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School Climate and Career Commitment

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SCHOOL CLIMATE AND CAREER COMMITMENT

BY

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ABSTRACT

This study examines the relationship between school climate and career commitment among recruits to the merchant marine. In a cross-national sample of academies in England, Spain and the United States, commitment to a maritime career is found to be associated with the school climate in which training takes place. Specifically, recruits being trained in a climate of high structural rigidity are more likely than recruits being trained in less rigid environments to have made a career decision and to have made that decision in favor of a short career at sea.

Furthermore, the above relationship is shown to be contextual in nature. Regardless of their personal perceptions of the climate of their school, recruits in structurally rigid academies express less commitment to a maritime career. This finding is interpreted as a result of the normative order in a structurally rigid environment discouraging the formation of an occupational identity and encouraging an instrumental orientation to a maritime career.

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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Commitment to work has often been identified as an important asset for both the individual and the organization that employs him. Berger,[1] for example, suggests that the meaning of work is enhanced where commitment is part of the occupational ideology. Widespread commitment encourages the individual to interpret his work as important and meaningful. For the organization, commitment reduces the need for additional mechanisms to insure stability and goal attainment. Where, for example, management can assume workers are intrinsically motivated in their work, fewer resources need be allocated to provide extrinsic motivation. As Fox points out, "The condition of commitment is one which many managements would like to see universal throughout their organization."[2]

Career commitment in maritime occupations in particular has been of interest to many researchers.[3] While investment in a relatively

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[1]Peter L. Berger, ed., The Human Shape of Work (New York: Crowell Collier and Macmillan, Inc., 1964).

[2]Alan Fox, A Sociology of Work in Industry (London: Collier Macmillan Limited, 1971), p. 72.

[3]See for example, J. M. M. Hill, The Seafaring Career (London: The Tavistock Institute for Human Relations, 1972); W. H. Hopwood, "Preparing to be a Merchant Navy Officer: A Study in Occupational Socialization" (M. Ed. Dissertation, Bristol University, unpublished, 1971); W. H. Hopwood, "Some Problems

long training period leading to specialized knowledge and skills would seem to be associated with a long career life, among maritime personnel this is not always the case. In fact, there appears to be a somewhat prevalent attitude among those studying to be ships' officers that a life at sea is a good way to make a lot of money quickly before settling down to a more desirable land-based job.[4] Available statistics on the American Merchant Marine indicate that this attitude is indicative of actual behavior as, in addition to generally high net attrition rates, "...the highest percentage of drop-outs...occurred during the first two years after original entry into the seagoing work force."[5]

However, lack of commitment among members is not necessarily a major problem for an occupation; it becomes a problem when this lack of commitment has some noticeable consequence. For example, if an

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Associated with the Selection and Training of Deck and Engineer Cadets in the British Merchant Navy," in Seafarer and Community, ed: Peter H. Fricke (London: Croom Helm Ltd., 1973); Michael Bassis and William Rosengren, "Socialization for Occupational Disengagement: Vocational Education in the Merchant Marine," Sociology of Work and Occupations 2 (May 1975): 133-149; Jan Horbulewicz, "The Parameters of the Psychological Autonomy of Industrial Trawler Crews," in Seafarer and Community, ed: Peter H. Fricke (London: Croom Helm Ltd., 1973); William R. Rosengren and Michael Bassis, The Social Organization of Nautical Training: America, Britain, and Spain (Lexington: D. C. Heath and Company, 1976)

[4]This sentiment was often noted in interviews and informal observations in the maritime academies under study. See pages 17-18, Chapter II, for a description of the qualitative data from which this observation was made.

[5]National Academy of Sciences, National Research Council, Shipboard Manpower: A Statistical Study of Men in the U. S. Merchant Marine 1962-1963 (Washington, D.C.: National Academy of Sciences, 1966), p. 7.

occupation in which societal values are entrusted, guarded over and perpetuated displays large manpower loses, the value of the occupation and the values it represents may be questioned and their influence diminished. If, for example, churches experienced high rates of turnover among their clergy, the consequence of this lack of commitment could be a general loss of faith in religious institutions and the values they represent. As Merton points out, when a member voluntarily gives up membership there is a "...threat to the group's values which are being repudiated by individuals who have previously accepted them, for this implies that the former members have in effect put them to the test and found these values wanting."[6] On the other hand, for an occupation with minimal relationship to core societal values and with a low skill level, a large manpower turnover would seem of much less consequence as long as a large pool of potential workers exists. More relevant, perhaps, to maritime occupations is that if large attrition rates are observed by prospective members, they may question the value of investing themselves in such a career and additional resources would need to be channeled into recruiting new members. Furthermore, where adequate job performance necessitates a long training period involving expensive equipment and highly trained personnel, high attrition rates are more difficult to tolerate than where adequate job performance requires little investment by the organization in the training of recruits.

Recruits to the merchant marine spend four years in vocational training involving, in addition to the ordinary costs of education,

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[6]Robert K. Merton, Social Theory and Social Structure (New York: The Free Press, 1968) p. 350.

specialized, expensive equipment including in the case of the American academies an ocean-going ship for training purposes.[7] Such investment in recruits is jeopardized by a predominantly truncated career pattern.

The research on career commitment in maritime occupations suggests that commitment problems stem from the nature of the occupation itself.[8] Maritime life is physically and emotionally demanding. Horbulewicz[9] has documented many of these demands which include such conditions of work as the climatic conditions in which work is performed, the confinement of shipboard life, and the noise and vibration levels of some work tasks. Further, separation from family, friends and a normal social life, necessitated by long periods of time at sea, is an additional hardship of maritime life:

> One cannot walk down to the corner bar for a drink, or walk in the woods, or shop at the local stores. Physical space is limited from stem to stern and from port to starboard beam. Social life is restricted to fellow shipmates, and these you must take or leave; one's watchpartner, the men congregating in the messroom, these are your companions. There is no wife to be with for weeks on end, no children to play with, no girl friend to visit. For weeks the ship will dominate the sea domaine. Until the first landfall life becomes the routine of watches--4 hours on, 8 hours off.[10]

In addition to the confinements of shipboard life, life at sea presents many hazards. "...the seaman preparing for departure to sea,

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[7]In England and Spain shipboard training is carried out on in-service merchant vessels. Academy students in England are actually employees of shipping companies and receive their sea training aboard company vessels.

[8]See for example references cited in footnote 3 above.

[9]Jan Horbulewicz, "The Parameters of the Psychological Autonomy of Industrial Trawler Crews," in Seafarer & Community, ed: Peter H. Fricke (London: Croom Helm Ltd., 1973), pgs. 67-84.

[10]Mariam G. Sherer, Shipping Out (Cambridge: Cornell Maritime Press, Inc., 1973), p. 9.

is always aware, consciously or not, that each trip on a ship has lurking uncertainty in it. There is much more security ashore. Yet after each sojourn ashore the seaman must prepare himself once more for his sea voyage and the uncertainties of the venture."[11]

Furthermore, the myths of romantic adventures in foreign ports dissolve as officers find they are required to spend most of their time in port aboard ship overseeing ship operations, and what romance and adventure do exist fade with repeated travels to the same ports. Further, technological advances in the occupation are reducing time ashore in foreign ports:

> Today, with quick turnabout due to automation, ability to load and unload ships quickly and high cost of dock facilities, a seaman may have only a day or two, if that in a port...Ships also tend to dock in port towns, not the cities themselves and are miles away, in many cases, from the center of tourist attractions. Thus ships dock in Southampton--rarely in London, or Cherbourgh, and not Paris, Bremerhaven, Bayonne, Port Newark, or in other boon docks here and there, for the most part, hours away from the center of town. So, of the seaman's precious few hours of shore leave, an hour or so of it must be spent in commuting."[12]

In addition to the actual rigors of a seafaring life, commitment problems appear to be exacerbated by a lack of knowledge of these demands, not only among the general population but more importantly among recruits to the occupation. Although maritime occupations are vital economic and political activities, they are performed for the most part in isolation from the general population. A large segment of the population is removed from observation of maritime activities simply by virtue of its being situated inland. Even in coastal areas,

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[11]Ibid., p. 10.

[12]Ibid., p. 12.

however, maritime pursuits are not performed in the midst of the day-to-day activity of the general population. While mailmen, shopkeepers, and bus drivers, for example, are encountered routinely, people engaged in maritime activities are not. Thus exposure to the realities of maritime life is generally limited to those working aboard ships. This lack of knowledge of the realities of a life at sea has been observed among recruits to maritime academies. Bassis and Rosengren found that exposure to the occupation through the training process changed student perceptions of a maritime life:

> Overall, students who have yet to be exposed to the socialization process in these academies manifest a considerably more optimistic set of perspectives toward the role of merchant marine officer. In comparison with upperclassmen the inductees appear to minimize the physical dangers of the occupation, the stress, and the boredom of the occupation, and to exaggerate the romance and thrill of shipboard life.[13]

Inductees in maritime academies, those with only a few weeks exposure to the institution, were much less likely than students who had been at the academy for at least a year to agree with such statements as "Time often passes very slowly on voyages," and "The physical dangers are very great when working at sea." In addition, new recruits were much more likely to feel that shipboard life is romantic and thrilling. This tendency for new recruits to be more optimistic and less realistic about the career than are more experienced students is supported too in Hopwood's[14] work with cadets in the British Merchant Navy.

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[13]Bassis and Rosengren, "Socialization and Occupational Disengagement," pp. 7-8.

[14]Hopwood, "Some Problems Associated with Selection and Training," pp. 105-114 passim.

In addition to this lack of direct experience of maritime life, literature and the entertainment media generally focus on the romance and adventure of a seafaring life. Life at sea is often portrayed as a romantic battle between man and nature and a seafaring man as something more than an average man-on-the-street. After an exhaustive study of the sailor in British fiction, Watson concludes:

> ...the English sailor, and possibly any sailor from Socrates' jurymen to Grand Admiral von Tirpitz, is much the same sort of person in all ages; and that differing presentations in literature are chiefly due to changing views as to which of his characteristics are virtues and which vices.[15]

But regardless of which traits are considered virtues and which vices, seamen are portrayed in romantic, almost larger than life terms "...the noble pirate, polite and bloodthirsty, the swearing boatswain, blunt and brave, the humours captain, thoroughly despicable, the plain dealer, misanthropic and honest, the merchant skipper, pious and practical, and the heart of oak, rough and loyal..."[16]

Moreover, the work conditions of maritime occupations appear in conflict with such basic social values as family life, heterosexual relationships, and variety and stimulation in work and leisure pursuits; and expectations, based on lack of knowledge and misinformation, for a romantic, adventurous career are left for the most part unfilled in the realities of a seafaring life.

Attempts have been made to understand commitment problems in maritime occupations and to encourage longer career commitment. These

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[15]Harold Francis Watson, The Sailor in English Fiction and Drama (New York: AMS Press, 1966), p. 203.

[16]Ibid.

attempts have generally worked from one of two assumptions:

1) people are motivated by extrinsic rewards: increase extrinsic rewards, get increased commitment. Kemp's[17] historical review of the British navy has many examples of attempts to increase the morale and general contentment of British sailors by means of various kinds of extrinsic rewards ranging in earlier times from allotments of rum to more current practices of offering monetary inducements.

2) people are motivated by intrinsic rewards and satisfactions such as a feeling of fulfillment in one's work or a sense of contribution to a worthwhile goal. Much of the research on maritime life has focused on this intrinsic dimension; however, few practical attempts have been made to increase career commitment in this manner, perhaps because of the difficulty involved in maximizing both business and human outcomes in this occupation. A current attempt of this kind is the practice among English shipping companies of allowing officers' wives to accompany their husbands while at sea. However, as Hopwood points out, this concession loses its impact "...when child-rearing, of necessity ashore, becomes the wife's predominant role."[18]

The present study is an alternative way of examining career commitment. Rather than examining the relationship between commitment and extrinsic (monetary) or intrinsic (satisfaction with work

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[17]Peter Kemp, The British Sailor (London: J. M. Dent & Sons, 1970).

[18]Hopwood, "Some Problems Associated with Selection and Training," p. 109.

conditions) rewards of the occupation, career commitment will be examined as it is related to the context of the training experience, specifically, the school climate in which training takes place.

School climate is a rather broad term used to refer to the general, overall social context of the school setting. The concept of school climate developed from attempts to understand the impact of schools on students--to understand how and in what ways students are cognitively and affectively changed by their experience in school. Not only are students assumed to be somehow different as a result of their having gone to school, but the particular kind of experiences they have and the kinds of places in which they have them would seem to be related to student outcomes.[19] These studies often involved examining objective physical and social characteristics of schools, e.g. size, sponsorship, demographic characteristics of participants, as they were related to such student outcomes as self concept, motivation, and achievement. An at least implicit assumption of these studies was that physical and social characteristics of schools "...tend to affect students through the interpersonal conditions

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[19]For a more detailed discussion and review of the development of the concept of school climate, along with a review of research employing school climate as a variable, see Kenneth A. Feldman and Theodore M. Newcomb, The Impact of College on Students, 2 vols (San Francisco: Jossey Bass Inc., Publishers, 1969). The reader interested in the concept of climate as an attribute of institutions is referred to Renato Tagiuri and George H. Litwin (ed.), Organizational Climate: Explorations of a Concept (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968).

[school climate] they foster in the environmental pressures, demands, and opportunities they create..."[20] Examination of this model

physical & social characteristics → school climate → student outcomes

stimulated interest in this intervening school climate, and research in the field began moving in the direction of measuring school climate more directly.

School climate, then, develops from objective qualities of the environment, but it is something more than simply a sum of these characteristics. School climate is perhaps best defined as a collective attitudinal interpretation of the environment. Although the concept of school climate is not as explicitly defined in the literature as it is above, two observations of studies employing this concept lead to the above definition. First, in these studies school climate is empirically measured by summation of the perceptions of individuals in a particular context. Thus it is a collective rather than an individual attribute. As Blau points out, some

> ...concepts refer to attributes of social collectivities, not to those of individuals, but they have counterparts that do refer to characteristics of individuals. Individuals can be described in terms of their orientations and dispositions, just as groups or entire societies can be described in terms of the prevailing social values and norms; and individuals can be distinguished on the basis of their social status, just as communities can be distinguished on the basis of the status distribution in them.[21]

Second, at least implicit in discussions of school climate is the implication that climate is created and defined by those experiencing

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[20]Feldman and Newcomb, p. 124.

[21]Peter M. Blau, "Structural Effects," American Sociological Review 25 (1960): 178-93.

the situation in day-to-day interaction. In other words, interpretations of stimuli by those experiencing them intervene between the objective properties of the situation and the resulting climate.[22]

Because it is a collective, interpretive concept, school climate is open to variation among maritime academies because institutions vary in terms of institutional properties, e.g. size, physical isolation, sponsorship, etc., and in terms of social characteristics, e.g. demographic composition of faculty and students. Objective environmental properties are open to a variety of interpretations, interpretations that are influenced by the total mix or interaction of physical and social properties of the school and its members. An illustration from maritime literature may help make this clearer. In a study of maritime officers, Hopwood found that a particular group of future officers expressed the opinion that life at sea was "...superior [to land-based alternatives] in terms of opportunity for social interaction,"[23] an opinion that would seem in conflict with the objective reality of life aboard ship. Hopwood interprets this as understandable, however, because this group was recruited from Ireland and Africa where the sea

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[22]Several studies have investigated the relationship between school climate as an objective property (measurement of such properties as size, student-faculty ratio, number of non-academic events, etc.) and as a subjective property (measurement of student perceptions of these same properties). While some overlap exists, students' perceptions of their environment do not always match the objective properties of the situation. See for example, Alexander W. Astin, "Two Approaches to Measuring Students' Perceptions of Their College Environment," The Journal of College Student Personnel (May 1971): 169-172.

[23]Hopwood, "Some Problems Associated with Selection and Training," p. 103.

provided an escape from "...the relatively deprived way of life which they assumed lay ahead of them in their home countries."[24] A further example is found in Goffman's study of total institutions where he found that

> Shetland youth recruited into the British Merchant Service are apparently not much threatened by the cramped, arduous life on board because island life is even more stunted. They make uncomplaining sailors because from their point of view, they have little to complain about.[25]

While school climate has been measured in its broadest sense, encompassing all aspects of the social mileau,[26] some dimensions of school climate have greater relevance than others when examining a particular variable such as career commitment. Rosenberg's discussion of component variables is particularly appropriate here to a discussion of such a global concept as school climate. Such a global concept has a number of subconcepts, or components. Rosenberg illustrates this process of dimensions of a global concept in a discussion of social class as a component variable:

> ...one of the most powerful variables in sociological analysis is the concept of social class. With startling consistency, social class is found to be associated with the wide variety of dependent variables with which the sociologist is concerned. The power of social class as a determinant of attitudes and behavior is one of the best documented of sociological findings.
>
> Social class, however, consists of a number of component elements. One cannot assume, therefore, that if social class is related to X and is also related to Y, then the same aspect of social class exercises the effective influence in both cases.

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[24] Ibid.

[25] E. Goffman, Asylums (New York: Doubleday, 1961), p. 66.

[26] The most notable of these are the College Characteristics Index (CCI) and the College and University Environment Scales (CUES), see C. R. Pace and G. G. Stern, "An Approach to the Measurement of Psychological Characteristics of College Environments," Journal of Educational Psychology 49 (1968): 269-277.

> Consider the following simple example: In the first case one finds a relationship between class and exposure to public affairs programs and in the second case a relationship between class and home ownership. The same aspects of class may not be the effective influence in the two cases. In the first case it may be level of education which is the crucial element in exposure to public affairs programs, whereas in the second case it may be income which affects home ownership. In both cases we say social class is responsible, but it may be different aspects of social class which produce the observed effect. If social class is related to self-esteem, perhaps it is social prestige which is the effective influence. If class is related to economic liberalism, perhaps it is union membership. If class is related to membership in certain groups, perhaps old family is responsible. If class is related to certain attitudes, perhaps style of life factors are centrally implicated.[27]

Rosenberg's discussion suggests that determination of the most "centrally implicated" component in a particular analysis is a decision based on theoretical consideration of the variables. And it would seem too that the context in which the variables are to be examined must be considered. In determining the most crucial dimension of school climate to consider in a study of career commitment, the following criteria are considered relevant: 1) the concept should be theoretically meaningful to a discussion of career commitment; and 2) it should be a characteristic of academies which has empirical variance.

Examination of the qualitative data[28] available on the maritime academies and their students suggests the dimension of school climate most relevant to a discussion of career commitment is one which captures the extent of repressive control of the institution over the student--repressive in the sense that students feel controlled by externally imposed rules governing their behavior with little input

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[27]Morris Rosenberg, The Logic of Survey Analysis (New York: Basic Books, Inc., Publishers, 1968), pp. 48-49.

[28]See page 17, Chapter II, for a discussion of the available qualitative data.

into the formulation of rules and little access to the people who formulate and execute the rules. On the one hand, proper behavior is narrowly defined and on the other the student has little or no formal input into this definition. In addition, the structure limits informal student input by prohibiting informal interaction between the student and those who define proper student behavior and who keep watch over it. We have named this dimension of school climate "structural rigidity."

In maritime academies, as in any social group, patterns of social organization form as people interact on a regular basis. Social control in the institution develops and is maintained through the normative system which evolves--a normative system influenced by students' expectations as well as by the official definition of academy and maritime life promulgated by the institution. "These two factors, what members of the occupation would like to produce as the end result of the training process and what would-be members of the occupation bring with them to their training, combine to create relatively unique socialization problems and conflicts."[29] Thus while the content of training, i.e. knowledge and skills for task performance, is similar across maritime academies because they are preparing students to perform similar work tasks, the context, i.e. school climate, may vary because academies vary in their degree of repressive control. From the interaction of students within the academy setting, a normative system develops among cadets which

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[29]Ronald M. Pavalko, Sociology of Occupations and Professions (Itasca, Illinois: F. E. Peacock Publishers, Inc., 1971), p. 93.

defines a range of acceptable behavior within the maritime academy and acceptable orientation toward future career plans. Where, for example, in the instance Hopwood[30] reports, most students feel that a life at sea is socially rewarding, the normative mileau will probably reward positive identification with academy goals, including commitment to a maritime life. On the other hand, where a majority of students feel confined by academy and shipboard life and controlled by, rather than integrated into, academy and shipboard life, the normative mileau will probably reward behavior that is oriented away from academy goals and toward more individualistic ends.

While lack of integration between student and institution appears to be less than desirable in any kind of educational experience,[31] in vocational education a clash between student and institution would seem to be an even greater negative force. The faculty in maritime academies represent the students' future vocation more directly than do the faculty in non-vocational education. For example, students pursuing a bachelor's degree in English may be pursuing that degree in preparation for a number of careers, e.g. teacher, journalist, author, editor, etc. The faculty, therefore, would not necessarily be an important occupational reference group for

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[30]Hopwood, "Some Problems Associated with Selection and Training," p. 103.

[31]Stern, for example, recommends greater restraint on the part of liberal arts colleges in exercising control over the lives of students. On the basis of his analysis of several such colleges, Stern argues that excessive control of student behavior is associated with lack of personal commitment on the part of students and results in a negative perception by students of the intellectual climate of their college. G. G. Stern, "Student Ecology and the College Environment," Journal of Medical Education 40 (1965): 132-154.

a student. Maritime students, on the other hand, are preparing for a rather specific occupation and those instructing them are members of this occupation. Thus a clash between student and institution would appear to be more of a clash between student and future career than it is where the educational experience is farther removed from the occupation itself. While students in the latter case are able to dismiss conflicts with a rationalization that things will be different when they get out into the real world of journalism or business, those in maritime academies may be less able to do this as relationships with faculty and institution generally are more indicative of future relationships within the occupation than they are in the instance above.

This study then will explore the relationship between occupational commitment and the context of career preparation. More specifically, it will address itself to the relationship between the structural rigidity of school climate and career commitment among recruits to the merchant marine.

CHAPTER II

METHODOLOGICAL PROCEDURES

This study is a secondary analysis of data collected by William Rosengren and Michael Bassis of the Department of Sociology and Anthropology, University of Rhode Island, at the opening of the academic year 1973-1974.[1] An eleven page questionnaire (see Appendix) was administered to all students enrolled in two American (Buzzard's Bay and Castine), two Spanish (Barcelona and Bilbao), and three English (Cardiff, Plymouth and Warsash) maritime academies. The data include responses from 1993 maritime students. The instrument is designed to gather information on a wide variety of aspects of nautical education and shipboard life. In addition to demographic characteristics, respondents are asked about their attitudes toward the content and context of their training, their views of a life at sea and of the status of the occupation, their plans within the occupation, and the perceived consequences of their training for an alternative life ashore.

A second body of data that is drawn on heavily in this study for theoretical suggestions and verification purposes consists of

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[1]This research was partially supported by grants from the International Center for Marine Resource Development, the Research Committee of the University of Rhode Island, and the Department of Sociology and Anthropology of the University of Rhode Island.

approximately sixty hours of tape-recorded interviews made by Dr. William Rosengren on the campuses of the seven maritime academies and with shipping company executives and ocean-going ships' officers. The survey instrument discussed above was formulated on the basis of this body of qualitative data.

Operationalizing Career Commitment

Career commitment is nominally defined as the attachment of a student to maritime life, the strength of his feeling that a maritime career is worthwhile. It is operationalized by the question "How many years do you plan to stay at sea?" This means of operationalizing career commitment, along with subsequent decisions on how to handle the responses, is suggested by the qualitative data discussed above. While this measure of commitment may be inappropriate for other occupations, among maritime students and current members of the occupation it is a common topic of conversation. Although it might be unusual to hear a doctor, plumber, or sociologist asking a colleague how many years he planned to remain at his job, this is a quite common question among individuals in maritime occupations. What is perhaps more surprising is that the answer to this question is almost always given as an exact figure--6 years, 11 years, 19 years--rather than in an expression such as "for awhile," "I'll see how it goes," or "until I retire." It is thus felt that the number of years an individual plans to stay at sea is a meaningful indicator of his commitment to a maritime career.

Career commitment is categorized as follows, based on the tertile breaks in the data: little commitment, less than five years; some commitment, 5 to 15 years; high commitment, 16 or more years.

A fourth category of the commitment variable stems from a number of considerations. Some respondents failed to specify a specific number of years when asked how many years they planned to stay at sea. Non-response to particular items is a common occurrence in survey research and is handled in a number of ways, e.g. removing non-respondents from the sample, giving them a mean score, giving them a score on the basis of a statistical procedure which estimates their probable response. The decision as to which alternative to take in a particular study is based on consideration of the entire situation, i.e. sample size, theoretical meaning of the item and of non-response to that item, etc. After careful consideration, non-respondents are included in a fourth category of the variable, titled "undecided." This decision is based upon theoretical considerations suggested by the qualitative data. Although ordinal measurement of this variable is jeopardized by this decision, because the number of years planned at sea is a very real issue for maritime students, it is felt that non-response to this particular item indicates an <u>uncertainty</u> rather than an <u>unwillingness</u> to answer the question. Exclusion of non-respondents or estimation of their probable response are thus deemed inappropriate.

By constructing the variable on the basis of both quantitative and qualitative data, it is felt that the categories of the commitment

variable reflect the real meaning that the question of the number of years planned at sea has for maritime students.

Operationalizing the Structural Rigidity Dimension of School Climate

The structural rigidity dimension of school climate is conceptualized as the feeling by students as to the extent that their behavior is extensively confined by rules, that they have little formal input into the formulation of these rules, and that they have little access (informal input) to those who formulate and execute these rules. It is operationally defined on the questionnaire by means of the following four items:

--There is an elaborate set of rules and regulations to which students are expected to conform.

--Faculty exercise a lot of control over student behavior outside of the classroom.

--Student opinion influences how this academy is run.

--Faculty are relatively inaccessible to students outside of class.

Respondents are asked to indicate for each of the above items whether they feel each statement is either 1) a very accurate description of conditions at their academy, 2) somewhat accurate, or 3) a very inaccurate description of conditions at their academy. A fourth possible response on the questionnaire is "don't know." However, because we have no theoretical rationale for assuming non-response has any particular meaning (as was the case with the career commitment variable), and because sample size permits, "don't know" respondents along with those for whom scattered data on the scale is missing have

been eliminated from the sample.[2] Thus only respondents with a score of 1, 2 or 3 for each of the scale items are included in the sample.[3]

After reverse scoring the items on rules, control of behavior, and inaccessibility of faculty, the scores on this variable range from low structural rigidity (4) to high structural rigidity (12).

Retaining the substantive meaning of the response categories, respondents are categorized on this variable as follows: 4 thru 7, low structural rigidity; 8, moderate structural rigidity; 9 thru 12, high structural rigidity.

The above is a measure of how individuals perceive the climate of their school. In order to examine the contextual relationship between school climate and career commitment a contextual measure of school climate is constructed based on these individual responses. Construction of this contextual measure is discussed below under Analysis Procedures.

Analysis Procedures

The relationship between the structural rigidity of school climate and career commitment is examined using crosstabulation procedures. But before examining this relationship, the seven maritime academies in the sample are first categorized on the measure of structural rigidity discussed above so as to obtain a contextual

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[2]Dan D. Nimmo and Charles M. Bonjean, Political Attitudes and Public Opinion (New York: David McKay, 1972), pp. 215-227.

[3]After removing from the original sample of 1993 those respondents for whom scattered data is missing (619) and foreign students in each of the academies (96), N = 1278.

measure of school climate. By categorizing academies on the basis of dominant student perception of structural rigidity, a contextual measure of school climate is created and the unit of analysis becomes the context in which an individual finds himself rather than the individual himself. School climate is then measured as a structural rather than as an individual property.

The academies in the sample are categorized as to dominant school climate upon examination of the mean scores on structural rigidity exhibited by each of the seven maritime academies (Table 1).

TABLE 1

MEAN SCORE ON STRUCTURAL RIGIDITY OF SCHOOL CLIMATE FOR EACH OF THE SEVEN MARITIME ACADEMIES

Structural Rigidity	Academy	Mean[a]	N
Low	Bilbao (Spain)	7.76	374
	Cardiff (England)	7.81	177
Moderate	Plymouth (England)	8.01	219
	Barcelona (Spain)	8.05	115
High	Buzzard's Bay (America)	9.21	453
	Castine (America)	9.27	365
	Warsash (England)	9.48	290

[a] $F = 5.51$; df = 6 1986; $p < .01$.

As can be seen from Table 1, the maritime academies in the sample distribute themselves along the dimension of school climate independently of national affiliation. The qualitative data available on these academies supports the above categorization, and along with

Rosengren and Bassis'[4] analysis suggests that differences between academies cross-cut national affiliation. Thus if a relationship between school climate and career commitment is found, we have confidence it is not simply an artifact of national differences.

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[4]William Rosengren and Michael Bassis, The Social Organization of Nautical Training: America, Britain, and Spain (Lexington: D. C. Heath and Company, 1976).

CHAPTER III

RESULTS

This chapter is an empirical analysis of the relationship between school climate and career commitment among recruits to the merchant marine. The reader is reminded that the measure of school climate used in this analysis is a contextual measure, a property of the institution rather than of the individual. Thus any relationship that is observed is interpreted as a relationship between a quality of the training experience and a property of individuals exposed to that experience.

The crosstabulation between school climate and career commitment is presented in Table 2. Before examining Table 2, however, the format used in this table necessitates explanation. A chi square is computed for this and subsequent tables to test the statistical significance of the findings. In addition, for each cell in Table 2 the observed and expected frequency and contribution of that cell to chi square is presented as a further aid in interpreting the association.

The format for each cell in Table 2 is as follows:

-- the first entry is the percentage that cell is of the row total.

-- the second entry is the observed frequency, the actual number of cases falling in that cell.

-- the third entry is the expected frequency, the number of cases that would be expected to be found in the cell if cases were distributed

by chance alone. The expected frequency is computed by multiplying the row total by the column total for each cell and dividing by N. -- the fourth entry is the contribution of that cell to the total chi square. Adding the contribution of all cells results in the total chi square, which is presented at the bottom of the table along with the degrees of freedom and probability level.

TABLE 2

CROSSTABULATION OF SCHOOL CLIMATE AND CAREER COMMITMENT

School Climate		Career Commitment				
		Low	Moderate	High	Uncertain	
CLIMATE 1	Low Structural Rigidity	2% 7 39 (26.00)	32% 94 106 (1.43)	24% 69 51 (6.06)	42% 123 97 (7.26)	293
CLIMATE 2	Moderate Structural Rigidity	5% 11 28 (10.23)	31% 65 77 (1.75)	20% 42 37 (.68)	44% 93 70 (7.94)	211
CLIMATE 3	High Structural Rigidity	20% 151 102 (23.12)	39% 305 281 (2.04)	15% 113 136 (3.78)	26% 205 255 (9.79)	774
		169	464	224	421	

Chi-square = 100.08; df = 6; $p < .001$.

The resulting chi-square in Table 2 shows a significant relationship between school climate and career commitment. Examination of percentage differences reveals that compared to recruits being trained in Climates 1 and 2, recruits being trained in

Climate 3 are less likely to express a high level of career commitment and more likely to express a low level of commitment. While 24% of those being trained in Climate 1 express strong commitment to a maritime life, only 15% of those being trained in Climate 3 express such commitment. An even greater difference among climates is seen among those indicating low career commitment where there is an 18% and 15% difference between Climates 1 and 3 and between Climates 2 and 3 respectively.

Moreover, recruits in Climate 3 are also less likely than recruits in Climates 1 and 2 to be uncertain about their career plans. Only 26% of students in Climate 3 express ambivalence about their career plans compared to more than 40% in both Climates 1 and 2.

Not only are the percentage differences greatest in the low commitment category, but these three cells contribute more than half of the total value of the chi-square. An additional 25% of the chi-square is accounted for by the three cells of the uncertain category of commitment. Thus it appears that most of the statistical variation obtained among climates as measured by chi-square is accounted for by the fact that recruits in Climate 1 are under-represented in the low commitment category and over-represented in the uncertain category and recruits in Climate 3 are over-represented in the low commitment category and under-represented in the uncertain category.

Thus Table 2 indicates that recruits to the merchant marine who are being trained in a climate characterized by high structural rigidity are more likely to have made a career decision and are more likely to have that decision be one of short-term commitment to a maritime life.

In order to strengthen the contention that the observed relationship is indeed a contextual one--that the relationship observed in Table 2 is not simply a result of how individuals perceive their environment but rather that climate is a social relaity which impinges upon individuals despite their personal perception of it--Table 3 examines the relationship between school climate and career commitment while controlling for individual perception of school climate.

TABLE 3

CROSSTABULATION OF SCHOOL CLIMATE AND CAREER COMMITMENT CONTROLLING FOR INDIVIDUAL PERCEPTION OF SCHOOL CLIMATE

Individual Perception of School Climate		Career Commitment				
		Low	Moderate	High	Uncertain	
LOW[d]	Climate 1[a]	2%	33%	19%	46%	126
	Climate 2[b]	6%	30%	19%	46%	70
	Climate 3[c]	26%	40%	13%	21%	161
MODERATE[e]	Climate 1	0%	25%	32%	43%	88
	Climate 2	5%	22%	27%	46%	59
	Climate 3	20%	38%	13%	29%	192
HIGH[f]	Climate 1	5%	39%	22%	34%	79
	Climate 2	5%	38%	15%	42%	82
	Climate 3	17%	39%	16%	28%	421

[a]Low Structural Rigidity

[b]Moderate Structural Rigidity

[c]High Structural Rigidity

[d]Chi-square = 51.90; df = 6; $p < .001$.

[e]Chi-square = 46.01; df = 6; $p < .001$.

[f]Chi-square = 18.50; df = 6; $p < .01$.

Table 3 shows that the significant relationship between school climate and career commitment found in Table 2 remains when individuals' perception of school climate is controlled. Examination of percentage differences reveals that regardless of individual perception of school climate, recruits in Climate 3 are more likely than recruits in Climates 1 and 2 to indicate a low level of career commitment. Among those who perceive a climate of low structural rigidity, for example, only 2% of those in Climate 1 indicate low commitment compared to 26% of those in Climate 3.

Conversely, regardless of individual perception of school climate, recruits in Climate 3 are less likely than recruits in Climates 1 and 2 to express long-term commitment to a life at sea. Among recruits who perceive a climate of high structural rigidity, for example, 22% of those in Climate 1 express high commitment compared to only 16% of those in Climate 3.

Thus Table 3 indicates that the contextual relationship between school climate and career commitment found in Table 2 exists over and above any relationship between an individual's perception of that climate and commitment. Regardless of how they personally perceive the climate of their school, recruits in a climate characterized by high structural rigidity are more likely to express a low level of career commitment and less likely to express a high level of commitment than recruits in a climate characterized by low or moderate structural rigidity. In addition to expressing less commitment to a maritime life, recruits in a climate of high structural rigidity are less likely to indicate uncertainty about their career plans than

recruits in less rigid environments regardless of how the climate of their training experience is perceived by them personally.

While Table 3 has given further support to the relationship between school climate and career commitment, it is difficult to interpret from Table 3 whether the relationship is primarily contextual in nature or whether it results from some interaction between context and perception of context. If, for example, an interactive process is involved in the observed relationship we would expect to find:

(1) the largest percentage of those expressing high commitment should be found among those in Climate 1 who perceive low structural rigidity.

(2) the largest percentage of those expressing low commitment should be found among those in Climate 3 who perceive high structural rigidity.

(3) the largest percentage of those expressing uncertainty should be found among those in Climate 1 who perceive low structural rigidity.

None of the above propositions nor their corollaries are seen to hold in Table 3, arguing for a contextual rather than an interactive relationship. However, percentage differences in some cases are small, and it is difficult to argue for their significance other than pointing out the persistent lack of support for the above propositions. In addition, percentage differences between Climates 1 and 3 differ considerably among the low, moderate and high categories of individual perception: among those expressing low commitment there is a percentage difference between Climates 1 and 3 of 24%, 20%, and 12% respectively in the

three perception categories. Among those expressing high commitment there is a percentage difference of 5%, 19%, and 6% respectively. This might be interpreted as support for an interaction between school climate and perception of climate.

Because of these difficulties in interpreting Table 3 in terms of anything other than support for the relationship observed in Table 2, Table 4 examines the relationship between individual perception of school climate and career commitment. If there is no relationship between individual perception of school climate and career commitment we have greater confidence in interpreting the relationship observed in Table 2 as primarily contextual in nature. On the other hand, if there is a relationship between individual perception of school climate and career commitment it would seem more appropriate to interpret the relationship as an association between commitment and the interaction of school climate and perception of that climate. In that case, further interpretation of Table 3 would seem appropriate. The percentage differences, for example, observed between Climates 1 and 3 among the three categories of individual perception might then be examined further.

Table 4 gives no support to a relationship between individual perception of school climate and career commitment. Examination of percentages in Table 4 reveals no differences in commitment between recruits who perceive the climate of their school as having low, moderate or high structural rigidity. In addition, the chi-square does not reach the .05 level of significance. Therefore, Table 4 supports interpretation of the relationship between school climate and career commitment as a contextual relationship.

TABLE 4

CROSSTABULATION OF INDIVIDUAL PERCEPTION OF SCHOOL CLIMATE AND CAREER COMMITMENT

Individual Perception of School Climate	Career Commitment				
	Low	Moderate	High	Uncertain	
Low Structural Rigidity	13%	36%	17%	34%	357
Moderate Structural Rigidity	12%	32%	20%	36%	339
High Structural Rigidity	14%	39%	16%	31%	582
	169	464	224	421	

Chi-square = 7.39; df = 6; p .05.

Summary of Results

School climate was shown to be significantly related to career commitment. Recruits being trained in a climate characterized by high structural rigidity were more likely to express a low level of commitment and less likely to express a high level of commitment than recruits being trained in less rigid climates. In addition, those being trained in a climate of high structural rigidity showed less uncertainty about their career plans. The above relationship remained when individual perception of school climate was controlled.

A final conclusion drawn from the analysis was that the relationship between school climate and career commitment is primarily a contextual one. The school climate in which recruits are trained was

related to their career commitment while how they individually perceived that climate was not found to be associated with their commitment to a maritime life.

CHAPTER IV

DISCUSSION OF RESULTS

While the findings in Chapter III support the existence of a relationship between school climate and career commitment, they invite two sources of concern:

1) Might the relationship be spurious?

2) How is it possible that the context of training is related to commitment while individuals' perception of that context is not?

This chapter will address each of these questions in turn.

1) Might the relationship be spurious?

While research findings are often open to questions of spuriousness, research employing cross-cultural data are particularly sensitive to this criticism. Because culture is a pervasive, powerful influence on human behavior, even the most casual reader might question the findings of a study employing cross-cultural data when the effect of cultural differences are not explicitly taken into account.

The sample used in the present study includes recruits to the merchant marine in three countries--England, Spain and the United States. In addition to three different cultural systems, these three countries present three different opportunity structures for those entering a maritime career.

> The United States academies train seamen for a declining merchant fleet, as evidence by the fact that the gross tonnage of the American fleet declined from about 40 million in 1946 to about 10 million at the end of the 1960's. In addition, the majority of the some 1,000 merchant vessels in service in 1966 were of World War II vintage. At the same time, the number of passenger vessels of American flag has also decreased, while the number of non-commercial seagoing vessels such as research ships in the service of agencies such as the NOAA has correspondingly increased.
>
> By way of contrast, the British schools train personnel with similar skills for a more stable merchant marine economy and one with employment options for graduates which are only now beginning to appear in the American market. Finally, the Spanish counterparts train deck and engine room mates for an expanding shipping industry, as evidenced by the reported growth of the fleet from 250 in 1945 to over 2500 in 1968.[1]

Thus in addition to less tangible cultural differences, one might suspect that commitment might vary among these countries as opportunities for job placement and rewards vary. It was because of these obvious differences between countries in culture and opportunity structure that Bassis and Rosengren[2] first thoroughly examined the effect of national differences on commitment to a maritime life before going on to explore other factors that might contribute to occupational commitment. Using the same data as employed in the present study, Bassis and Rosengren found no support for a relationship between national affiliation and career commitment.

> As clear and as important as these cross-national differences may appear to be, they in fact bore no relationship to the degree of commitment expressed by students in each country. That is, there is no relationship between national characteristics of either maritime students or schools and occupational commitment.[3]

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[1]William R. Rosengren, "Training Problems in Merchant Marine Academies," proposal submitted to the Office of Education, February 1972.

[2]Michael Bassis and William R. Rosengren, "Socialization for Occupational Disengagement: Vocational Education in the Merchant Marine," Sociology of Work and Occupations 2 (May 1975): 133-149.

[3]Ibid., p. 136.

In addition to the above, support that the relationship between school climate and career commitment found in the present study is not spurious by reason of national differences comes from the manner in which the contextual measure of school climate was constructed (see page 22, Chapter II). Examination of mean scores on the school climate variable revealed that differences in school climate cross-cut national affiliation. The three English schools, for example, were distributed across all three categories of the school climate measure. Thus there is no reason to believe that the relationship between school climate and career commitment found in our sample is spurious by reason of national differences.

An additional possible source of spuriousness is that of the entering characteristics of recruits. As discussed in Chapter I, many recruits enter training with a romantic, unrealistic view of a maritime life. Could it be then that these students, as they become disillusioned during training, express less commitment than students who enter the academy with a realistic view of what will be expected of them. If prior knowledge of a seafaring life were differentially distributed among the academies in our sample, perhaps by reason of their location or recruitment of a particular type of student, this might account for the relationship that was observed between climate and commitment. Bassis and Rosengren[4] have examined this possibility using a number of indicators of knowledge of maritime life prior to academy entrance: occupation of father, number of relatives in the merchant marine or sea-related occupations, whether recruits grew up on or near the

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[4]Ibid.

seacoast. They found these background characteristics, along with all other entering characteristics for which data was available, did not vary significantly among the academies. Thus differences in commitment observed among the maritime academies in the sample must be accounted for by something that goes on during the academy experience rather than by something recruits bring with them to the experience.

To the extent that the arguments above are valid, we can proceed on the assumption that the relationship between school climate and career commitment is not spurious and can address the second question raised by the research.

2) How does the context of training influence individuals' commitment to a maritime life?

Our research has identified school climate as a salient property of the academy experience and has shown that the climate in which training takes place is related to the occupational commitment expressed by recruits. As seen in Chapter III, recruits being trained in a climate characterized by a great deal of structural rigidity were more likely than recruits in more loosely structured environments to express a low level of commitment and less likely to express a high level of commitment. The analysis further indicated that while the context in which individuals are trained was associated with their commitment to a life at sea, their personal perception of that context was not. The question then arises as to how the climate in which an individual receives his training is related to his commitment to a maritime life although his personal perception of that climate is not related to his commitment. This question is further complicated by

the fact that methodologically the contextual measure of school climate is simply a summation of individual perceptions. Thus the question of how the training context influences commitment requires two lines of explanation: the methodological issue--how can two variables with the same methodological base show different associations with a third variable, and the theoretical issue--how is it that an individual's perception of a phenomenon has less impact than the collective definition of that phenomenon. While these appear to be two separate questions, in fact they are related and their answers overlap and clarify one another.

As discussed in Chapter I, just as individuals can be categorized on the basis of some property, so too can social groups or collectivities be categorized on the basis of those same properties. For example, individuals can be categorized as to religious affiliation as can social collectivities. On the one hand, we ask individuals their religious affiliation, on the other we examine the proportion of the various religions represented in the group. Methodologically, the only way to make such a statement about the group is by examining the characteristics of its members. Thus we ask only one question, but in the former case leave the measurement at the individual level and in the latter case bring it to the group level by classifying the group on the basis of its predominant religious affiliation or distribution.

This is the basis for the contextual measure of school climate used in this study. Individual students in the academies were asked about the climate of their school. By summing the responses of students within each academy we are able to make a statement about the predominant climate of that academy. The contextual measure of school

climate then is measuring a property that arises from a number of individuals forming a collectivity. Thus the two variables share a common base--individual responses to a measure of school climate--but are conceptually two separate variables: the one measuring something about the individual and the other measuring a collective property of the group. Although the measurement of group properties rests on the measurement of individuals within the group, a social group takes on properties of its own that are not found in any of its members taken separately. As Blau points out:

> The conception of structure or system implies that the component units stand in some relation to one another and, as the popular expression "The whole is greater than the sum of its parts" suggests, that the relations between units add new elements to the situation. This aphorism, like so many others, is a half-truth. The sum of fifteen applies, for example, is no more than fifteen times one apple. But a block of ice is more than the sum of the atoms of hydrogen and oxygen that compose it. In the case of the applies, there exist no linkages or relations between the units comprising the whole. In the case of the ice, however, specific connections have been formed between H and O atoms and among H_2O molecules that distinguish ice from hydrogen and oxygen, on the one hand, and from water, on the other. Similarly, a bus-load of passengers does not constitute a group, since no social relations unify individuals into a common structure. But a bus-load of club members on a Sunday outing is a group, because a network of social relations links the members into a social structure, a structure which is an emergent characteristic of the collectivity that cannot be reduced to the attributes of its individual members. In short, a network of social relations transforms an aggregate of individuals into a group...and the group is more than the sum of the individuals composing it since the structure of social relations is an emergent element that influences the conduct of individuals.[5]

We are left then with the more interesting question of how "...an emergent element...influences the conduct of individuals."

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[5]Peter M. Blau and W. Richard Scott, Formal Organizations (San Francisco: Chandler Publishing Company, 1962), p. 3.

More specifically, how does the climate of training in maritime academies influence an individual's commitment to a life at sea regardless of how he personally perceives that climate?

Such a group influence on the individual might be explained by the fact that behavior does not proceed in a vacuum but rather within a social context. The range of acceptable behavior within this context is defined, legitimated and enforced through the normative order. Individual proclivities may lean outside these boundaries, but in order to survive within a social context the individual must bring them back to within acceptable bounds.

Because social life cannot flow smoothly where each confrontation of individuals is a completely fresh experience with no rules, no expectations for the other's behavior, nor guidelines for one's own, a social organization develops which defines rules, expectations and guidelines. A normative system emerges in response to the need for order in social interaction. Such a system defines not only acceptable modes of behavior, e.g. responding to another's friendly greeting in kind, but also acceptable attitudes and orientations toward a multitude of issues and ideas, e.g. man's needs have precedence over other animals'. This normative system serves the individual, providing him with a set of expectations for his own and other's behavior, and serves the group as a whole as it protects the group from disorder. It is thus the normative order which is the mechanism through which individuals' behavior is influenced by the group.

Basically, the way in which the normative order influences and controls individual behavior is through a system of sanctions--punishments and rewards. While the form of these vary with the group

in which they develop, broadly speaking punishment ranges from the most subtle, benign form of ridicule to the much more explicit, forceful, even life threatening kinds of actions. Rewards range from a symbolic pat on the back to the conferral of status or monetary honors.

While each of us grows up learning a kind of generalized societal normative system, each group we join has its own set of norms to be learned and obeyed. These norms develop from particular conditions within the group and external conditions that impinge on the group. A group of soldiers, for example, will develop a normative system that is a reflection of the kinds of circumstances with which it is beset. In non-combat groups, soldiers might ridicule their country's involvement in the war or perhaps harass a fellow soldier; but in a combat group faced with immediate danger any behavior that weakens the morale of the group or places it in greater danger is likely to be actively discouraged through the normative system. At the same time, status in the group might be allocated to members who are particularly active in keeping up morale or who take personal risks for the sake of the group's safety.

Thus a normative order develops within groups in response to the need for order in social life, and this normative system reflects the particular conditions facing the group.

Just as the combat group develops norms to meet the needs of social life peculiar to that group, so too the students at a maritime academy probably develop a normative order sensitive to their particular situation. While it is difficult to observe how a normative order develops and how each of its components arises from a particular condition of the group, it is possible to speculate on how a particular

property such as school climate enters the normative order and takes on consequences for individuals' commitment to a maritime life.

An interesting contradiction in the training of recruits to the merchant marine is that while academy training has some of the same properties as training in the professions, e.g. medicine and the law, under some circumstances training in maritime academies does not appear to result in the same professional outcomes. Training in the professions is characterized by 1) a long period of training, 2) that training and final certification in the hands of members of the profession, and 3) acquisition of specialized skills and knowledge. The long training period and acquisition of specialized knowledge and skills narrows the ideational focus of recuits and limits their occupational alternatives. Association with and control by current members of the profession encourages internalization of professional norms and an occupational identity. These three characteristics of the training experience taken together work toward occupational commitment as they transform the entering recruit from layman to professional in terms of his skills, and perhaps more importantly, in terms of his self identification as a professional. Professional training works toward "...the acquisition of a distinctive set of values, norms, and work role conceptions...the learning of a 'professional subculture.'"[6] Part of the professional subculture transmitted during professional socialization is that "...commitment to the work is not a passing fancy but rather a long-term if not life-long commitment."[7] While training in maritime

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[6]Ronald M. Pavalko, Sociology of Occupations and Professions (Itasca, Illinois: F. E. Peacock Publishers, Inc., 1971), p. 42.

[7]Ibid.

academies has the three characteristics of professional training discussed above, under some circumstances these apparently do not lead to the internalization of a norm of commitment. The school climate in which maritime training takes place may be a factor which undermines the other professional characteristics of academy training and thus may be discouraging the commitment the other characteristics are attempting to foster. More specifically, it may be that self identification as a professional is undermined by a training experience in a school climate of high structural rigidity.

Structural rigidity has been defined earlier as the feeling that behavior is extensively confined by rules, that there is little formal input into the formulation of these rules, and little informal input in the way of access to faculty members outside of class. Thus a structurally rigid climate makes a sharp distinction between recruits and the members of the maritime academies who are training them. Instead of promoting anticipatory socialization, encouraging students to adopt the norms and values of the professional group they seek to enter, thereby fostering the development of an occupational identity, such a division between recruit and profession would seem to discourage it. While anticipatory socialization has benefits for both the individual and the group to which he will belong in the future, as Merton points out, anticipatory socialization will probably not occur under conditions where the individual "...would not find acceptance by the group to which he aspires and would probably lose acceptance, because of his out group orientation, by the group to which he belongs."[8]

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[8]Robert K. Merton, Social Theory and Social Structure (New York: The Free Press, 1968), p. 319.

Where, for example, students have no formal input into the regulations governing them, such rules would seem more likely to take on the characteristics of external impositions rather than internalized norms of behavior. Students undergoing training for a specific occupation where that training is being given by current members of the occupation would seem to be particularly susceptible to such an interpretation. On the one hand recruits are trying to become merchant marines, not only in terms of skills but also in terms of recognition of that status by others, and on the other hand that recognition is being denied them by members of the very occupation they are trying to enter.

Furthermore, where most students do not have access to faculty members on an informal basis to explore areas of a sea life not covered in formal classroom experiences, the peer group may develop a lore of its own, which may or may not be valid. For example, a negative stereotype may develop of those who stay at sea during their entire working life. Because the sea limits possibilities for a normal social and family life, this stereotype might possibly involve elements of sexual promiscuity or predominantly homosexual inclinations among men who stay at sea. The point is not so much that students may thus be denied accurate information, but rather that the peer group becomes a primary source of information for the student and the socialization powers of the peer group are thus enhanced. Furthermore, the peer group may define informal student/faculty encounters as deviant and may discourage students from actively seeking out faculty through their own initiative. Isolated cases of informal contact between faculty and students threatens the power of the group by providing

an alternative information source and may even actively threaten the validity of the group's knowledge in the eyes of members.

While the academy is seeking to foster a maritime identity among students, it would appear to be putting up roadblocks to such an identity formation where academy life can be interpreted by recruits as free from the influence of mere recruits. "Mere recruits" is perhaps the significant definition that comes through to students in a climate which is structurally rigid. Because students in such a climate are systematically excluded from decisions that can be viewed as part of the occupation they are seeking to enter and are discouraged from having informal encounters with members of the occupation who are training them, recruits are encouraged to identify themselves as outsiders rather than as junior colleagues. The differences between outsider and junior colleague in status and self image would seem a crucial factor impinging on the normative order of trainees. Where the majority of recruits regard themselves as outsiders to the academy and the occupation it represents, the normative order will reward outsider behavior and punish or at least discourage junior colleague behavior. Thus commitment is not likely to be encouraged by a normative order that discourages a junior colleague orientation to the academy. This may take the form of ridicule of individuals who express such commitment, their exclusion from social activities, or perhaps from a network of informal communication. On the other hand, those who express an instrumental orientation toward the academy and a life at sea--defining it as a quick way to make big money before going on to a more desirable career--might be rewarded by the normative order, perhaps through leadership or other status positions.

The data analysis presented in Chapter III is congruent with the above interpretation of structural rigidity undermining commitment. Most importantly, this particular dimension of school climate does not so much appear to foster commitment where it is minimal at it discourages commitment where it is present to a large extent by leading students to make an early career decision against long-term commitment to a maritime life. While more than a third of those recruits in less rigid climates remained open to maritime career possibilities, more than two-thirds of those in the most rigid environments had already made a career decision. And these recruits were much more likely than recruits in less rigid environments to have made a decision in favor of a short maritime career life.

Summary Remarks

This research has explored the relationship between occupational commitment and the training experiences of recruits to the merchant marine. While previous research has demonstrated that commitment problems in maritime occupations have many sources--primarily lying in the nature of the occupation itself--our research indicates that commitment is sometimes discouraged during career preparation before recruits are ever exposed to the actual rigors of a life at sea. A contextual relationship between school climate and occupational commitment was observed among the academies in our sample. A structurally rigid climate was found to be associated with an early career decision against long-term commitment to a life at sea. This finding was

interpreted as a result of the normative order in a structurally rigid environment discouraging the formation of an occupational identity and encouraging an instrumental orientation to a maritime career.

STUDENT QUESTIONNAIRE

A COMPARATIVE STUDY OF NAUTICAL EDUCATION

Department of Sociology and Anthropology
University of Rhode Island
Kingston, Rhode Island

INSTRUCTIONS: Read the directions carefully. Answer the questions accurately. There are no right or wrong answers, only those which are accurate for you. Your name will not appear anywhere on this questionnaire. The answers you give are strictly anonymous, and no one will know which individuals provided which answers. All information will be treated in a scientific-statistical fashion. Time is limited. Move as quickly as you can.

++

PART I. Circle the city in which your academy is located:

Castine Buzzard's Bay Bilbao Barcelona Warsash Plymouth Cardiff

2. How old are you? _____
3. Did you grow up on or near the seacoast? Yes_____; No _____
4. How many people live in the city in which your home is located? _____
5. How many miles is your home from your maritime academy? _____
6. What is (or was) your father's occupation? _____
7. At what age did he stop attending school? _____
8. How old were you when you first considered entering the Merchant Marine?_____
9. How old were you when you made the final decision to do so? _____
10. List THREE occupations you considered entering other than the Merchant Marine:

(1)_____ (2)_____ (3)_____

11. Write in the number of your brothers and uncles who are (or were) in:

The Merchant Marine....( ) The Shipping Industry....( )
The Navy.....( ) Shipbuilding.....( )
The Fishing Industry...( )

12. How many years do you plan to stay at sea? _____

PLEASE TURN THE PAGE

13. Circle whether you are a DECK or ENGINEERING student.

14. Circle the Year of Training you are in:
FOURTH (Freshman) THIRD (Sophomore) SECOND (Junior) FIRST (Senior)

15. Have you been on a training cruise yet? Yes_____ No_____
IF YES, list the ports you visited_____

_____

16. Did you enjoy the training cruise(s): CIRCLE ONE OF THE FOLLOWING:
More than you thought you would
About as much as you thought you would
Less than you thought you would

17. Have you yet been assigned to and served on an ACTUAL Merchant Vessel?
Yes_____ No_____
IF YES, What ports did you visit?_____

_____

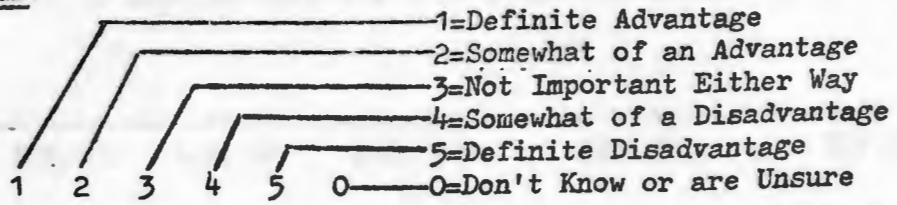
Did you find the experience:
_____ MORE valuable than you expected?
_____ ABOUT as valuable as you expected?
_____ LESS valuable than you expected?

18. Check the ONE elective sequence which is of GREATEST interest to you:
_____ Oceanography
_____ Ocean Engineering
_____ Fisheries Science
_____ Computer Science
_____ Other (write in) _____
_____ None

19. If, in the future, you should decide to leave the sea, what occupation do you think you will go into? _____

_____

PART II. FOR EACH OF THE FOLLOWING STATEMENTS, CIRCLE THE NUMBER WHICH INDICATES THE DEGREE TO WHICH EACH ASPECT OF BEING A MERCHANT MARINE OFFICER IS AN ADVANTAGE OR DISADVANTAGE:



1. Living conditions aboard ship.....1 2 3 4 5 0
2. Getting an inexpensive education.....1 2 3 4 5 0
3. Being away from home and family.....1 2 3 4 5 0
4. The amount of money to be earned.....1 2 3 4 5 0
5. The responsibility of being in charge of a ship.....1 2 3 4 5 0
6. The opportunity to become a real man.....1 2 3 4 5 0
7. Learning and applying nautical skills and knowledge.....1 2 3 4 5 0
8. Serving aboard ships of foreign flag.....1 2 3 4 5 0
9. Doing something useful and important for my country.....1 2 3 4 5 0
10. The opportunity for promotion and job security.....1 2 3 4 5 0
11. Living a disciplined and orderly work-life.....1 2 3 4 5 0
12. The opportunity to visit interesting and exciting ports..1 2 3 4 5 0
13. Doing something different from my friends.....1 2 3 4 5 0
14. Being aboard ship for long periods of time.....1 2 3 4 5 0
15. Exercising the authority and leadership of a ship's officer.....1 2 3 4 5 0
16. Job opportunities to be available when I leave the sea...1 2 3 4 5 0
17. Comradeship with my fellow officers and men.....1 2 3 4 5 0
18. The respect shown me by my friends when I return home from a voyage.....1 2 3 4 5 0
19. Being a member of a profession.....1 2 3 4 5 0
20. Avoiding a typical job on land.....1 2 3 4 5 0
21. Taking part in a different kind of social life.....1 2 3 4 5 0
22. A chance to earn a college degree.....1 2 3 4 5 0

PART III. ASSUME THAT YOU HAVE BEEN A SHIP'S OFFICER FOR ABOUT FIVE YEARS. PLACE AN 'X' AT THE POINT ALONG THE FOLLOWING SCALE WHICH WOULD INDICATE THE ANNUAL SALARY YOU WOULD HAVE TO EARN TO MAKE STAYING AT SEA WORTHWHILE TO YOU:

ALSO ASSUMING THAT YOU HAVE BEEN AT SEA FOR ABOUT FIVE YEARS, PLACE AN 'X' NEXT TO THE RANK YOU FEEL YOU WOULD HAVE TO HOLD TO MAKE STAYING AT SEA WORTHWHILE:

DECK

____ 3RD OFFICER
____ 2ND OFFICER
____ 1ST OFFICER
____ SHIP'S CAPTAIN
_____(Other)

ENGINEERS

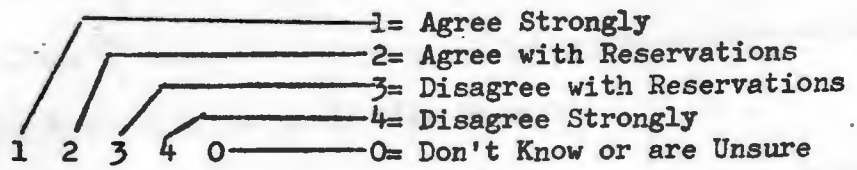
____ 3RD ENGINEER
____ 2ND ENGINEER
____ CHIEF ENGINEER
_____(Other)

PART IV. FOR EACH OF THE OCCUPATIONS LISTED BELOW, INDICATE HOW THE PRESTIGE OF EACH COMPARES WITH THE PRESTIGE OF BEING A 1ST OFFICER OR CHIEF ENGINEER:

1= Ship's Officer is Much Higher
2= Ship's Officer is Somewhat Higher
3= Ship's Officer is Somewhat Lower
4= Ship's Officer is Much Lower
0= About Equal in Prestige

____ High School Teacher
____ Lawyer
____ Civil Engineer
____ General Manager of a Company
____ Construction Contractor
____ Civil Service Clerk
____ Large Retail Shop Owner
____ Accountant
____ Captain in the Navy
____ Pharmacist
____ Social Worker
____ Factory Foreman
____ Policeman
____ Carpenter
____ Barber
____ Hotel Manager
____ Restaurant Owner
____ State Trooper
____ Army Sergeant
____ Graduate of a Regular University
____ The Occupation You Plan to Enter Should you Leave the Sea

PART V. SHOULD YOU DECIDE TO LEAVE THE SEA AND COME ASHORE IN TEN OR FIFTEEN YEARS, CIRCLE THE NUMBER WHICH INDICATES THE DEGREE TO WHICH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS:



1. I won't be at a disadvantage in finding a job ashore.....1 2 3 4 0
2. It will be nice to spend more time at home with my family.....1 2 3 4 0
3. The loss of union protection and benefits would be difficult to bear.....1 2 3 4 0
4. I expect to be able to find a job of a maritime nature ashore....1 2 3 4 0
5. The practical nautical skills I have will be of value to me ashore.....1 2 3 4 0
6. Having had this training and experience, I expect my social standing to be improved.....1 2 3 4 0
7. I worry about what kind of a job I'll be able to get.....1 2 3 4 0
8. I expect to find it difficult to adapt to life ashore.....1 2 3 4 0
9. My theoretical and general knowledge (mathematics, physics, liberal arts, etc.) will be of value to me ashore.....1 2 3 4 0
10. I would miss taking part in the work of Masters', Mates', and Pilots' Union.....1 2 3 4 0
11. My specialized training and experience will limit my chances....1 2 3 4 0
12. Having had this education and experience, I expect to be able to make a lot of money.....1 2 3 4 0
13. A career in the Merchant Marine is financially rewarding.....1 2 3 4 0
14. Opportunities to secure employment aboard ships is very good now.....1 2 3 4 0
15. Securing employment with a shipping company guarantees a life-long career.....1 2 3 4 0
16. In the near future jobs on ships will be increasingly difficult to obtain.....1 2 3 4 0
17. It is relatively easy to get a job on a ship of a foreign flag..1 2 3 4 0
18. The maritime Unions are helpful in making job's for officers attractive and plentiful.....1 2 3 4 0

PART VI. FOR EACH OF THE FOLLOWING, PRINT (1) YOUR MOST DESIRED CHOICE, AND (2) YOUR LEAST DESIRED CHOICE, AND (3) THE CHOICE YOU ARE MOST UNCERTAIN ABOUT:

A. The Type of Ship you wish to serve aboard (passenger, dry cargo, tanker container, automated, etc.):

1._____ 2. _____ 3. _____

B. The Shipping Company for which you would like to work:

1._____ 2._____ 3. _____

C. The Trade Route you would most like to travel (Coastal, North Atlantic, South American, Far East, etc.):

1. _____ 2. _____ 3. _____

D. The Size of Crew of which you would most like to be a member (i.e., 100+, 50-60, 30-40, 20-30, 10-20, etc.):

1. _____ 2._____ 3. _____

E. Indicate the Size of Ship you would MOST like to serve aboard:

5,000 - 10,000 Tons _____
10,000 - 20,000 Tons _____
40,000 - 50,000 Tons _____
50,000 -100,000 Tons _____
Larger than 100,000 _____

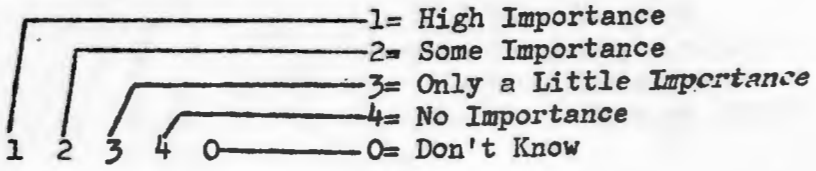
F. Indicate the Size of Ship you would LEAST like to serve aboard:

5,000 - 10,000 Tons _____
10,000 - 20,000 Tons _____
40,000 - 50,000 Tons _____
50,000 -100,000 Tons _____
Larger than 100,000 _____

PEOPLE DESCRIBE MERCHANT MARINE OFFICERS IN DIFFERENT WAYS. FOR YOU, INDICATE HOW DESCRIPTIVE OF A MERCHANT MARINE OFFICER THE FOLLOWING STATEMENTS ARE BY PLACING A '6' BEFORE THE MOST DESCRIPTIVE, A '5' BEFORE THE NEXT MOST DESCRIPTIVE, DOWN TO A '1' BEFORE THE LEAST DESCRIPTIVE:

_____ An Officer is similar to a Professional Man
_____ An Officer is similar to a Business Executive
_____ An Officer is like a Representative of his Nation
_____ An Officer is similar to a Foreman
_____ An Officer is similar to a Technician
_____ An Officer is similar to a Naval Officer

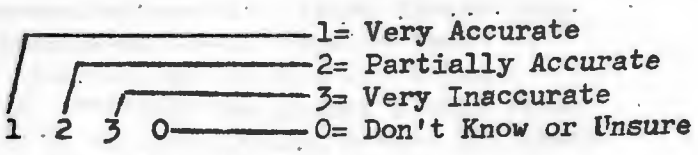
PART VII. BELOW IS A LIST OF ACTIVITIES IN WHICH SHIPS' OFFICERS MIGHT ENGAGE ABOARD SHIP. AS YOU SEE THE JOB OF A SHIP'S OFFICER, INDICATE HOW MUCH IMPORTANCE YOU WOULD ATTACH TO EACH TASK OR ACTIVITY:



1. Working effectively with tools.....1 2 3 4 0
2. Learning how to keep the ship's operating expenses as low as possible.....1 2 3 4 0
3. Life-boat drill and inspection.....1 2 3 4 0
4. Repairing navigation and other electronic equipment.....1 2 3 4 0
5. Behaving like an officer at all times.....1 2 3 4 0
6. Doing the paper work involved in the ship's business.....1 2 3 4 0
7. Organizing and directing the work of others.....1 2 3 4 0
8. Using a ship in the best interests of my country.....1 2 3 4 0
9. Maintaining a spirit of cooperation and colleagueship aboard ship.....1 2 3 4 0
10. Anti-collision techniques.....1 2 3 4 0
11. Rigging and crane work.....1 2 3 4 0
12. Methods of cargo storage.....1 2 3 4 0
13. Issuing and following orders promptly.....1 2 3 4 0
14. Exercising caution in moving about a ship.....1 2 3 4 0
15. Working in a business-like and efficient manner.....1 2 3 4 0
16. Fire-control techniques and exercises.....1 2 3 4 0
17. Maintaining military-like relations between officers and men....1 2 3 4 0
18. Working with matters of collective bargaining and labor union grievances.....1 2 3 4 0
19. Engine repair and maintenance.....1 2 3 4 0
20. Trying to maintain a happy ship.....1 2 3 4 0
21. Thinking about how what I do will effect my country's best interests.....1 2 3 4 0

 PLEASE TURN THE PAGE

PART VIII: INDICATE BELOW THE EXTENT TO WHICH THE FOLLOWING STATEMENTS ARE ACCURATE DESCRIPTIONS OF THE CONDITIONS AND CIRCUMSTANCES OF TRAINING IN YOUR ACADEMY:

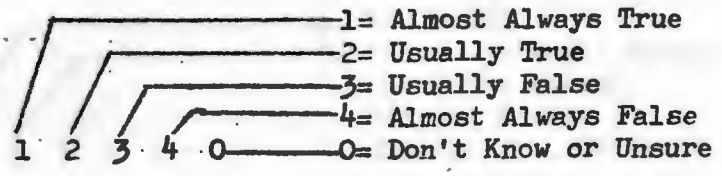


1. Students are expected to learn manners, courtesy, and other gentlemanly virtues.....1 2 3 0
2. Faculty and upper classmen are treated with respect and dignity.....1 2 3 0
3. Student opinion influences how this academy is run.....1 2 3 0
4. Most students develop a strong sense of loyalty to this academy....1 2 3 0
5. There is an elaborate set of rules and regulations to which students are expected to adhere.....1 2 3 0
6. There are satisfying opportunities here for a pleasant social life and recreational activities.....1 2 3 0
7. Faculty are relatively inaccessible to students outside of class...1 2 3 0
8. Students in the First, Second, Third, and Fourth Classes spend a lot of time in common activities.....1 2 3 0
9. Faculty exercise a lot of control over student behavior outside of the classroom.....1 2 3 0
10. Exercising self-control and discipline contribute to being a successful student in this academy.....1 2 3 0
11. Many students regret their decision to attend this academy.....1 2 3 0
12. A friendly and helpful atmosphere characterizes relations between faculty and students in this academy.....1 2 3 0
13. The wearing of proper uniform and a naval form of deportment a valuable part of training for the Merchant Marine. 1 2 3 0

MERCHANT MARINE OFFICERS MAY GIVE THEIR LOYALTY TO VARIOUS INSTITUTIONS AND ORGANIZATIONS. IN THE CASE OF YOURSELF, PLEASE PLACE A '6' BEFORE THE ONE TO WHICH YOU FEEL THE MOST LOYAL, A '5' BEFORE THE ONE TO WHICH YOU FEEL THE NEXT MOST LOYAL, DOWN TO A '1' BEFORE THE ONE TO WHICH YOU FEEL LEAST LOYAL:

_____ The Ship on which you happen to be Serving
_____ The interests of the Profession
_____ The Shipping Company which employs you
_____ Yourself
_____ Your country and its maritime interests
_____ The Interests of the Officers' Union

PART IX. FOR EACH OF THE STATEMENTS BELOW, CIRCLE THE NUMBER WHICH INDICATES THE DEGREE TO WHICH YOU REGARD THEM AS TRUE STATEMENTS ABOUT ACTUALLY WORKING AND LIVING ABOARD A SHIP:



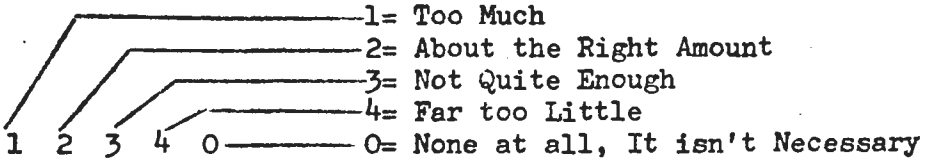
1. Many skills taught in the academy are of little use aboard ship.....1 2 3 4 0
2. Higher ranking officers are helpful and friendly toward new officers.....1 2 3 4 0
3. One has frequent opportunities to go ashore at new and exciting ports.....1 2 3 4 0
4. Time often passes very slowly on voyages.....1 2 3 4 0
5. The responsibilities an officer has often causes a lot of stress and strain.....1 2 3 4 0
6. Beginners are often hazed, ridiculed, and made to perform menial tasks.....1 2 3 4 0
7. There is a good relationship between officers aboard ship and shipping company officials ashore.....1 2 3 4 0
8. The distinctions made between officers and men aboard ship are too great.....1 2 3 4 0
9. The romance and thrill of shipboard life are exagerated.....1 2 3 4 0
10. A naval-military type of life and discipline exists on most ships.....1 2 3 4 0
11. There is a good feeling of comraderie among officers on ships..1 2 3 4 0
12. The physical dangers are very great when working on the sea....1 2 3 4 0
13. Working aboard a ship is much like working in a business enterprise or a factory ashore.....1 2 3 4 0

IN A GENERAL SENSE, INDICATE YOUR DEGREE OF SATISFACTION OR DISSATISFACTION WITH EACH OF THE FOLLOWING:

1= Very Satisfied
2= Somewhat Satisfied
3= Dissatisfied

1. Your choice of a career in the Merchant Marine.....1 2 3
2. The quality of the technical training you are receiving.....1 2 3
3. The economic opportunities in this profession.....1 2 3
4. The overall way of life as a student in this academy.....1 2 3
5. The kind of shipboard training and experience provided.....1 2 3
6. Your capabilities relative to other Merchant Marine students.....1 2 3
7. Your social status as a graduate of this Academy.....1 2 3

PART X. STUDENTS WANT DIFFERENT THINGS FROM THEIR MARITIME TRAINING. FOR THE KINDS OF TRAINING AND STUDIES LISTED BELOW, INDICATE HOW MUCH YOU RECEIVE IN YOUR TRAINING:



1. Classroom instruction in physics and mathematics.....1 2 3 4 0
2. Literature and humanities.....1 2 3 4 0
3. Classroom and planetarium instruction in astronomy.....1 2 3 4 0
4. Classroom instruction in social studies.....1 2 3 4 0
5. Training in traditional seamanship and boatwork.....1 2 3 4 0
6. Foreign language training.....1 2 3 4 0
7. Philosophical, moral, and patriotic topics.....1 2 3 4 0
8. Classroom instruction in business management and finance.....1 2 3 4 0
9. Practical work in navigation and radar.....1 2 3 4 0
10. Instruction in the use of leisure time.....1 2 3 4 0
11. Training in freight administration and cargo handling.....1 2 3 4 0
12. Training in safety practices.....1 2 3 4 0
13. Classroom instruction in international law and international relations.....1 2 3 4 0
14. Meteorology.....1 2 3 4 0
15. Physical education and health education.....1 2 3 4 0
16. Training in personnel management and supervision.....1 2 3 4 0
17. Training in ship structure and use of equipment.....1 2 3 4 0
18. Marine economics and maritime law.....1 2 3 4 0
19. Ship stability and flotation.....1 2 3 4 0
20. Mechanical engineering.....1 2 3 4 0
21. Thermal and fluid dynamics.....1 2 3 4 0
22. Tool working and diesel engineering.....1 2 3 4 0
23. Pipe fitting and steam engineering.....1 2 3 4 0
24. Techniques of refrigeration and fuel storage.....1 2 3 4 0
25. Instruction in how to behave as an officer.....1 2 3 4 0

 PLEASE GO ON TO THE FINAL PAGE

FINAL PART. PEOPLE DESCRIBE SHIPS IN VARIOUS WAYS. FOR YOU, INDICATE HOW DESCRIPTIVE OF A MERCHANT VESSEL THE FOLLOWING STATEMENTS ARE BY PLACING A '6' BEFORE THE MOST DESCRIPTIVE, A '5' BEFORE THE NEXT MOST DESCRIPTIVE, DOWN TO A '1' BEFORE THE LEAST DESCRIPTIVE:

_____ A ship is similar to a small community

_____ A ship is similar to a complex piece of machinery

_____ A ship is like a symbol of national power

_____ A ship is similar to a business enterprise

_____ A ship is similar to a naval vessel

_____ A ship is similar to a factory

ONE LAST QUESTION: When you receive your reserve commission do you intend to go on active duty in the Navy?

Yes_____; No_____; Haven't yet decided_____

++

THANK YOU VERY MUCH FOR YOUR TIME AND YOUR COOPERATION;PLEASE ACCEPT OUR BEST WISHES FOR A HAPPY AND SUCCESSFUL CAREER AS AN OFFICER IN THE MERCHANT MARINE

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