

In the past 15 years the Navy has recognized the importance of keeping pace with the changing food tastes of its younger sailors by instituting ethnic and specialty foods, multiple choice menus, speed-line service for hamburgers, french fries and hot dogs, a la carte breakfasts, salad bars, dietary foods and carbonated beverage dispensers in messes ashore. This increased variety has helped morale and also has the added effect of helping to eliminate what Philip Connelly, Chairman of the Armed Forces Food Service Committee of the Food Service Executives Association, describes as "food monotony" which he claims is a major problem with "captive" clienteles. [Connelly, 1963].

In Vietnam, good food was reported by one observer to have been "the largest single factor affecting the morale of naval forces." [Sutton, 1969]. Given the fact that hostile

conditions and terrain ran the gammut from continual active enemy engagement to rear support operations, sweltering heat to bitter cold, mountainous jungles to flat rice paddies and the concomitant extensive logistical arrangements, there is little room to underestimate the importance placed on food service and eating during the Vietnam War.

The Vietnam War also precipitated the development of new concepts in feeding as a result of the uniqueness of the war and the desire to provide hot, nutritious meals to keep health and morale at optimum levels. The long-range-patrol food packet was the first military ration to use freeze-dried foods and replaced the older and more familiar WWII C-rations as the primary food source for personnel operating in forward areas. Portable galleys, disposable food containers and prefabricated food (e.g., removal of fat and bone in meats) were also used extensively by U.S. forces. [Anderson, 1972].

While "necessity is the mother of invention" is a trite and over-used phrase, the Vietnam War certainly stimulated innovations in feeding operations and necessitated the development of new concepts in meeting the food needs of the modern serviceman.

D. FOOD AND THE SOCIAL ENVIRONMENT

In addition to the major role food plays in determining the health and morale of Navy personnel, the act of eating food together can be viewed from a sociological standpoint. A Navy ship is a community in and of itself. On long deployments, 80 plus hour work weeks are not uncommon. Much of a

sailor's time is spent standing watches, operating machinery and/or sophisticated electronic equipment which can become routine and monotonous rather quickly. The more arduous and stressful the duty, the more important becomes eating, both as respite from the man-machine interface and also as a time when all hands come together to share in the pleasant task of dining.

It is during meal activities that persons from different ethnic backgrounds, geographical origin and social strata share a common need, i.e., the need for sustenance. It is a time when social relationships take on added importance in bringing together a group of diverse individuals who can share experiences, carry on informal discussions, make important personal decisions with the help of others, or simply enjoy the rest and relaxation that comes from eating among friends.

A habitability design study conducted by the Department of Architecture, University of California, Berkeley, saw dining and the area provided for it on naval ships in the following way:

"A ship's messing area can be regarded as more than just a space in which meals are served and consumed. It can be defined as a social space where crew members can change roles and moods from those that occupy them while on duty at their stations or work areas. Among the many territories aboard ship, the messing area is a commons of sort, where crew members belonging to different living and working groups can meet and socialize. Because of the restriction of space available for recreation activity, especially typical of Destroyer type ships where encroachment of armaments and navigation and propulsion equipment has occurred, multipurpose use of the messing area is almost a necessity. It is really the only space of sufficient capacity and availability to accommodate a sizeable portion of the crew." [Hassid et al., 1973].

Thus, it can be seen the messing or dining area serves a dual function. Its primary function is to serve as an area in which to feed the crew, however, dining itself is often the major social event of the day. It is the authors' opinion that the higher the quality of the environment in this area and the quality of the food served within its boundaries, the more likely the crew will respond in a positive fashion to their organizational and social setting.

The importance placed by officers on the activities of their wardroom is no less than that for sailors in their dining facility. The purpose of the wardroom is to promote and maintain the well-being, morale and efficiency of the officers by providing dining, social and recreational outlets aboard ship.

The wardroom has often been referred to as an officer's seagoing home. Here the influence of social norms, customs and traditions exert a profound influence on the lives of wardroom members. It is here that camaraderie and esprit de corps are fostered and important decisions are made affecting the activities and morale of the entire crew.

Professor Chester A. Wright at the Naval Postgraduate School, Monterey, California, places a great deal of importance on the quality of service in the wardroom by stating, "(it) had a definite bearing on the climate of a ship, the morale and pride of its officers and the morale and treatment of its crew." He goes on to say that he "never saw a crack ship that had a lousy wardroom." [Wright, 1977].

The role of food service in maintaining morale and providing the opportunity for social exchange and recreation has received added emphasis by the Navy in its recent design and construction of ships. Food service as a system has for many years been relegated to a secondary role in ship design, often apportioned left-over space and utility support after the primary mission support systems and spaces have been satisfied.

In 1965, habitability was established as a military characteristic of U.S. naval ships and consequently, food service designers are now insuring the effective integration of the food service system into the early design efforts of naval ships. [Rowe, 1976]. As much emphasis is now placed on where a person eats as what he eats. How a food service area looks, smells, sounds and feels influences to a large degree how one perceives the taste of food.

Even food storage has taken on new dimensions with the advent of nuclear powered ships. No longer is the cruising radius of a ship governed by the amount of fuel it can carry, but now is limited only by the endurance of its crew and the amount of food it can carry.

It was said centuries ago, "seamen love food above everything else." [Commanders Digest, 1975]. While this phrase may be somewhat simplistic, food appears to be an important determinant of morale and as such can be a key variable in how crew members relate to each other in a closed environment aboard ship.

E. FOOD AND RETENTION

Another aspect of food and food service operations that has received some attention by the Navy recently is how they relate to a person's desire to join and remain in the Navy beyond the first enlistment.

One study completed by the Naval Personnel Research Activity, San Diego, tested the hypothesis that as the discrepancy between the values of an individual and those of the Navy increases, the probability of his reenlistment decreases. In addition to being perhaps intuitively appealing, the study did find a strong relationship between "good chow" and the expectation of the sailor that it would be good as one reason for joining the Navy over the other branches of service. The study showed little discrepancy between the values of the individual and the Navy when it involved serving good food. [Blumenfeld, 1965].

One of the conclusions reached by the Navy's Office of Retention Plans and Programs in 1971 was that even though food and how it was served had long had a strong impact on a sailor's attitude regarding retention in the Navy, it was likely that more incentives were going to be needed in the future. [Schwartz, 1970].

More recently, the whole idea of habitability has been investigated to determine what, if any, effect it has on retention of naval personnel. Habitability, as the term is now used, still involves the activities associated with the messing area but generally includes the berthing areas,

working areas, sanitary facilities, and recreational facilities as well.

In 1971, the Center for Naval Analyses published a report indicating that "mess facilities" ranked sixth in importance with respect to crew satisfaction, and that satisfaction was inextricably linked with performance, morale and retention. [Stephan, 1971]. Another study, completed by the Naval Health Research Center, went on to show that habitability satisfaction sub-scales were all high for the reenlistee, moderate for those who were recommended for reenlistment but who chose to leave the Navy, and low for those not recommended for reenlistment. [La Rocco et al., 1975].

In a similar study conducted at about the same time as the one mentioned above, the preliminary findings showed that shipboard environmental conditions are correlated with health, satisfaction, performance, and retention of naval personnel. [Goldman and Segal, 1976].

F. SUMMARY

While health, morale, positive attitudes, worker satisfaction and reenlistment are functions based largely on individual characteristics and perceptions, their interaction in an environment as complex and large as the Navy appears to warrant further study and consideration by upper level management within the naval organization. The fact that food and food service appear as common threads throughout these functions implies the need to remain continually focused on this area. No other consideration seems to impact as quickly on the

immediate needs and concerns of naval personnel as the quality and quantity of their food.

Given the elimination of the draft and the changing value system of service age people today, these authors would be interested in seeing a study conducted to determine if food quality still ranks as high in the value system of young people joining the Navy today as it did ten or fifteen years ago.

Evolutionary changes in future shipboard weapons, propulsion, electronic and navigation systems can be anticipated with varying degrees of probability, but the one item that can be predicted with almost complete certainty is that sailors and officers will continue to demand and expect high quality food service a minimum of three times a day in the foreseeable future.

The following sections will analyze the perceptions and attitudes of those men and women responsible for daily food service operations in the U.S. Navy.

IV. METHODOLOGY

This chapter contains a brief description of the procedures by which data was gathered in analyzing the impact of the amalgamation of the former CS and SD ratings into the present MS rating. It also contains a description of how the data will be used to support the study thesis.

Data for this analysis came from two principal sources. The first source was the Human Resource Management (HRM) data bank maintained at the Naval Postgraduate School in the W. R. Church Computer Center. The second source was a series of formal structured interviews conducted by the authors in support of this study.

The current HRM data bank contains the aggregated responses of approximately 295,000 naval personnel. These individuals were respondents to the HRM survey given during the period 1974 through 1976. From the data bank master file, a working sub-file was created containing the responses of all TN, SD, CS and MS personnel (N=6594). The breakdown of respondents by year is as follows:

<u>Year</u>	<u>No. Respondents</u>
1974	1128
1975	3226
1976	<u>2240</u>
Total.....	6594

The HRM survey data were chosen as a prime data source for several reasons. The data were readily available and accessible. The data contained a number of different demographic variables that could be used in identifying important characteristics and facts concerning the respondents. Also, the data covered the period of time both before and after the amalgamation, i.e., one year before and two years after the CS and SD merger on 1 January 1975.

At the present time the HRM survey data bank is the only known and readily available data source that contains a wide range of information derived from a significant portion of the MS population within the Navy.

While several other studies, cited in the "Introduction," have made limited use of the HRM survey data, this study seeks to accomplish a more detailed analysis of the HRM survey data. This result is to be achieved by looking at only the responses from the MS community, gathered over a much longer period of time than in the previous studies, i.e., three years vice two.

In deciding what specific pieces of data from the HRM survey data bank would be useful in this study, several factors were taken into consideration. First, there was a desire to use information in the form of responses to either individual questions or groups of questions, which form survey indices, from as many of the six major dimensions of the survey (listed in Appendix B) as possible. This choice would provide a broader base than other alternatives considered from which to analyze the possible impact of the amalgamation of the food service ratings.

Second, it was considered important that whatever questions or indices used remain unchanged over the entire three-year period to provide some stability to the analysis.

Third, the questions or indices selected should in some way attempt to measure the areas of self-perception, work group harmony, peer and supervisory relationships, and job satisfaction.

Lastly, it was considered that for a comparative analysis to be meaningful, Navy normative data should be readily available for each question or index selected. The normative data in this case would be question or index means for all respondents from surface, air and submarine commands over the entire three-year period being used in the analysis.

The decision to use HRM survey indices was driven by the fact that Navy normative data had been previously computed and was available from the Naval Personnel Research and Development Center (NPRDC) for the survey indices and not for individual questions. It should be noted that NPRDC has recently begun computing normative data for only 16 of the 24 survey indices due to major changes that have taken place in the design of the survey. Of these 16 indices, only 11 have remained relatively constant in question make-up over the three-year period. When the individual questions comprising each of these 11 indices were analyzed for question content, only five indices were considered useful for the purpose of this study. The five indices are as follows: Human Resource Emphasis, Supervisory Support, Peer Support, Work Group

Coordination, and Satisfaction. Five of the six major dimensions are represented and a list of the individual questions comprising each of the selected indices is contained in Appendix C. The sixth major dimension, Human Goals Programs, has no index normative data available for the entire three-year period due to question changes on the HRM survey and was rejected for this reason.

For each index selected, the mean for all MS respondents was plotted and compared at six-month intervals. The initial reference period is 1975, using 1974 mean data as a base line for statistical purposes, since it covers the period one year prior to the merger. The "mean" referred to in this case and throughout the rest of this thesis is the index mean which is defined as the sum of the individual question means in each index, divided by the number of questions in the index. The question means are based on a five point response scale ranging from one to five, with one being the lowest or most negative response and five being the highest or most positive response. The index means for all MS personnel were also compared with index means for all surface, air and submarine respondents using the same time periods and intervals.

Index means for all MS respondents were also analyzed according to race by determining the means for all Caucasians, Blacks and Filipinos having taken the HRM survey. Another breakdown involved analyzing index means according to pay-grade for all MS respondents prior to and after the amalgamation.

The last analysis involving the HRM survey data used the information obtained from responses to demographic question 13 (What are your current service plans?) on side one (demographic side) of the HRM survey response form. Side one of the response form is contained in Appendix D. A comparison was made between the percentage of non-Caucasian personnel within the lower paygrades (E1-E3) and the percentage of Caucasians in those same paygrades who indicated a favorable response toward reenlisting in the Navy on question 13.

While the HRM survey data bank is able to provide statistical-historical data about MS personnel in the Navy, the authors felt it important to gather and analyze more current data regarding the perceptions, attitudes and feelings of those MS's presently serving in the Navy. As a result, structured, one-on-one, formal interviews were conducted in the San Diego area during the period 23 January to 10 February 1978. The interviews involved 60 MS personnel from three afloat commands and two major shore commands.

Access to the three afloat commands was obtained through the auspices of Commander, Naval Surface Force, Pacific Fleet (COMNAVSURFPAC) in conjunction with scheduled "MS Assist Team" visits. An attempt was made to interview all MS personnel assigned to each of these commands. The two shore commands were selected based on their geographic proximity to the afloat commands. These two shore commands both had a heavy concentration of MS personnel with varied operational backgrounds and experience levels. Again, an attempt was made

to interview all assigned MS personnel. The protocol used solicited a limited amount of demographic information as well as responses to six interview questions. The instrument is contained in Appendix E.

In order to obtain more accurate responses from the interviewees and reduce the threat level imposed by the interviewers, each respondent was assured that his or her anonymity would be protected and that individual interview sheets would be destroyed by the authors after the data was analyzed. All respondents were informed that the data collected would be aggregated and used by the authors in this thesis and for any other purpose considered useful by the authors. At the same time, an effort was made to prevent raising unrealistic expectations on the part of the respondents.

While the sample size ($N=60$) of MS respondents cannot be considered a stratified random sample in a strict statistical sense, it does have practical significance in that it was chosen from various elements of the larger MS population in the San Diego area. However, using criteria suggested by Warwick and Lininger [1975], this particular sample may be inferred as being fairly representative of the larger MS population in the Navy.

The information derived from the interviews was used as a basis for a comparative analysis of the responses by race and paygrade for each question. This analysis was conducted in order to highlight any differences in perceptions,

attitudes and feelings that exist currently within the MS sample. The basic analytic strategy employed in using the interview results was an attempt to ascertain recurring themes among responses. The intended result was the development of an overall picture representative of each significant racial group in the MS rating.

The following chapter will attempt to analyze and interpret the developed data. The last section of this chapter, involving the application of a socio-technical change model, will utilize the HRM survey data, interview data and socio-cultural information to assess how the amalgamation of the CS and SD ratings has impacted on the goals, technology, people and structure of the naval organization. From this analysis process, conclusions and recommendations will be developed for consideration by those Navy personnel responsible for training, developing and managing the MS rating.

V. AMALGAMATION ANALYSIS

A. AMALGAMATION BACKGROUND

To provide some insight into the factors leading up to the amalgamation of the former Steward (SD) and Commissary-man (CS) ratings, this section attempts to briefly trace the significant events which led to that decision.

Beginning in 1970, the national political environment became especially sensitive to issues involving apparent preferential perquisite treatment of its military officers. There were public expressions by some Congressional members that military officers were enjoying a particularly sumptuous lifestyle. Of particular concern was the employment of a category of enlisted personnel, including many SD's, whose apparent sole function was to provide personal services to senior officers. The fact that many of these enlisted personnel were non-Caucasian made these alleged Congressional claims of discriminatory practices of special treatment appear even more valid and justified. Also, during this era of involvement in a very unpopular war (Vietnam), the military officer was suffering some erosion of public status.

The racially explosive 60's had raised the level of consciousness of almost every American regarding treatment and opportunities for minority individuals. The military was no exception. The military was quick to come to grips with some of the more volatile issues. Race relations, equal

opportunity, inter-cultural training, human goals and affirmative action plans were all instituted in an attempt to achieve racial equality and harmony within the military services.

During the period 1970-1974, several important events occurred as a result of the influences of the prevailing socio-political climate. Beginning in 1972, enlisted aide billets for senior officers were drastically reduced from 1700 to 500. The utility of the "closed" mess system for military officers was increasingly questioned and was eventually replaced by an "open" mess system. Pentagon and White House messes also came under attack by Congress. The enlisted personnel who were assigned to these messes were mostly non-Caucasian and this was interpreted by some critics as a form of servitude by a minority group for the predominantly white officer ranks. [BUPERS Briefing Notes, 1977].

In addition, Admiral E. R. Zumwalt began a four-year tour as Chief of Naval Operations (CNO) in 1970. This CNO was not only highly committed to racial equality in the Navy, he was also personally responsible for efforts to eliminate any and all traces of racial discrimination in the Navy. [Zumwalt, 1975].

The combined effect of Congressional pressure to eliminate special treatment afforded its senior military officers, including anything that resembled servitude by minority personnel, and a new CNO who became extremely sensitive to racial equality, was to focus attention on the inequities that existed in the Navy's Steward rating.

The modern SD rating was established in 1948 in conjunction with the post-WWII changes in the Navy's rating structure ordered by President Harry S. Truman (Executive Order #9981). Prior to this time, during the period 1919 to 1932, the rating had been almost the exclusive domain of Blacks and a few other minorities (Guamanians, Chinese and Japanese). This was the direct result of the discriminatory policy that forced all Black sailors into serving as "messmen" for the officer community. In 1932, for all practical purposes, Blacks ceased to be recruited for duty as messmen. Black messmen were systematically replaced by recruits from Guam and the Philippines. [Wright, 1975].

A governmental agreement reached between the United States and the Republic of the Philippines in 1952, later amended in 1954, allowed the Navy to recruit 2000 male Filipino citizens each year to serve solely as Stewards. The result of this agreement over time was to change the racial composition of the Steward rating from predominantly Black to predominantly Filipino. [BUPERS Rating Review Board Proceedings, 1971].

By 1970, conditions within the Steward rating could only be described as poor. Filipinos were being allowed to enlist in a wider variety of ratings other than the Steward rate. As a consequence of the increased range of choice, fewer Filipino citizens entered the Steward rating. Additionally, the apparent social stigma, an association with forced servitude by minorities, and the menialness of the work, all contributed to making the rating unattractive to both Caucasian and non-Caucasian recruits alike.

The rating was stagnated at the top because of the high retention of its senior Filipino members coupled with a reduction in the number of SD billets available. In 1970 the Navy began to reduce the billet structure from 17,000 to eventually 9,000. One result was that it took an average of seven years service to make E-4 and almost 13 years to make E-5. This was over twice as long as in most other ratings. By 1972 the SD rating was more than 20% overmanned and significantly racially imbalanced, being over 90% Malayan. [Spillane, 1975].

The concept of changing the SD rating or merging it with another rating was first considered in 1970 as a management solution to the problems mentioned above. In an attempt to resolve the problems, the Naval Personnel Research and Development Laboratory (NPRDL) conducted several studies (June 1971; July 1971) involving the former SD and CS ratings. One study concluded that the two ratings were highly comparable and could be combined into a single rating. The second study concerned a proposal to merge the CS and SD ratings into a single Food Serviceman (FS) rating with food preparation and mess management specialties differentiated at paygrades E-6 and E-7.

A third study conducted by the Naval Personnel Research and Development Laboratory (August 1971) gathered the reactions of Stewards and Commissarymen toward a merger of the two ratings. Data was obtained by using questionnaire responses from 3,465 Stewards and 4,254 Commissarymen. Important factors

brought out in the study indicated that eight in ten of the Commissarymen were opposed to any merger, while almost the same proportion of Stewards either favored a merger or were neutral toward the idea. The study also concluded that a merger might generate other problems since it would bring together two major ethnic groups (Filipinos and Caucasians). These groupings have characteristically developed different work habits and enjoy different cultural attributes in their work environments.

The Bureau of Naval Personnel Rating Review Board (1971) recommended against combining the CS and SD ratings. The Board felt that there was too much opposition by both CS and SD personnel to a merger and that the duties performed by each rating were different enough to warrant separate ratings.

While a considerable amount of preliminary investigation and study had been done regarding either merging the SD rating with another or improving the SD rating to make it more attractive, it was not until early 1974 that Admiral Zumwalt directed serious examination of a merger of the SD and CS ratings. In a memorandum to the Secretary of the Navy (1974), he proposed disestablishing the CS and SD ratings and forming a new combined rating called Commissary Specialist (CP). Admiral Zumwalt was relieved as CNO before any merger was implemented; however, his successor, Admiral Holloway, reaffirmed the direction that had been taken. In November 1974 the concept of merging the CS and SD ratings into the present Mess Management Specialist (MS) rating was approved.

The order set 1 January 1975 as the effective date for the amalgamation. The implementing directive is contained in Appendix F.

In 1974, CS and SD rating consolidation milestones were prepared by the Bureau of Naval Personnel to provide for a timely and smooth transition for everyone involved. By March 1978, all MS personnel were to have been fully cross-trained and capable of doing all the tasks required by either the former CS or SD rates. Advancement examinations that followed the cross-training period (1975-1978) were to reflect the merger completion and there would no longer be separate advancement exams for former CS and SD personnel.

B. HRM SURVEY DATA ANALYSIS

This section contains an analysis of the data used to test hypotheses related to assessing the impact of the CS and SD amalgamation. The analysis focuses on personnel attitudes and perceptions as measured by the Navy's HRM survey.

The first hypothesis is a statement referring to the entire MS population. Hypotheses two and three are statements concerning specific groups of people within the larger MS rating. Hypothesis four is a statement relating trends in reenlistment intentions for Caucasian MS personnel to the trends in the racial composition of the MS rating.

1. Hypothesis One

H₁ - There will be a significant decline in five selected HRM survey indice mean scores for MS personnel in the one-year period following amalgamation of the CS and SD ratings:

- (1) Human Resource Emphasis (HRE)
- (2) Supervisory Support (SS)
- (3) Peer Support (PS)
- (4) Work Group Coordination (WGC)
- (5) Satisfaction (SAT)

a. Data Analysis

HUMAN RESOURCE EMPHASIS

	74	75 ₁	75 ₂	76 ₁	76 ₂
\bar{x}	2.96	2.88*	2.82**	3.00	2.94
N	1109	1563	1639	1095	1118

* p < .05

1 = Jan-June

** p < .01

2 = July-Dec

Table I-1

The HRE index measures the perceptions of MS personnel regarding the amount of concern displayed by the organization toward its human resources.

The data presented in Table I-1 show a statistically significant decline in the HRE index mean scores for MS personnel during the first and second halves of 1975, following rating amalgamation on 1 January 1975. Two years after amalgamation, the index mean score is almost identical to the pre-merger score.

Using Navy normative data contained in Appendix G covering the same time period (1974-1976), all-Navy HRE index mean scores showed a general increase. Using simple linear regression techniques, a correlation coefficient of $-.60$ was obtained between MS and Navy normative index mean scores.

SUPERVISORY SUPPORT

	74	75 ₁	75 ₂	76 ₁	76 ₂
\bar{x}	3.49	3.38**	3.48	3.49	3.50
N	1111	1567	1645	1101	1124

** $p < .01$

Table I-2

The SS index measures MS perceptions of the degree to which their supervisor fosters feelings of worth and dignity within the work group.

The data presented in Table I-2 show a significant decline in the SS index mean scores for MS personnel during the six-month period immediately following amalgamation. Two years after amalgamation, the index mean score is almost identical to the pre-merger score.

Navy normative data during the period 1974-1976 showed an overall decline (Appendix G). A correlation coefficient of $-.68$ resulted between MS and Navy normative index mean scores.

PEER SUPPORT

	74	75 ₁	75 ₂	76 ₁	76 ₂
\bar{x}	3.46	3.48	3.41	3.45	3.46
N	1105	1560	1641	1093	1120

Table I-3

The PS index measures MS perceptions of how well each work group member enhances each other's feeling of personal worth.

The data in Table I-3 show no significant change during the two-year period following amalgamation.

Navy normative data during the same period showed a steady increase in index mean scores (Appendix G). A correlation coefficient of $-.50$ was obtained between MS and Navy normative index mean scores.

WORK GROUP COORDINATION

	74	75 ₁	75 ₂	76 ₁	76 ₂
\bar{x}	3.23	3.15*	3.10**	3.21	3.17
N	1111	1564	1640	1092	1117

* $p < .05$

** $p < .01$

Table I-4

The WGC index measures the perceptions of MS personnel regarding how effectively their work group members plan, coordinate and support each other.

The data presented in Table I-4 show a significant decline in WGC index mean scores for MS personnel during the first and second halves of 1975. Two years after amalgamation, the index mean score is still below the 1974 pre-merger score.

Navy normative data during the same period showed a large increase in 1975 followed by an even larger decrease in 1976 (Appendix G). A correlation coefficient of $-.50$ was obtained between MS and Navy normative index scores.

SATISFACTION

	74	75 ₁	75 ₂	76 ₁	76 ₂
\bar{x}	3.23	3.28	3.35**	3.46**	3.43**
N	1107	1564	1643	1096	1123

** $p < .01$

Table I-5

The SAT index measures the level of satisfaction perceived by MS personnel with work group members, supervisors, command, job and career opportunities.

The data presented in Table I-5 show a significant increase in SAT index mean scores for MS personnel during three of the four six-month periods following amalgamation.

Navy normative data during the same period showed an increase as well (Appendix G). A correlation coefficient of $.92$ was obtained between MS and Navy normative index scores.

b. Interpretation of Results

Three of the five indices show a significant decline in mean scores following amalgamation of the CS and SD ratings. One index remained relatively constant and one showed a significant increase. Four of the five indices show a strong negative correlation between MS and Navy normative mean scores. While causality can not be assumed from the MS survey data, there appears to be a relationship between the decline of mean scores and the first stages of implementation of the CS and SD rating merger. This inference is strengthened by the strong negative correlation obtained between MS and Navy normative mean scores during the same time frame, suggesting that MS data trends were running counter to the overall Navy trends following the merger.

The results of the data analysis generally support the hypothesis as stated. While the SAT index did not support the hypothesis, one possible explanation is contained in the study done by Szalay and Bryson [1977]. This study indicated that Filipino personnel, in general, were more satisfied with the naval organization than other cultural groups. This same study also suggests that Filipinos tend to be more positive on opinion surveys than other ethnic groups in the U.S. Navy. This appears to be due in large part to cultural norms that discourage open disagreement with authority figures and organizational procedures, both formal and informal.

Of the 6,594 cases used in this thesis study, 45% were Filipino personnel. If their responses to questions

concerning satisfaction are generally higher, as suggested by Szalay and Bryson, then it would seem reasonable to expect MS mean scores on the HRM satisfaction index to also be higher, accounting for the positive gap differences from the all-Navy normative mean scores contained in Appendix G.

In order to evaluate the impact of the CS and SD rating amalgamation on the major racial groups comprising the MS rating, a second hypothesis was developed.

2. Hypothesis Two

H_1 - There will be a significant decline in the mean levels of organizational attitudes of Filipino MS personnel in the one-year period following amalgamation of the CS and SD ratings as measured by five selected indices on the HRM survey:

- (1) Human Resource Emphasis (HRE)
- (2) Supervisory Support (SS)
- (3) Peer Support (PS)
- (4) Work Group Coordination (WGC)
- (5) Satisfaction (SAT)

a. Data Analysis

HUMAN RESOURCE EMPHASIS

		74	75 ₁	75 ₂	76 ₁	76 ₂
CAU	\bar{x}	2.64	2.62	2.60	2.76*	2.73
	N	392	624	758	473	504
BLK	\bar{x}	2.84	2.74	2.77	2.93	2.80
	N	57	115	116	63	79
FIL	\bar{x}	3.24	3.20	3.10**	3.26	3.25
	N	559	628	660	491	471

* $p < .05$, ** $p < .01$

The data presented in Table II-1 show a slight decline in mean scores for Caucasian and Black MS personnel during the year following amalgamation. However, during the first half of 1976, the Caucasians showed a significant increase in their mean scores. The Filipinos, on the other hand, show a decline in mean index scores during the year following amalgamation, the decline being statistically significant at the .01 level during the second half of 1975.

SUPERVISORY SUPPORT

		74	75 ₁	75 ₂	76 ₁	76 ₂
CAU	\bar{x}	3.36	3.30	3.44	3.43	3.47
	N	393	687	758	472	505
BLK	\bar{x}	3.64	3.38	3.67	3.41	3.59
	N	57	115	117	65	79
FIL	\bar{x}	3.62	3.48**	3.50*	3.52	3.57
	N	560	629	663	495	474

* $p < .05$

** $p < .01$

TABLE II-2

The data in Table II-2 show slight declines in the index mean scores for Caucasians and Blacks during the first six months following amalgamation, followed by a slight increase during the second half of 1975. The Filipinos show a significant decline in index mean scores during the entire year following amalgamation. Their index mean scores remain below the pre-merger scores during all of 1976 as well.

PEER SUPPORT

		74	75 ₁	75 ₂	76 ₁	76 ₂
CAU	\bar{x}	3.40	3.49	3.44	3.42	3.41
	N	391	684	759	471	504
BLK	\bar{x}	3.51	3.42	3.53	3.37	3.79
	N	57	115	117	64	79
FIL	\bar{x}	3.55	3.48	3.34**	3.50	3.49
	N	557	625	660	489	471

** $p < .01$

Table II-3

The data in Table II-3 show a slight increase in index mean scores for Caucasians following amalgamation, and a slight decrease for Blacks during the first half of 1975, followed by a slight increase during the second half of 1975. The same pattern is repeated for Blacks in 1976. The Filipinos show a decline in index mean scores during 1975 and 1976 with the decline in the second half of 1975 being statistically significant at the .01 level.

WORK GROUP COORDINATION

		74	75 ₁	75 ₂	76 ₁	76 ₂
CAU	\bar{x}	3.07	3.03	3.00	3.11	3.08
	N	393	686	759	471	504
BLK	\bar{x}	3.22	3.09	3.15	3.02	3.25
	N	57	115	116	64	78
FIL	\bar{x}	3.38	3.29*	3.23**	3.35	3.29*
	N	560	627	659	488	469

* $p < .05$

** $p < .01$

Table II-4

The data in Table II-4 show a slight decline in the index mean scores for Caucasians and Blacks during the first year following amalgamation, with both groups showing a slight increase during the second half of 1976 from their pre-merger mean scores. The Filipinos show a marked decline during the two-year period following amalgamation with declines in three of four six-month periods being statistically significant.

SATISFACTION

		74	75 ₁	75 ₂	76 ₁	76 ₂
CAU	\bar{x}	3.04	3.11	3.19**	3.26**	3.26**
	N	395	687	759	471	506
BLK	\bar{x}	3.31	3.32	3.45	3.35	3.35
	N	57	114	116	65	78
FIL	\bar{x}	3.39	3.48	3.56**	3.66**	3.70**
	N	555	627	663	491	473

* $p < .05$

** $p < .01$

Table II-5

The data in Table II-5 show increases in index mean scores for all three racial groups during the two years following amalgamation. For Caucasians and Filipinos the increases are statistically significant at the .01 level during the second half of 1975 through 1976.

b. Interpretation of Results

Hypothesis two was developed on the basis of the several recent studies referenced in the introduction of this thesis. [CINCLANTFLT 1977; Nartea 1977]. These studies

indicated a sense of growing dissatisfaction among Filipino MS personnel with regard to the CS and SD merger which the authors felt would be reflected in the HRM survey data. Four of the five indices show a decline in mean scores during the first year following the merger and three of the five indices reflect a similar decline during the second year following the merger. Based on this, hypothesis two appears to be supported.

Again, causality cannot be inferred on the basis of the HRM survey data. However, the merger could be a contributing factor in the decline of the indice scores for Filipino personnel. The satisfaction index was the only index that did not decline. The fact that the index means increased for all three major racial groups within the MS rating in the satisfaction index may be related to the nature of the questions in this index. Several of these questions are more global in nature and do not necessarily relate to the MS rating specifically, making it easier to respond to these questions by taking a macro perspective of the naval organization.

No significant decline or increase following the merger is evident in the five indices for Black MS personnel which is most likely due to the small sample size. Caucasian MS personnel also show no significant decline in any of the five indices. In fact, a significant increase is noted in two of the indices. Whether this stems from the fact that the amalgamation may have had a less negative effect on them

as a group or factors were operating within the larger naval environment that resulted in their increased mean scores is unknown at this time and cannot be inferred from the data presented in proving hypothesis two.

When the data from hypothesis two is compared with the data from hypothesis one, it is likely that the large Filipino population within the MS rating (45%) is driving the HRE, SS, and WGC indice means in a negative direction.

Another question that logically surfaced was what effect the amalgamation had at different paygrade levels within the MS rating and would the HRM survey data reflect any trend in the five indices being used if analyzed according to paygrade. As a result, hypothesis three was developed.

3. Hypothesis Three

H₁ - During the one-year period following the amalgamation of the CS and SD ratings there will be a more significant decline in organizational attitudes for E1-E3 paygrades than for all other enlisted MS paygrade groupings as measured by five selected indices on the HRM survey:

- | | |
|-----------------------------|-------|
| (1) Human Resource Emphasis | (HRE) |
| (2) Supervisory Support | (SS) |
| (3) Peer Support | (PS) |
| (4) Work Group Coordination | (WGC) |
| (5) Satisfaction | (SAT) |

a. Data Analysis

HUMAN RESOURCE EMPHASIS

		74	75 ₁	75 ₂	76 ₁	76 ₂
E1-3	\bar{x}	2.88	2.61**	2.64**	2.71**	2.66**
	N	464	223	426	275	287
E4-5	\bar{x}	2.98	3.07	2.84**	3.05	2.96
	N	418	217	722	504	500
E6	\bar{x}	3.04	3.21	3.00	3.17	3.13
	N	163	116	293	188	207
E7-9	\bar{x}	3.28	3.36	3.13	3.31	3.36
	N	58	30	97	75	73

* $p < .05$

** $p < .01$

Table III-1

The data in Table III-1 show a significant decline in index mean scores for E1-3 MS personnel during the two-year period following amalgamation. The data also show a significant decline in mean scores at the E4-5 paygrade level during the second half of the year following amalgamation. In fact, the second half of 1975 is the only six-month period which shows a decline in mean scores for all paygrade levels; however, it is not statistically significant for the E6 and E7-9 personnel.

SUPERVISOR SUPPORT

		74	75 ₁	75 ₂	76 ₁	76 ₂
E1-3	\bar{x}	3.40	3.06**	3.31	3.35	3.40
	N	464	223	427	276	287
E4-5	\bar{x}	3.47	3.43	3.44	3.48	3.43
	N	418	219	726	508	500
E6	\bar{x}	3.69	3.63	3.76	3.57	3.61
	N	164	116	293	190	212
E7-9	\bar{x}	3.93	4.15	4.04	3.87	4.18
	N	59	30	98	74	74

* $p < .05$

** $p < .01$

Table III-2

The data in Table III-2 show a decline in mean index scores for both E1-3 and E4-5 MS personnel during the year following amalgamation. The decline at the E1-3 paygrades during the first six months following amalgamation is statistically significant at the .01 level. The mean scores for E1-3 personnel remain below the 1974 pre-amalgamation level until the second half of 1976 when the score just equals the pre-amalgamation score.

A slight decline in mean scores is also evident at the E6 paygrade in three of the four six-month intervals following amalgamation, but they are not statistically significant. Only at the E7-9 paygrades is the mean score for the last half of 1976 above the 1974 pre-amalgamation score. However, it is not significantly higher due to the small number of E7-9 personnel in the sample.

PEER SUPPORT

		74	75 ₁	75 ₂	76 ₁	76 ₂
E1-3	\bar{x}	3.43	3.38	3.42	3.31	3.48
	N	462	223	426	275	287
E4-5	\bar{x}	3.48	3.47	3.33**	3.46	3.35*
	N	414	215	723	505	499
E6	\bar{x}	3.41	3.60	3.58*	3.51	3.58*
	N	164	115	293	188	210
E7-9	\bar{x}	3.81	3.92	3.68	3.69	3.94
	N	59	30	98	72	73

* $p < .05$

** $p < .01$

Table III-3

The data in Table III-3 show a decline in index mean scores for both the E1-3 and E4-5 paygrades following amalgamation. At the E4-5 paygrades, the decline is statistically significant during the second half of 1975. For the E1-3 personnel, the decline is very close to being significant at the .05 level during the first half of 1976. At the E6 and E7-9 paygrades, the trend is generally toward increasing mean scores following amalgamation, with increases at the E6 paygrade being statistically significant during the second half of 1975 and 1976.

WORK GROUP COORDINATION

		74	75 ₁	75 ₂	76 ₁	76 ₂
E1-3	\bar{x}	3.13	2.95*	2.98*	3.01	3.06
	N	464	223	427	275	285
E4-5	\bar{x}	3.25	3.19	3.07**	3.26	3.10*
	N	418	217	722	503	499
E6	\bar{x}	3.30	3.36	3.34	3.18	3.32
	N	164	116	293	188	210
E7-9	\bar{x}	3.67	3.71	3.44	3.63	3.71
	N	59	30	97	73	72

* $p < .05$

** $p < .01$

Table III-4

The data in Table III-4 show a general decline in index mean scores for E1-3 and E4-5 MS personnel. For E1-3 personnel, the decline is significant at the .05 level in the first year following amalgamation and for E4-5 personnel, the decline is significant at the .01 level during the second half of 1975 and significant at the .05 level during the second half of 1976. At the upper paygrade levels, the table shows generally a slight increase in index mean scores following amalgamation.

SATISFACTION

		74	75 ₁	75 ₂	76 ₁	76 ₂
E1-3	\bar{x}	2.94	2.67**	2.99	3.06	3.05
	N	462	223	428	274	286
E4-5	\bar{x}	3.33	3.44	3.39	3.53**	3.45*
	N	416	218	725	505	500
E6	\bar{x}	3.56	3.72	3.74*	3.61	3.67
	N	164	114	292	190	212
E7-0	\bar{x}	3.95	3.92	3.94	4.01	4.00
	N	59	30	97	74	74

* $p < .05$

** $p < .01$

Table III-5

The data in Table III-5 show a significant decline in the satisfaction index mean score for E1-3 personnel immediately following the amalgamation. However, the mean scores show a slight increase beginning in the second half of 1975. For the other paygrade levels, there is a general trend toward increased mean scores following amalgamation.

b. Interpretation of Results

According to the data contained in Tables III-1 through III-5, the most significant declines in indice mean scores have generally taken place at the E1-3 paygrades, followed closely by the declines at the E4-5 paygrades. All five of the indices show a decline during the first six months following amalgamation at the E1-3 paygrades, with the decline being statistically significant in four of the five indices.

Only in the peer support and satisfaction indices are mean scores slightly higher than pre-amalgamation scores two years following the amalgamation.

Paygrades above the E5 level generally tend to show increases in mean scores following amalgamation. The few declines that do occur above this paygrade level appear to be of short duration and are not confined to any one time period or any particular index. In view of the above, hypothesis three is generally supported by the HRM survey data.

Again, causality cannot be assumed since many other variables are unaccounted for which could affect the indice mean scores. However, it is interesting to note the results of the data in the Tables III-1 through III-5 in light of the fact that the lower paygrades account for the overwhelming majority (67%) of people serving in the MS rating. Additionally, at the time of the amalgamation Filipinos made up the majority of personnel in the E3 through E5 paygrades. Whether their dissatisfaction with the amalgamation accounts for the decline in mean scores in the lower paygrades is uncertain, but when compared with the information presented following hypothesis two, the possibility of Filipino personnel driving the declines in indice mean scores seems plausible.

Assuming the CS and SD amalgamation did have a more pronounced impact at the lower paygrades, as suggested by the HRM survey data, other possible explanations exist. One involves the ambiguity and uncertainty felt by personnel

serving on their first or second enlistment in the MS rating. A change in the rating structure, coupled with an impending change in work assignments and/or location, may have been more difficult for these personnel to accept due to their more limited experience and tenure. The shift in work location, i.e., from the enlisted dining facility (EDF) to the wardroom, may have been perceived very negatively, especially by Caucasian MS personnel, since they would now be doing former "Steward's work." The generally negative connotation of racial servitude and the legacy of a history of menial work associated with the former Steward rating has been addressed in the beginning section of this chapter.

Another area of concern involves the possible impact of the amalgamation on reenlistment and/or retention of Caucasian MS personnel. Of particular interest is whether or not the Caucasian reenlistment rate has had any significant effect on the present racial composition of the MS rating and what trends can be forecast. As a result of this question, hypothesis four was developed to test the assumption that the MS rating might be becoming polarized along racial lines. In order to do this, data obtained from the Bureau of Naval Personnel (Pers-611) and responses to question 13 on side one of the HRM survey form (Appendix D) were utilized.

4. Hypothesis Four

H₁ - During the one-year period following amalgamation of the CS and SD ratings, Caucasian MS personnel in their first enlistment will show a decline in reenlistment intentions.

a. Data Analysis

E1-3 REENLISTMENT INTENTIONS

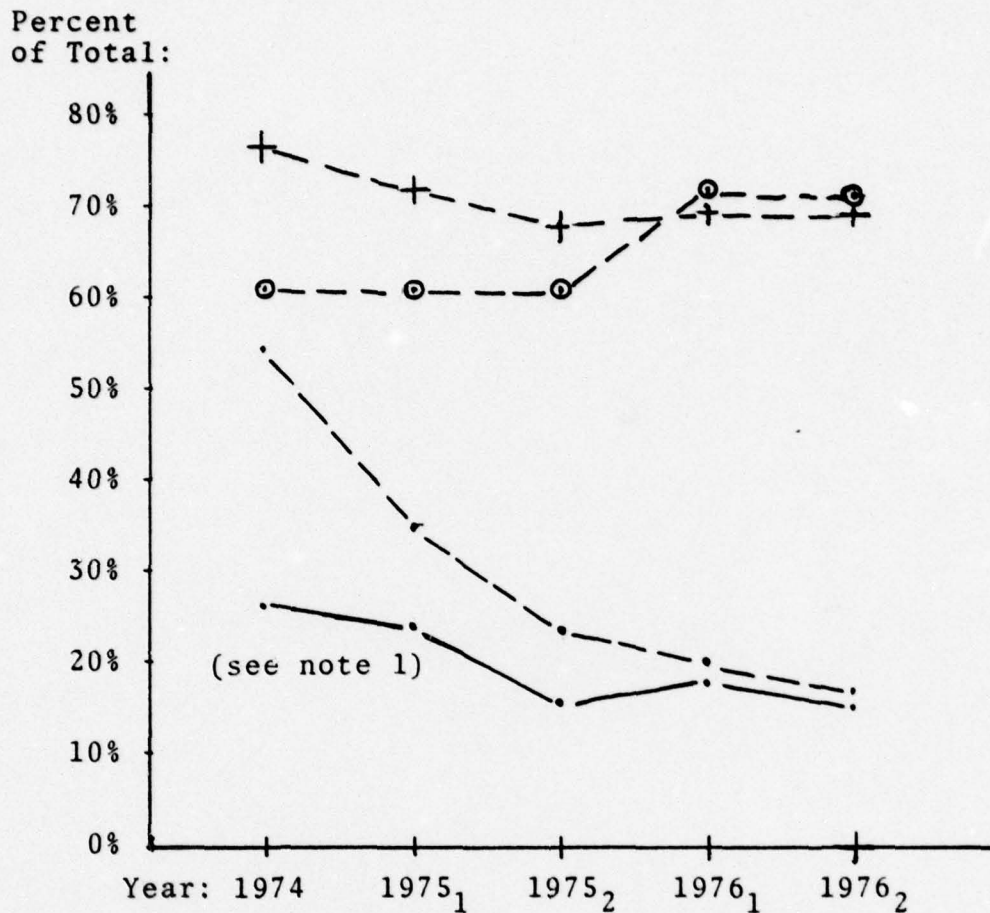


Figure 1

- % E1-3 Caucasian intending to reenlist
- - - • - % Non-Caucasian in E1-3 paygrades
- - - - ○ % Non-Caucasian in E4-5 paygrades
- + - - - + % Non-Caucasian in E6-9 paygrades

Note 1: Actual percentages contained in Appendix H.

The information contained in Figure 1 shows a general decline in the percentage of Caucasian MS personnel in paygrades E1-3 indicating either a response of "plan to

remain on active duty at least until eligible for retirement" or "reenlist or extend but undecided about making the Navy a career" to question 13 of the HRM survey. This information is based upon a sample of 1,295 Caucasian MS respondents to the survey serving in their first enlistment during the period 1974 through 1976. This downward trend is further supported by a recent memorandum to all Supply Corps officers [Grinstead, 1977] indicating that only 18% of all first term MS personnel were being retained on active duty beyond their first enlistment.

b. Interpretation of Results

Inspection of Figure 1 reveals a definite decline in the percentage of Caucasian MS personnel intending to reenlist and also a reduction in non-Caucasian inputs to the lower enlisted paygrades in the MS rating. The percentage of non-Caucasian personnel serving in paygrades E1-3 declined from 54% to 21%. This situation, uncorrected, can only result in a worsening shortfall of mid-level petty officers in the very near future.

The top two lines in Figure 1 show that the upper paygrades in the MS rating are composed largely of non-Caucasian personnel (predominantly Filipino) and that their percentage of the entire MS rating at these paygrades has only declined slightly since amalgamation. The percentage of non-Caucasian personnel serving in paygrades E4-5 declined from 75% to 64% and E6-9 non-Caucasian personnel showed an increase from 60% to 67%.

By combining the bottom two lines and comparing the result with the aggregation of the top two lines in Figure 1, it becomes rather apparent that the MS rating is becoming more racially polarized. The present picture shows non-Caucasians steadily dominating the upper paygrades and Caucasians increasingly comprising the lower paygrades. The situation at the lower paygrade levels was further highlighted during a recent interview with the Director of the MS Class "A" School in San Diego [Nelson, 1978]. The director discussed a brief analysis in which a racial profile of the CY '77 class was estimated. This analysis suggested that over 90% of the most recent input to the MS "A" school was Caucasian. Approximately 1% of the school input was estimated to be Filipino with the remaining 8 to 9% being primarily composed of Blacks and Hispanics.

Clearly, the trend in ethnic distribution of MS personnel is toward an ever widening racial gap. This gap is most pronounced between the upper and lower paygrades in the MS rating and is further aggravated by the shrinking number of Caucasians expressing any intent to reenlist during their first enlistment. Therefore, it is concluded that hypothesis four is supported.

While this section has attempted to look at the impact of the CS and SD amalgamation through the use of "historical" data contained within the HRM survey data bank, the following section in this chapter continues to focus on the impact of the amalgamation and its attendant issues by

using "real time" information gathered from recent interviews of active duty MS personnel in the San Diego area.

C. INTERVIEW RESULTS

In an attempt to provide a current assessment of how MS personnel feel about their rating, approximately three years following amalgamation of the CS and SD ratings, 60 interviews were conducted in the San Diego area. Three representative afloat commands, consisting of a CG, FF and LST, were visited for the purpose of interviewing all assigned MS personnel. Two shore sites with a heavy concentration of MS personnel, one being a Bachelor Officer Quarters (BOQ) and the other the Naval Training Command (NTC), were also visited for the purpose of conducting interviews. At NTC, a total of 17 MS "A" School staff members and MS "C" School students were interviewed. The "C" School students were from various fleet and shore activities, several being located outside the San Diego area. A more complete demographic profile of the interviewees is contained in Appendix I.

Of the 60 MS personnel interviewed, 26 were Caucasian, 27 were Filipino and 7 were from other ethnic or cultural backgrounds. A summary of the information obtained from each of these racial groups and the authors' conclusions are presented in the remainder of this section.

1. Caucasians

The overwhelming majority of the 12 Caucasians who served in the CS rating prior to amalgamation expressed the attitude that the present rating is less desirable and less

satisfying than their former rating. Their perception is that rating promotions have slowed, especially at the E-5 and above levels. This group expressed a strong dislike for working in the wardroom area and preferred instead to work in the enlisted dining facility (EDF). They indicated having strong negative feelings regarding amalgamation ever since it took place.

For the entire group of Caucasians, the mean age was 23.6 years and the mean time in service (TIS) was 5.0 years. Their mean age at enlistment was 18.6 years, making their enlistment age about the same as that of the present inputs to the MS Class "A" School (19 years). Most of the younger members of this group stated they enlisted with the idea of "checking out" the Navy and then trying to get a "better" job in the civilian community when their enlistment expired.

Of the 14 Caucasians interviewed serving on their first enlistment, 50% said they were not going to reenlist, 43% stated they were undecided, and only one said he was definitely going to reenlist. The one individual who stated he was going to reenlist was serving in submarines and was submarine qualified. While the number of MS's interviewed serving in submarines was very small (N=3), all three were far more positive about being in the MS rating, and two individuals indicated they were definitely making the Navy a career.

Only four of the 26 Caucasians indicated they would have liked to have had more cross-training and more opportunity

to learn the skills required of the former SD rating during the period following amalgamation. The remainder were of the opinion they already knew enough about wardroom job requirements, either from past experience or formal school training, to enable them to satisfactorily perform in the wardroom environment.

Of the 26 personnel interviewed, 20 stated they did not like working for minority petty officers, especially Filipinos who had been former Stewards. They viewed the MS rating as being top heavy with Filipinos and indicated a sense of polarity within their work group along racial lines, i.e., themselves being in one camp and the Filipinos in the other.

These same 20 Caucasians perceived the Filipinos as being clannish, hard to get to know, overly critical of their work, strict disciplinarians, unwilling to accept new ideas (especially from subordinates) and incompetent in managing EDF operations. Generally, their attitude was that they would work with but not for a Filipino unless he was "really sharp." Some stated they thought Filipinos made rate as a result of longevity in the service vice being skilled or knowledgeable in their new rating.

Of the six Caucasians who did not perceive any racial problems between themselves and other races within their work group, five had less than 18 months active duty service and their average TIS as a group was less than 10 months. The sixth individual who stated he did not perceive any problems

between Caucasians and Filipinos worked in a BOQ setting, had six years of active duty and was married to a Philippine national.

2. Filipinos

Overall, the Filipinos expressed a feeling that the MS rating is better than their former rating in terms of promotion opportunities and job challenge. The amalgamation was viewed as a chance for improving their job status and self-esteem within the naval organization.

The mean age of the Filipino group was 36.8 years and the mean TIS was 13.9 years. Their mean age at enlistment was 22.4 years, which is considerably older than the average age of students entering MS "A" School. Collectively, they saw the Navy as a stepping stone to better economic status and enlisted with the primary expectation of remaining in the Navy for a 20-year career and the accrued retirement benefits.

Without exception, the 27 Filipino personnel interviewed indicated they would retire as soon as they reached 20 years of active service. This objective was considered so important that most interviewees voluntarily disclosed that any attempt to alter the Navy's present retirement program would result in their leaving the Navy at the first opportunity.

Seventeen of the 26 Filipino personnel indicated they received little or no cross-training following amalgamation in operating an EDF. They were of the opinion that their commands had moved very slowly, if at all, in attempting to afford them any opportunity for additional training in

EDF operations. All 17 felt they needed more training than they received to successfully compete with former CS personnel in the EDF environment and on advancement examinations. The remaining 10 individuals who did not express any cross-training problems were either former CS personnel or had the good fortune to be at a command which conducted a rigorous cross-training program immediately following the amalgamation.

Sixty percent of the Filipinos interviewed indicated that Caucasians and Filipinos had some difficulty working together in the MS work group. Senior Filipino petty officers perceived the younger Caucasian personnel as being lazy, unwilling to work for Filipinos, and hard to motivate. They expressed a working knowledge of leadership principles and felt they had extended themselves in every way to gain the support of junior Caucasians but had been generally unsuccessful.

Filipino personnel perceived they were often rated unfairly by their Caucasian seniors, both officer and enlisted, with respect to their leadership abilities displayed in the EDF area. They also rated communication difficulties high on their list of perceived problem areas, but viewed this more as an excuse used by Caucasians to justify their discriminatory behavior.

3. Others

Of the remaining interviewees, there were three Blacks, two Mexican Americans, one American Indian and one Hawaiian. Two Black MS personnel stated they did not like being in the

MS rating. The remaining individuals expressed a more positive feeling toward serving in the rating and two indicated they were going to reenlist. The other three were uncertain about their reenlistment intentions.

Collectively, the "other" group viewed the Caucasian and Filipino MS's as having the most difficulty communicating and working together. This group indicated an awareness that most junior Caucasian personnel resented working for senior Filipino petty officers. They were more positive regarding their own working relationships with Filipino personnel, but like most of their Caucasian peers, tended to view Filipinos as clannish, using their native language in the presence of other MS's when English would have been more appropriate, and having difficulty managing EDF operations, especially if they were former Stewards.

4. Interpretation of Results

Based on the interview results, there appears to be a pronounced level of dissatisfaction and irritation among many members of the MS rating at the present time. Reasons for this apparent dissatisfaction and irritation, expressed by the interviewees, range from unmet expectations, poor quality of work life, and abuse from the crew, to inept supervision, slow advancement, and lack of formal training.

Young first-term Caucasians are expressing their discontent with being in the MS rating by "voting with their feet" as evidenced by the fact that only one of those interviewed stated a definite intention to reenlist. This trend

was analyzed in the previous section using HRM survey data for the years 1974-76. The results of the interview data, coming some two years later, suggest this negative reenlistment trend is continuing and may become even more exaggerated in the very near future.

It is the opinion of the researchers, however, that the real problems in the MS rating today lie more in the areas of self-esteem, self-perception, interpersonal and intercultural relationships. Few MS personnel interviewed expressed a high degree of professional pride in their work. They generally viewed their rate as subordinate or less important than other ratings to the overall mission accomplishment of their commands. There generally seemed to exist a sense of few rewards being available to an MS person even if one did his or her very best.

The lack of communication skills and mistrust evidenced among members of the MS rating, especially between Caucasians and Filipinos, may be of critical importance in understanding some of the current issues in the rating. Junior MS personnel tend to perceive that their senior petty officers care little about them as individuals or shipmates. This feeling was particularly pronounced when the junior individual was from one racial group and the senior was from another. Consequently, perceived racial discrimination in work assignments and performance evaluation marks existed for both junior Caucasians and Filipino personnel. These imbalances in assessment appear to have fostered increased feelings

of mistrust and suspicion. The Filipino MS's are not only different racially and culturally, but also tend to be much older than their Caucasian counterparts. This culture and age discrepancy may be adding yet another dimension to the perceived differences causing friction between the two groups. The intensity of feelings reached aboard one command was reported by one interviewee to be "all out war"!

Caucasian and Filipino personnel alike seem to possess a lack of understanding and awareness of each others' cultural background, heritage and value systems. As a result, perceptions often appear to take on racial overtones. This racial coloration tends to further inhibit communication flow between individuals. Communication blockages seem to create a situation which only increases the polarity of members within the MS work group according to race.

The preceding interview data, if representative, suggests an apparent polarization of attitudes and perceptions along racial lines within the MS rating. To further test for this possibility, an analysis of variance was performed, using the same HRM survey data as in the preceding section, to determine if Caucasian and Filipino perceptions of the naval organization were homogeneously distributed with relation to each other in 1974. The analysis of variance was again performed using HRM survey data from the last half of 1976 to determine if any change had occurred in the relationship of the distributions over time. A complete table of the resulting F-ratios is contained in Appendix J.

The F-ratios obtained suggest that the distribution of survey scores around the mean of the five indices, used in the preceding section to measure perceptions of the organization, were not significantly different for Caucasian and Filipino respondents in 1974. The F-ratios obtained for 1976 show that significant differences existed in four of the five indices (Supervisory Support, Peer Support, Work Group Coordination, and Satisfaction).

When each racial group was analyzed separately between 1974 and the last half of 1976, Caucasian respondents showed no significant difference in distribution in all five indices while Filipino respondents showed significant shifts on three of the five indices (Human Resource Emphasis, Supervisory Support, and Satisfaction).

What the F-ratios suggest is that in 1974 the CS and SD personnel were clearly defined separate groups who perceived the naval organization with similar distributions about a mean indice score. In 1976, the people serving in the new MS rating, designed to unify and consolidate all food service personnel, apparently have a much greater diversity of perceptions about the organization.

One conclusion to be drawn from this analysis is that the information derived from the interview data, i.e., the perception that a racial polarity exists within the present MS rating, is supported by statistical analysis. It would appear likely that the process of amalgamation has not succeeded in developing a single unified group. What seems to

have occurred is the emergence of clearly definable racial subgroups which are very likely more dissimilar perceptually than before the amalgamation.

A second conclusion is that the genesis of the current state of polarity within the MS rating was most likely discernable from HRM survey data as early as 1976. The usage of such data analysis, to monitor the progress of organizational change, may be an untapped resource for managers in the naval organization. This analysis might allow for early assessment of progress and/or problem identification precipitated by organizational changes.

D. SOCIO-TECHNICAL ANALYSIS

The preceding analysis provided a sense of the perceptions and attitudes of individuals serving in the MS rating. While this information furnishes helpful clues and additional insight to the issues addressed in the Introduction, it remains only a piece of a much larger picture. At this point, it is difficult to separate the valuable from the less important in the amalgamation picture. Are the interactions and difficulties found through data gathered at the perceptual level, significant problems in and of themselves, or are they perhaps symptoms of a larger issue?

To facilitate the development of an organizationally useful answer to this question, Leavitt's [1964] model of socio-technical change was chosen as a vehicle for further analysis. This model separates systems into four interrelated, interactive

subsystems through which to view organizational change.

These categories are summarized in Figure 2 on page 87.

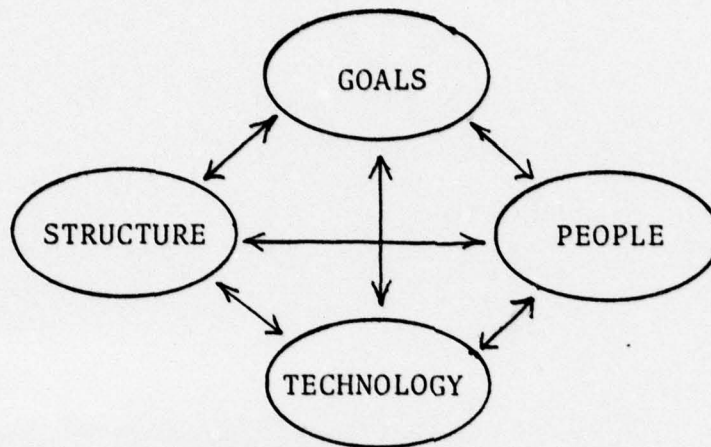
The arrows in Figure 2 represent the possible interactions among component parts of the model. It should be noted that in addition to the primary interactions of the components, many times there are secondary and tertiary reactions. The model, as shown, does not take into consideration the impact of the environment on the organization. Important environmental influences will be discussed along with the component analysis of each of the major model parts.

Since Navy planners did not use this systemic model to guide the changes made in the food service ratings, all of the possible interactions between subsystems were not dealt with as separate entities in the planning and implementation phases. The potential utility of the model lies principally in its delineation of the multiple subsystem interactions.

1. Goal Subsystem

In relating the CS and SD amalgamation decision to this model, the change process was most probably initiated through the Goal Subsystem Component. Environmentally, an increased racial awareness on the part of the United States society, and Congress in particular, coupled with the concomitant sensitivity to any organizational practice that even hinted of institutional racism, led the Navy to recognize the de facto existence of the SD rating as a separate racial sub-group in 1971. The adoption of the Human Goals Program by the Department of Defense in 1969 and the ensuing effort

SOCIO-TECHNICAL MODEL



GOALS --- the organizational functions or tasks such as combat readiness, international diplomacy, equal opportunity, and resource management.

PEOPLE --- the human element, interactions, and concerns influencing organizations.

TECHNOLOGY -- the tools used to accomplish goals.

STRUCTURE --- the systems of communications and work flow in organizations.

Figure 2

to institutionalize it helped to stimulate this increased racial awareness. Internally, the Navy had established goals for manpower utilization and retention. Failure to meet these goals became a prime motivating factor in the decision to combine the CS and SD ratings. It had become obvious to personnel planners that ostensibly similar ratings were experiencing very different manning and retention levels. In general, the CS rating was undermanned and the SD rating was overmanned, based on the actual billet requirements. One consequence was inequitable advancement; promotions in the CS rating were much more rapid than in the SD rating. [Spillane, 1975]. The proposed organizational change to achieve these manning goals and alleviate the personnel inequity was primarily structural in nature (amalgamation).

2. Structure Subsystem

The impact of this structural change was felt in all of the other three components. The effect of structural change on food service technology was an expansion of the technical skills and knowledge required for all members of the new rating by almost 30%. This technological requirement had been anticipated by the Navy hierarchy. A study was commissioned in 1971 to determine the degree of occupational similarity between the CS and SD ratings. [Naval Personnel Research and Development Laboratory, July 1971]. This study concluded that 71% of the CS and SD rating qualifications were identical, comparable, or related. The most significant differences analyzed occurred at the E-6 level and centered

on the differing administrative requirements for the enlisted and officer mess operations. The basic conclusion was that it was both feasible and desirable to combine the two food service related ratings. The Bureau of Naval Personnel Rating Review Board (1971) dealt, in part, with the possible impacts of structural change on technology. The Board identified a series of possible problems resulting from the proposed change. One such problem was qualification compatibility, which was felt at the time to be similar in definition but different in magnitude, scope, and implementation between the CS and SD ratings.

The technology of these food service ratings is relatively stable when compared to some of the more technical ratings [e.g., Electronics Technician (ET) or Firecontrol Technician (FT)]. However, the greatest impact on organizational structure is generated by the relatively people intensive nature of this technology. The number of personnel required to conduct food service operations on board ship has not been greatly reduced in the past seventy-five years by innovation in either provisioning or preparation techniques. This personnel intensive factor is evidenced by the fact that the MS rating is the third largest rating in terms of sheer numbers in the entire United States Navy enlisted structure. The technology subsystem helps drive the structural in the Navy by defining the specific job requirements. These functional requirements are translated into tasks which become the basis for determining manning levels and rate structure.

This technology driving structure phenomenon was partially addressed by the Rating Review Board when billet numbers and definitions were examined.

3. People Subsystem

Perhaps the greatest effect of the structural change of rating amalgamation has been on the people subsystem. To ascertain the likely perceptions and reactions of CS and SD personnel toward a possible merger, a study was made by the Naval Personnel Research and Development Laboratory. [August, 1971]. This study was based on results from a questionnaire mailed to CS's and SD's in May of 1971. The survey sample numbered a total of 7,719 responses and was considered representative of the entire food service population. This study concluded: (1) the majority of Stewards were generally satisfied with the Navy but less than satisfied with their rating, (2) the majority of Commissarymen were satisfied with both their rating and the Navy, and (3) consolidation would result in an increase in satisfaction for Stewards and a decrease in satisfaction for Commissarymen. The two most negative aspects about the proposal were expressed by the Commissarymen who disliked the prospect of cleaning officers' living quarters and serving food "waiter style." The most positive aspect for all survey respondents was satisfaction in learning the skill of cooking.

The study's final conclusion dealt with the problems inherent in bringing together two major ethnic groups which have historically remained identifiably distinct within

the organization. The possibility of conflicts arising simply from basic cultural differences was addressed by the study group. A dynamic program for acculturation was recommended in the study report to reduce or eliminate these likely conflicts.

In addition to these interactions, the literature suggests that major change, in and of itself, would generate tension for members who move from one work setting into another. To help alleviate this change induced problem, a policy of rotational cross-training was recommended to be contained in the implementing directive. Judging from the concern voiced by the Chief of Naval Operations in a personal message to major fleet and shore commanders in November of 1975, implementation of the initial amalgamation order (Appendix F) may have been slowed by organizational inertia. This issue of cultural conflict was still a matter of concern as late as 1977 to personnel planners within the Bureau of Personnel. [BUPERS Briefing Notes, 1977].

The advancement of larger numbers of CS than SD personnel, in the fall of 1974, was viewed by some Filipino Stewards as a manifestation of institutional racism. This was perceived as a practice which ran counter to the espoused reasons behind the merger. The organizational decision regarding food service personnel advancements impacted heavily and negatively on the Filipino community. As recently as August 1977, official correspondence was still being initiated to investigate the perceived inequities. [Nartea, 1977].

a. Filipino Culture

The cultural differences predominant in the CS and SD ratings were not officially addressed in the implementing plan and directives. The results of the analysis of HRM survey data and interview data presented in Sections B and C of this chapter point to the need for further exploration in this area. The fact that the SD rating was a relatively isolated, organic, racial sub-group of the organization made it easier for the Filipino culture to remain essentially unchanged by the majority Caucasian-American culture, especially in the area of interpersonal relationships. The social values in the Filipino culture which most affect interpersonal relationships are almost diametrically opposed to the analogous American social values. The Philippine culture centers primarily on two social values: first, family centered loyalty and secondly, a shame orientation. Children throughout their maturation are encouraged to develop group dependence. Overt expressions of anger are discouraged. Individual excellence is often subjugated to group production. To excel would draw attention to an individual and bring shame to one's friends who could not do as well. Success is measured as a function of education, religious observance, and provision of some semblance of an inheritance for the family. [Duff, 1973].

The concepts of social acceptance, personal honor, and dignity define the Philippine value termed "amor proprio." This important social value usually results in

very polite, formal relationships outside of the family group. It is sometimes manifested to the extreme condition of implied agreement with another when no agreement actually exists. In the Philippine culture, intermediaries traditionally serve as social dampening agents to insure no aggravation results from interpersonal exchanges.

How does this compare with the generally accepted individual values of the American culture? A conflict is likely almost immediately because the American places a high value on independence, autonomy, personal excellence, and directness of communications. What are the logical outcomes in the shipboard environment of merging people with distinct cultural values into a single rating? One likely outcome is the exclusion of other races from friendship by Filipinos. The Filipinos may be reluctant to incur additional primary social obligations by extending their family relationship to those of another culture. These actions leading to non-involvement thus avoid the incurrance of a "debt of primary obligation" (utang na loob). A second result producing resentment toward the merger by Caucasians would likely be generated on several levels: resentment of the introduction of new work group members, resentment of different leadership styles, and suspicion of an unfamiliar racial minority. As evidenced by the interview data in this chapter, young Caucasian Americans are not comfortable with close, meticulous supervision; often viewing this as impuning their abilities and endangering their independence. The value placed on autonomy

and independence by the typical young Caucasian is very pronounced in our society. [Bowers, 1975]. While these values may be subordinated upon entering the Navy, they are apparently not completely discarded.

Conversely, the interview data indicated that Filipino supervisors were often frustrated because their methods for teaching and leading that were successful when directing the activities of other Filipinos were not as successful with young Caucasian personnel. The reaction of some Filipino supervisors was to become even more directive and seemingly arbitrary toward their subordinates. Motivation of workers is often difficult in a heterogeneous group under the various constraints of military life. This is compounded when the group is infused with a sizeable input of personnel whose cultural values utilize a completely different set of motivators.

4. Secondary Reactions

There are also possible secondary effects attendant to this change that may result during interaction with crew members external to the rating. One example is the creation of a "Rotational Pool" for non-designated seamen to act as compartment cleaners in the officers' quarters aboard ship. This action is likely to affect the attitudes of other young seamen who observe their peers performing such duties. This may be construed among peer groups as unwarranted servitude, thereby increasing the negative reaction to performing these duties. Crew members perceiving discord among the MS's may extrapolate this perception into generalities about the

character of racial groups. They may also correlate this projection with the quality of food service, thereby exacerbating whatever problems may already exist. The interview data in Section C of this chapter revealed a sense of frustration on the part of junior MS's as a result of the crew's lack of appreciation of the sustained effort required to provide quality food service. This phenomenon is not new or unique but, intuitively, if the work group is split and experiencing internal discord, the members will be less able to deal effectively with outside irritants.

Discord within the rating will very likely affect attainment of organizational goals. The analysis of data in Section B of this chapter has indicated that this may be happening or at least contributing to the lack of attainment of retention goals. There is also a probable impact on other crew members whose cooperation is necessary for achieving organizational goals, i.e., if the crew is poorly fed, their productivity may be adversely affected. Similarly, if food is well prepared, the crew may be more receptive to fulfilling their organizational roles. In any event, discord along racial lines runs counter to the intent of the policy and goals outlined in the Navy's Human Goals Program. Additionally, desired habitability goals may be harder to achieve if food service is negatively affected. Finally, the atmosphere and quality of food service operations may be seen to directly affect the attainment of the Navy's fourth mission of diplomacy when foreign dignitaries are served and entertained aboard ship.

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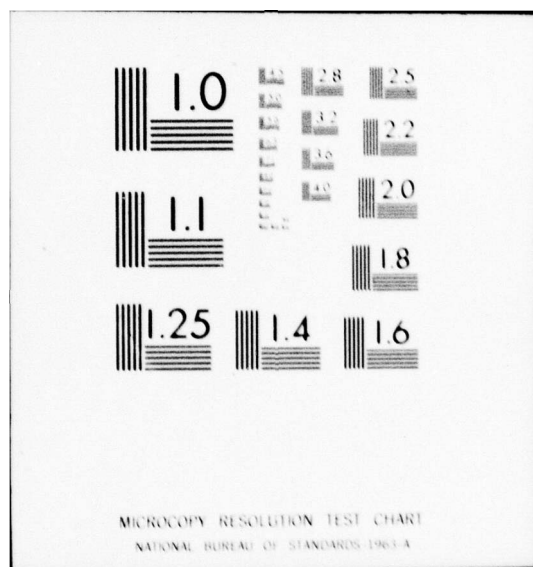
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The people component may also negatively affect technology, particularly if equipment is damaged in the cross-training process. In the case of food service, the accounts and records can also be considered technologically based tools of the rating and are susceptible to error as people begin to learn new techniques and accounting systems. Therefore, management techniques may require some modification as people adjust to the new structure.

In summary, the early steps toward amalgamation and the implementation phase have concentrated on preparing rating members for changes within the structural and technical components of the Leavitt model. Less extensive preparation was made in the people component. The most pressing issues facing the rating today appear to be in the area of interpersonal/intercultural relations. This is a problem rather than a symptom at the work group level. At the more abstract organizational level, these problems are symptoms of the need for improved planning for organizational change.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. MAJOR CONCLUSIONS OF STUDY

The following are the major conclusions of this study:

1. The food support system has historically been a key element in the accomplishment of naval operations. Its impact on morale, retention, quality of work life and worker satisfaction has only recently been studied using rigorous scientific methods. The importance of and the potential for negative impact of food service operations within the naval organization continues to be eclipsed by the attention given to the rapidly changing technology in naval hardware systems and platform design. Yet throughout the study, one theme continues to recur. The MS rating in the U.S. Navy possesses the capacity to directly affect the well being of every officer and enlisted member.

2. While a structural and technological amalgamation of the former CS and SD ratings has been ostensibly completed, a perceptual and attitudinal amalgamation has not occurred on the part of Caucasian and Filipino members serving in the MS rating.

3. The decision to amalgamate the former CS and SD ratings was well researched and organizationally rational. However, the implementation phase of this organizational change concentrated heavily on the structural and technological factors and gave less attention to the human impact on the organization's members.

4. Both the Caucasian and Filipino racial subgroups within the MS rating are experiencing a sense of organizational anxiety and frustration as a result of the amalgamation. Major sources of irritation perceived by the Caucasian subgroup include:

- a. Slower advancement.
- b. Domination of upper paygrades by former SD personnel.
- c. Lesser competence of former SD's to manage EDF operations.
- d. Image of wardroom duties as servitude and former "nigger" work.

Major sources of irritation perceived by the Filipino subgroup include:

- a. Institutional racism and discrimination in promotions and evaluations.
- b. Caucasian disrespect and resentment in working for Filipino petty officers.
- c. Lack of adequate training and preparation in EDF operations following amalgamation.
- d. Having a "language problem" stereotype.
- e. Being viewed as "second rate" leaders and petty officers.

5. The majority of MS personnel lack a positive self-image of themselves in their role as food servicemen. Factors influencing this image are:

- a. Lack of recognition and support by command.
- b. Failure of MS personnel to appreciate the marketability of food service skills in the civilian community.
- c. Excessive negative feedback from the crew concerning food quality, quantity and service.
- d. Limited opportunity to obtain advanced professional training.

e. Cognitive dissonance resulting from high expectations developed during "A" school being largely unmet in the fleet.

f. Senior petty officer role models for younger MS personnel lack esprit, professionalism and positive attitudes toward service in the MS rating.

6. Many members of the MS rating are still unclear regarding the reasoning behind the amalgamation decision. There tends to exist a general lack of understanding of the social, political, environmental, organizational, economic, and managerial factors which necessitated the organizational change.

7. Intercultural conflict and friction, especially between Filipino and Caucasian personnel, permeate the MS rating at all levels. An apparent major source of intercultural conflict is the widely divergent managerial styles used by Filipino and Caucasian petty officers.

8. Without a marked improvement in the retention of first-term MS personnel, a void will soon exist at the mid-level paygrades. This situation has the potential to further aggravate and intensify the racial polarity that already exists between the upper and lower levels within the MS rating hierarchy. Additionally, this is likely to have the consequence of creating a scarcity of qualified senior level supervisors in the long term future.

9. The Navy's fourth mission, involving overseas diplomacy, could be seriously jeopardized if social functions hosted for foreign officials and dignitaries are catered by poorly motivated, improperly trained, dissatisfied, unprofessional and insensitive food service personnel.

10. Based on the results of this study, HRM survey data may be a potentially useful tool for managers of organizational change to monitor and assess personnel attitudes and perceptions on a near real time basis.

11. As a result of the amalgamation, the people problems that currently exist within the MS rating have the potential to impact negatively on battle readiness and mission accomplishment. They are of such magnitude, intensity and pervasiveness that immediate steps should be initiated to ensure the survivability of the MS rating as a viable entity in the naval organization.

These conclusions are based on the authors' analysis of HRM survey data, interview data, and an extensive review of the literature dealing with habitability and food service support systems in the Navy. Additional ideas and information related to these conclusions were obtained from informal discussions with naval officers, enlisted personnel other than interviewees, and Naval Postgraduate School faculty members.

While the conclusions are not exhaustive by any means, they do represent the significant ideas that were garnered from the basic research conducted. They focus attention on the human element within the naval organization as being the critical component that will ultimately determine the degree of success achieved by the amalgamation.

B. MAJOR RECOMMENDATIONS OF STUDY

The recommendations growing out of the conduct of this study will be divided into rating-specific and Navy-specific categories. The former will be addressed to immediate issues

that exist in the MS rating and the latter to those interested in instituting managed change in the larger organization. They will also include the need for future research in the area of human resource management. The first six recommendations are primarily related to the MS rating and the last three are of a more nomothetic nature.

Recommendation A

The present self-image of MS personnel is weak and needs considerable improvement. Therefore, the following actions are recommended:

1. Emphasize the marketability of professional catering, hotel and restaurant management, and culinary skills inherent in the MS rating. This might begin as early as during the recruitment phase.
2. Establish a highly visible apprenticeship training program in the MS rating that is recognized by civilian food service oriented professional organizations and societies.
3. Establish a suitable reward system at the command level to increase recognition of individual food service personnel, e.g., conduct cooking/baking competition with winners, selected by the crew, to receive letters of recognition from the commanding officer with appropriate copies to parents/spouse and service record. Winners could also be given the opportunity to spend several days training with a professional civilian chef/caterer in the local community.
4. Include within the Navy's current PQS program standards for MS personnel.

5. Conduct team building workshops for MS work groups utilizing current assets such as HRMC/D's and FTC's.
6. Conduct some type of assertiveness training for all MS personnel to facilitate coping with negative feedback.
7. Develop an information package utilizing a multi-media approach aimed at educating and informing crew members of the importance and rich history associated with Navy food service operations.
8. Devise a vehicle to ensure that all MS personnel have a clear understanding of the background and rationale which led to the amalgamation of the CS and SD ratings.
9. Include in the MS Rate Training Manuals and "A" School curriculum a separate section outlining the historical contributions of food service personnel and the importance of their role in the modern naval environment.

Recommendation B

To reduce the intercultural friction and improve the managerial and interpersonal skills of MS personnel, it is recommended that strong consideration be given to:

1. Encouraging commands to assign priority to MS personnel when scheduling Leadership and Management Effectiveness Training (LMET).
2. Developing a mini-workshop in interpersonal communication skills stressing cultural differences between Filipinos and Caucasian-Americans and emphasizing their antithetical managerial and leadership styles.

3. Including didactic instruction in cultural awareness in the MS "A" and "C" School curricula.

4. Encouraging all MS personnel to utilize education opportunities, such as the Program for Afloat College Education (PACE), to improve their verbal English skills.

Recommendation C

With the advent of amalgamation, the traditional career guidelines for former CS and SD personnel were disrupted. To facilitate the transition to new career goals in the MS rating recommend that:

1. Career planning workshops be developed for senior petty officers in the MS rating.

2. A more active, dynamic effort be made to inform junior MS personnel of career paths to Warrant Officer and educational opportunities, establish individual career goals for them, and monitor their progress in reaching these goals.

Recommendation D

To reduce the possibility of cognitive dissonance and unmet expectations of newly-reported MS "A" School graduates, and to foster a stronger sense of group identity and belonging, it is recommended that:

1. A sponsor program be instituted incorporating on board MS assets. Personal contact should be made prior to an individual's departing MS "A" School and close individual support should continue through the initial shipboard adjustment period.

Recommendation E

To make the ninety-day "mess cooking" and rotational pool assignment periods a more positive experience and encourage more OJT inputs into the MS rating, recommend that:

1. A suitable reward system recognizing superior performance be instituted. Recognition could take the form of "Messman of the Month" awards and commanding officer letters of appreciation (copies to individual, parents/spouse and service record).
2. A training program, focused on professional knowledge, be developed to ensure rotation through as many food service skill areas as possible.
3. Mess Deck Masters-at-Arms be made fully aware of the impact and the critical nature of this ninety-day period in forming the attitudes and perceptions of young enlisted personnel toward the MS rating in particular and the Navy in general.

Recommendation F

At the present time the MS rating is perceived as being less attractive than many other Navy ratings. This problem is particularly acute in minority communities, as evidenced by the small minority input to the rating. To increase the quality and numbers of personnel seeking entry into the MS rating, it is recommended that:

1. A more active recruiting effort be made to solicit qualified enlistees from vocational schools, junior colleges, technical institutes and high schools who are interested in

pursuing careers in food service operations, and hotel and restaurant management.

2. An aggressive campaign be conducted in minority communities to overcome the legacy of history and the apparent socio-cultural stigma still associated with the former Steward and Commissaryman ratings. This would have the effect of making the MS rating more attractive to minority community members.

Recommendation G

Understanding the complexities involved in planning and instituting change and its impact on structure, goals, people and technology, is important to the survival of large, modern organizations. There are currently several change models that could be utilized in planning for major organizational change. It is recommended that trained Navy personnel with a background and experience in Organization Development be included in the decision making process involving future major organizational changes.

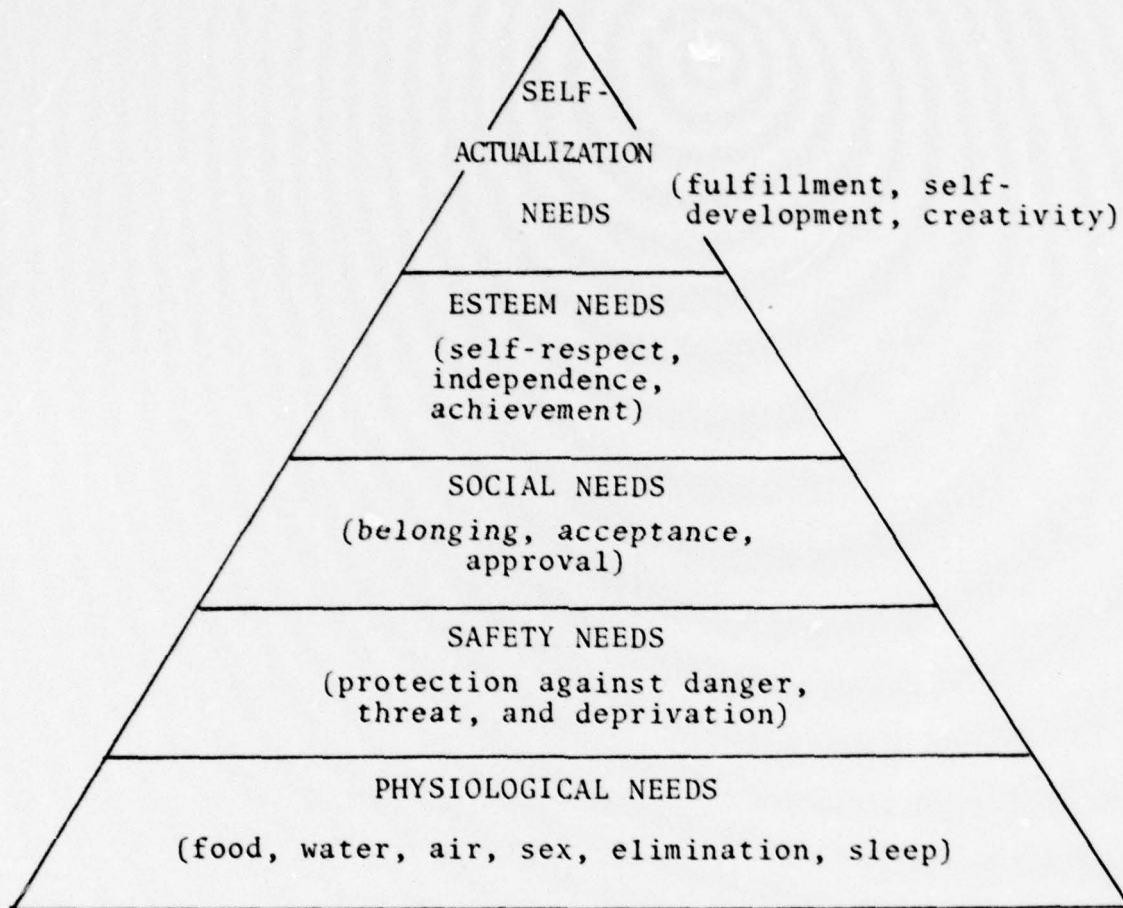
Recommendation H

It is recommended that an increased number of senior MS personnel be considered for a tour of duty within the Human Resource Management field. This could serve to provide an internal capability to address the socio-technical, cultural and attitudinal difficulties that currently exist within the MS rating.

Recommendation I

A requirement exists in any planned change effort to monitor and evaluate the perceptions and attitudes of personnel affected or involved in the change process. The HRM survey is an institutionalized diagnostic instrument for measuring people's attitudes toward and perceptions of the organization. The standard 88 question survey has a provision for including 40 additional questions which could be tailored to measure attitudes and perceptions concerning specific issues such as organizational change. Therefore, it is recommended that further research be undertaken to determine the validity and reliability of using HRM survey data to assess and predict the impact of organizational change on the organization's members.

APPENDIX A
MASLOW'S HIERARCHY OF NEEDS



APPENDIX B

HRM SURVEY DIMENSION/INDEX INFORMATION

DIMENSION	INDEX
COMMAND CLIMATE	COMMUNICATION FLOW DECISION MAKING MOTIVATION HUMAN RESOURCE EMPHASIS LOWER LEVEL INFLUENCE
SUPERVISOR LEADERSHIP	SUPERVISOR SUPPORT SUPERVISOR TEAMWORK SUPERVISOR GOAL EMPHASIS SUPERVISOR WORK FACILITATION
PEER LEADERSHIP	PEER SUPPORT PEER TEAMWORK PEER WORK FACILITATION PEER PROBLEM SOLVING
WORK GROUP PROCESSES	WORK GROUP COORDINATION WORK GROUP READINESS WORK GROUP DISCIPLINE
END RESULTS	SATISFACTION INTEGRATION OF MEN AND MISSION TRAINING GENERAL
HUMAN RESOURCE MANAGEMENT	EQUAL OPPORTUNITY/RACE RELATIONS DRUG ABUSE ALCOHOLISM PREVENTION COMMUNITY INTERRELATIONSHIPS

APPENDIX C

QUESTION MAKEUP OF SURVEY INDICES

HUMAN RESOURCES EMPHASIS INDEX: The command shows concern for human resources in the way it organizes its personnel to achieve its mission. Personnel within the command perceive that the organization and assignment of work sensibly considers the human element.

Questions:

1. To what extent does this command have a real interest in the welfare and morale of assigned personnel?
2. To what extent are work activities sensibly organized in this command?
3. This command has clear-cut, reasonable goals and objectives that contribute to its mission.
4. I feel that the workload and time factors are adequately considered in planning our work group assignments.
5. People at higher levels of the organization are aware of the problems at your level.

SUPERVISORY SUPPORT INDEX: Leaders behave in a way which increases the work group members' feelings of worth and dignity.

Questions:

1. How friendly and easy to approach is your supervisor?
2. When you talk with your supervisor, to what extent does he/she pay attention to what you are saying?
3. To what extent is your supervisor willing to listen to your problems?
4. My supervisor makes it easy to tell him/her when things are not going as well as he/she expects.

PEER SUPPORT INDEX: Work group members behave toward each other in a manner which enhances each member's feeling of personal worth.

Questions:

1. How friendly and easy to approach are the members of your work group?
2. When you talk with the members of your work group, to what extent do they pay attention to what you are saying?
3. To what extent are the members in your work group willing to listen to your problems?

WORK GROUP COORDINATION INDEX: Work group members plan, coordinate, and support each other effectively.

Questions:

1. To what extent does your work group plan together and coordinate its efforts?
2. To what extent do you have confidence and trust in the members of your work group?
3. To what extent is information about important events widely exchanged within your work group?
4. To what extent does your work group make good decisions and solve problems well?

SATISFACTION INDEX: Personnel within the command are satisfied with their supervisors, the command, other work group members, their jobs, and their present and future progress in the Navy.

Questions:

1. All in all, how satisfied are you with the people in your work group?
2. All in all, how satisfied are you with your supervisor?
3. All in all, how satisfied are you with your job?
4. All in all, how satisfied are you with this organization, compared to most others?
5. All in all, how satisfied do you feel with the progress you have made in the Navy, up to now?
6. How satisfied do you feel with the chance for getting ahead in the Navy in the future?

7. Does your assigned work give you pride and feelings of self worth?

8. Do you regard your duties in this command as helping your career.

APPENDIX D

NAVY HUMAN RESOURCE MANAGEMENT SURVEY

SIDE 1

MARKING INSTRUCTIONS

USE A NO. 2 BLACK LEAD PENCIL.

DO NOT USE INK OR BALLPOINT PENS.

MAKE BLACK MARKS BETWEEN DOTTED LINES.

ERASE CLEARLY ANY ANSWER YOU WISH TO CHANGE.

MAKE NO STRAY MARKS ON THE ANSWER SHEET.

The following questions ask for some background information about yourself. Your responses will be kept strictly confidential.

- Sex: ☐ Male ☐ Female ☐ Civ Emp ☐ Foreign National (overseas only)
- Employment Status: ☐ Mil ☐ Civ Emp
- Racial/ethnic identity:
 - ☐ Polynesian, Samoan, Hawaiian
 - ☐ Chinese, Japanese, Korean
 - ☐ White
 - ☐ Spanish descent (Mexican American, Puerto Rican, Cuban American, Chicano, Latino)
 - ☐ Malayan, Filipino, Guamanian
 - ☐ Black
 - ☐ Indian Tribes, Eskimo, Aleut, (Native American)
- Marital status:
 - ☐ Single (never married)
 - ☐ Married
 - ☐ Other (separated, divorced, widowed)
- What is your highest level of education? (Select one)
 - ☐ Did not complete high school
 - ☐ Completed high school (including GED)
 - ☐ Completed some college, or Associate degree
 - ☐ Hold BA/BS or equivalent degree
 - ☐ Hold Masters degree or beyond
- How long have you been assigned to this command/organization?
 - ☐ Less than 3 mos.
 - ☐ 3 mos. but less than 6 mos.
 - ☐ 6 mos. but less than 1 year
 - ☐ 1 year but less than 2 years
 - ☐ 2 years but less than 4 years
 - ☐ 4 years or more
- How long have you been assigned to your present workgroup?
 - ☐ Less than 1 month
 - ☐ 1 month but less than 6 mos.
 - ☐ 6 mos. but less than 1 year
 - ☐ 1 year or more
- Have you taken this Survey before:
 - at this command/organization? ☐ Yes ☐ No
 - at another command/organization? ☐ Yes ☐ No

- (Mil) How many years have you been in the Navy?
- (Civ) How many years of federal service have you accumulated?

10	11	12	13	14	15	16	17	18	19	20
----	----	----	----	----	----	----	----	----	----	----

10. Age:

1	2	3	4	5	6	7
---	---	---	---	---	---	---

11. Paygrade:

OFF	WARR	ENL	GS	WG	WL	WS	WO	WR	RA
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

12. What is your supervisor's code?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

REMAINING QUESTIONS, FOR MILITARY ONLY

- What are your current service plans?
 - ☐ Eligible for retirement
 - ☐ Plan to remain on duty at least until eligible for retirement
 - ☐ Re-enlist or extend, but undecided about making Navy a career
 - ☐ I am undecided about my service plans (not eligible for retirement)
 - ☐ Do not plan to stay beyond my current obligation, enlistment, or extension
- How much obligated service do you have left?
 - ☐ Less than 6 mos.
 - ☐ 6 mos. but less than 1 year
 - ☐ 1 year but less than 2 years
 - ☐ 2 years or more (indefinite for officers)
- Have you completed a formal 2 weeks Leadership and Management Course for Officers/Petty Officers (LMT) since 1974?
 - ☐ Yes ☐ No

Question 16 is for **ENLISTED ONLY**. All officers skip to #17.

- What is your rating or striker designation? (Ex: AT, ETR, YN)
If non-designated give apprenticeship group (Ex: FA, SN, HN)
If it has only two letters use upper two boxes.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

Question 17 is for **OFFICERS** and **WARRANT OFFICERS** only.

- What is your officer designator? (Ex: 1320)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

APPENDIX E
INTERVIEW QUESTIONS

Demographic Data: Command Type _____; Date _____
Rate/Paygrade _____; Race _____; Sex _____
"A" School Grad? _____; TIS _____; AGE _____

1. What's it like to be an MS at this command?
 2. If you were in the Navy prior to the merger of the CS and SD ratings (Jan 75):
 - a. Were you a CS or SD and where were you stationed (geographically)?
 - b. What was the most difficult part for you in making the transition?
 - c. What was done by your command to make the transition easier?
 - d. What else could have been done to make the transition easier?
 3. What do you think could be done to give you a greater sense of pride in your rating? (i.e., what isn't being done that pisses you off?)
 4. Please indicate your present intention concerning reenlistment on the following five point scale: (Retirement=6)

Definitely No	Probably No	Undecided	Probably Yes	Definitely Yes
1	2	3	4	5
- **If respondent answer = 1, 2 or 3, include "probe" of question 5.**
5. What are the primary reasons you see for young men/women (E3,4,5) leaving the MS rating?

****Probe:** Would elimination of any of these reasons make you want to reenlist?
 6. In the MS rating, are majority and minority people suspicious of each other? (If yes, go to "probe")

****Probe:** What do you think could be done to reduce or eliminate the suspicion?

APPENDIX F
IMPLEMENTING DIRECTIVE

R 171945Z/212 DEC 74 ZEO
FM:CNO WASHINGTON DC
TO:NAVOP
BT

UNCLAS //NO1220//,
SUBJECT: UTILIZATION OF MESS MANAGEMENT SPECIALIST (MS)
PERSONNEL

1. THIS NAVOP ANNOUNCES THE DISESTABLISHMENT OF TWO OF THE NAVY'S OLDEST AND PROUDEST RATINGS. THE SECRETARY OF THE NAVY HAS APPROVED THE MERGER OF THE COMMISSARYMAN AND STEWARD RATINGS INTO A NEW MESS MANAGEMENT SPECIALIST (MS) RATING WITH AN EFFECTIVE DATE OF 1 JANUARY 1975. THIS NAVOP ALSO PROVIDES GENERAL GUIDANCE REGARDING THE PRINCIPLES WHICH WILL GUIDE THE RATING MERGER AND THE UTILIZATION OF MS PERSONNEL. SPECIFIC IMPLEMENTING GUIDANCE WILL BE ISSUED FOR EACH AREA REQUIRING POLICY DIRECTIVES.

2. THE MS RATING IS DESIGNED TO PROVIDE A SINGLE SOURCE RATING FOR PERSONNEL TRAINED TO PERFORM FOOD PREPARATION, FOOD SERVICE AND HOTEL MANAGEMENT DUTIES THROUGHOUT THE NAVY. ALTHOUGH ENLISTED FOOD PREPARATION AND SERVICE WILL NOT BE AFFECTED BY THE MERGER, MANY OF THE DUTIES FORMERLY PERFORMED BY PERSONNEL OF THE SD RATING ARE NOT INCLUDED WITHIN THE SCOPE OF THE MS RATING AND HAVE EITHER BEEN

PAGE 02 RUENAAA0813 UNCLAS

ELIMINATED, DESIGNATED AS AN OFFICER'S INDIVIDUAL RESPONSIBILITY OR WILL BE ASSUMED BY ROTATIONAL POOLS OF ENLISTED PERSONNEL, E-1 THROUGH E-3, UNDER THE SUPERVISION OF MS PETTY OFFICERS.

3. AS REGARDS ROTATIONAL POOLS, OPNAV WILL AUTOMATICALLY CONVERT SELECTED BILLETS FROM SD APPRENTICE TO GENERAL APPRENTICESHIP BILLETS FOR USE IN ROTATIONAL POOLS AFLOAT AND WILL IDENTIFY SD APPRENTICE BILLETS FOR CIVILIANIZATION ASHORE. THIS EFFORT WILL COMMENCE IN JULY, 1975, AND BILLET CONVERSION WILL BE COMPLETED AFLOAT BY DECEMBER, 1975. COMMANDING OFFICERS WILL ESTABLISH ROTATIONAL POOLS SUBSEQUENT TO THE BILLET CONVERSION AS ADDITIONAL E-1'S THROUGH E-3'S BECOME AVAILABLE FOR PERFORMANCE OF HOUSEKEEPING FUNCTIONS IN OFFICER LIVING SPACES AFLOAT. SUCH FUNCTIONS WILL ULTIMATELY BE CIVILIANIZED ASHORE TO THE MAXIMUM EXTENT POSSIBLE WITHIN FUNDING AUTHORIZATIONS. ALL PERSONNEL E-1 THROUGH E-3 WILL BE ELIGIBLE FOR ASSIGNMENT TO ROTATIONAL POOLS WITHOUT EXCEPTION AND WILL NORMALLY REMAIN IN THE POOL FOR A PERIOD OF 90 DAYS. PETTY OFFICERS AND MARINE NON-COMMISSIONED OFFICERS SHALL NOT BE DETAILED TO ROTATIONAL POOLS EXCEPT WHEN E-3 AND BELOW PERSONNEL ARE NOT AVAILABLE.

4. PERSONNEL OF THE MS RATING WILL ESSENTIALLY PERFORM THE DUTIES ASSOCIATED WITH THE FORMER SD AND CS RATINGS WITH THE FOLLOWING EXCEPTIONS:

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A. BASIC OFFICER STATEROOM OR LIVING SPACE MAINTENANCE SERVICE INCLUDING SWEEPING, DUSTING, SINK CLEANING AND PAINTING AS REQUIRED WILL BE PROVIDED TO ALL OFFICERS AFLOAT AND ASHORE. HOWEVER, THESE HOUSEKEEPING DUTIES WILL BE THE RESPONSIBILITY OF A ROTATIONAL POOL AFLOAT AND WILL BE CIVILIANIZED TO THE MAXIMUM EXTENT POSSIBLE ASHORE. BED MAKING SERVICE WILL BE PROVIDED ONLY TO CO'S, XO'S, UNIT COMMANDERS AND OFFICERS IN THE GRADES OF O-5 AND ABOVE OR THEIR EQUIVALENTS.

B. MAINTENANCE AND CLEANING OF PASSAGEWAYS AND HEADS IN OFFICER'S COUNTRY IS ALSO A RESPONSIBILITY OF THE ROTATIONAL POOL.

C. ALL OFFICERS ARE SOLELY RESPONSIBLE FOR THE CARE, MAINTENANCE AND ORDERLINESS OF THEIR OWN PERSONAL EFFECTS. SORTING AND STOWAGE OF PERSONAL LAUNDRY IS THE RESPONSIBILITY OF THE INDIVIDUAL OFFICER. THE ROTATIONAL POOL MAY BE REQUIRED TO PICK UP AND DELIVER OFFICER LAUNDRY.

D. CLEANING AND MAINTENANCE OF OFFICER FOOD SERVICE AND RELATED SPACES INCLUDING FOOD SERVICE AREAS, FOOD PREPARATION AREAS AND SCULLERIES WILL NORMALLY BE CONSIDERED A RESPONSIBILITY OF THE MS RATING. HOWEVER, IN THOSE CASES WHERE ASSIGNMENT TO OFFICER FOOD

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SERVICE SPACE CLEANING OR SCULLERY DUTIES IS NECESSARY ON A FULL TIME BASIS, SUCH DUTIES SHOULD BE SHIFTED TO THE ROTATIONAL POOL WHERE PRACTICABLE OR CIVILIANIZED ASHORE.

E. FAMILY OR BUFFET STYLE FOOD SERVICE WILL BE USED IN OFFICER MESSES WHERE FEASIBLE. INDIVIDUAL SERVICE IS STILL AUTHORIZED AT BREAKFAST OR FOR SPECIAL OCCASIONS. FOOD SERVICE IN CO, UNIT COMMANDER AND FLAG MESSES WILL REMAIN UNCHANGED.

5. ALTHOUGH ALL FORMER CS AND SD PERSONNEL WILL BE CONVERTED TO THE NEW MS RATING, MS PERSONNEL AND BILLETS WILL BE ASSIGNED SPECIAL NECS TO IDENTIFY FORMER SOURCE RATINGS. THESE NECS WILL BE USED FOR ADMINISTRATIVE PURPOSES DURING THE CONVERSION PERIOD AND WILL BE PHASED OUT AS PERSONNEL ARE ADEQUATELY TRAINED AND STUDY MANUALS AND EXAMS BECOME AVAILABLE UNDER THE MS RATING CONCEPT. COMMANDING OFFICERS WILL ENSURE THAT MS PERSONNEL ARE ASSIGNED IN A MANNER TO BE CROSS TRAINED IN BOTH OFFICER AND ENLISTED FOOD SERVICE MANAGEMENT.

6. FORMER STEWARDS AND COMMISSARYMEN WILL RETAIN THEIR OLD RATING BADGES DURING THE TRANSITION PERIOD UNTIL NEW RATING BADGES BECOME AVAILABLE.

7. FURTHER GUIDANCE ON ORGANIZATIONAL AND ADMINISTRATIVE MATTERS WILL BE FORTHCOMING.

BT

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APPENDIX G
MS AND NAVY NORMATIVE DATA

			1974	1975	1976	r (correlation coefficient)
HRE	MS	\bar{x}	2.96	2.83	2.97	-.60
		N	1109	3202	2213	
	Navy	\bar{x}	2.55	2.66	2.63	
		N ^{1/}	34,680	33,400	95,050	
SS	MS	\bar{x}	3.50	3.43	3.50	-.68
		N	1111	3212	2225	
	Navy	\bar{x}	3.51	3.63	3.10	
PS	MS	\bar{x}	3.46	3.45	3.46	-.50
		N	1105	3201	2213	
	Navy	\bar{x}	3.58	3.66	3.66	
WGC	MS	\bar{x}	3.23	3.13	3.19	-.50
		N	1111	3204	2209	
	Navy	\bar{x}	3.14	3.27	2.94	
SAT	MS	\bar{x}	3.23	3.32	3.44	.92
		N	1107	3207	2219	
	Navy	\bar{x}	3.13	3.27	3.31	

^{1/} N for Navy normative data is the same for each time period across all indices.

APPENDIX H

PERCENT CAUCASIANS STATING INTENT TO REENLIST*

Time Pay- grades	1974	1975 ₁	1975 ₂	1976 ₁	1976 ₂
E1-E3	27%	26%	13%	21%	20%
E4-E5	50%	56%	46%	56%	56%
E6	90%	92%	89%	83%	89%
E7-E9	96%	100%	96%	100%	91%

PERCENT NON-CAUCASIANS IN MS RATING*

Time Pay- grades	1974	1975 ₁	1975 ₂	1976 ₁	1976 ₂
E1-E3	54%	37%	24%	23%	21%
E4-E5	75%	71%	67%	67%	64%
E6-E9	60%	58%	59%	68%	67%

* All percentages obtained from HRM survey data only.

APPENDIX I INTERVIEW DEMOGRAPHIC INFORMATION

Caucasians (N=26)

Command:	CG	5	Sex:	Male=23; Female=3
	FF	4		
	LST	1	TIS: (years)	#
	BOQ	7	1	5
	NTC	4	2	6
	SUB	2	3	3
	EDF (shore)	2	4	2
	LPD	1	5	4
			6	1
Paygrade:	MSSA	5	7	0
	MSSN	7	8	1
	MS3	8	9-12	0
	MS2	3	13	1
	MS1	2	14	2
	MSC	1	15-16	0
			17	1
Age:	18-20	5	18 & above	0
	21-24	15	Mean age at enlistment:	
	25-30	2	18.6	
	31-35	2		
	36-40	2		

Filipinos (N=27)

Command:	AD	1	Sex:	Male=27
	CG	5		
	FF	3	TIS: (years)	#
	LST	4	10	6
	NTC	5	11	4
	BOQ	9	12	3
			13	0
Paygrade:	MS3	2	14	1
	MS2	9	15	2
	MS1	11	16	3
	MSC	5	17	3
			18	3
Age:	28-30	3	19	2
	31-35	8	Mean age at enlistment:	
	36-40	9	22.4	
	41-45	7		

Other (N=7)

Command: CG 4
LST 1
SUB 1
BOQ 1

Paygrade: MSSA 1
MSSN 2
MS3 2
MS2 2

Age: 21-24 5
25-30 1
30 &
above 1

Sex: Male=7

TIS: (years) #
1-4 5
5-10 1
10 or more 1

Mean age at enlistment:
19.2

APPENDIX J
RESULTS OF ANALYSIS OF VARIANCE

Table I - Caucasian vs. Filipino

INDEX	1/74 - 12/74	7/76 - 12/76
Human Resource Emphasis	F(559,392)=1.12	F(504,471)=1.10
Supervisory Support	F(560,393)=1.35**	F(505,474)=1.26**
Peer Support	F(391,557)=1.06	F(504,471)=1.19*
Work Group Coord.	F(393,560)=1.06	F(504,469)=1.21*
Satisfaction	F(395,555)=1.03	F(506,473)=1.41**

* $p \leq .05$

** $p \leq .01$

Table II - Within Racial Group; 1974 vs. 1976 (second half)

INDEX	CAUCASIAN	FILIPINO
Human Resource Emphasis	F(504,392)=1.11	F(559,471)=1.37**
Supervisory Support	F(505,393)=1.13	F(560,474)=1.22*
Peer Support	F(504,391)=1.01	F(557,471)=1.10
Work Group Coord.	F(504,393)=1.14	F(560,469)=1.00
Satisfaction	F(506,395)=1.05	F(555,473)=1.46**

* $p \leq .05$

** $p \leq .01$

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