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MILITARY PSYCHOLOGY IN THE NETHERLANDS 1967

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UNITED STATES OF AMERICA

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MILITARY PSYCHOLOGY IN THE NETHERLANDS 1967

INTRODUCTION

As in the case of many countries occupied by Germany during World War II, the roots of present-day Dutch military psychology may be traced to Great Britain. During the period 1944-45, plans were made by Dutchmen exiled in Great Britain for the establishment of a formal military psychology program in Holland at the end of the war. In 1945 a formal Psychology Department was established in the Dutch Army by Professor De Graaf. At that time the Air Force was part of the Army, and the Navy had a small selection board with one psychologist, Drs* Ch. J. de Wolff, and two officers. In 1945 Captain D. Langelaar, present head of the Navy program, joined the Army psychology group. In 1952 a change in Army senior commanders resulted in a gradual constriction of the Army program, and Langelaar left in 1955 to join the Navy Selection Board Office.

The Navy psychology program was established on a large scale in 1961 with Langelaar and three other uniformed psychologists. The Air Force program began in 1951 under Dr. S.D. Fokkema, who is now a professor at the Free University of Amsterdam. At the present time the three service programs differ rather drastically in terms of scope, magnitude, and sophistication of effort.

For its size the Netherlands maintains a rather large military force. Conscription is used, as necessary, to provide the requisite personnel for the forces. However, as is noted in some detail later in this report, large numbers of young Dutch males are disqualified or otherwise exempted from military service so that conscription is by no means universal. Enlistment in the military services is permitted at the age of 15, and all males not in service must register for conscription at the age of 18½. At the age of 19 they are administered a basic intelligence battery as a first step in determining eligibility for military service.

Responsibility for the examination of conscripts rests with a one-man office in the Department of Defence. The psychologist charged with this responsibility is Dr. E.S. van der Vleugel, Afdeling Dienstplichtzaken Departement

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* Drs = doctorandus (= licentiate, male or female)

van Defensie, Bleyenburg 38, The Hague. His office is responsible solely to the Netherlands Department of Defense. He operates autonomously and has no official contact with the three service military psychology programs. While this office was not visited, it is understood that van der Vleugel's research activity is concerned primarily with a continuing item analysis of his classification battery. The test battery itself has not been revised since its introduction some fifteen to twenty years ago. Moreover, each of the services administers its own basic battery and is little influenced by the results of the more general conscript testing.

In October 1965 an Interservice Committee on Psychology was established in the Netherlands Department of Defence. Prior to this time each service operated an autonomous program and there was no official interaction. The council is composed of four members, the directors of the three service programs, and van der Vleugel. Langelaar is the current president. A full-time secretary, Lt. T. Van Noort RNN, has been assigned to the council to assist in the conduct of its business. Van Noort, an educational psychologist, is currently on active duty to fulfill his military obligation.

For the first year and a half of its existence, the council reportedly was plagued with conflicts, differences of opinion, etc. After talking to a number of individuals about the work of this Interservice Committee, it would appear that the difficulties have in fact been resolved. Within recent months the Committee has actively launched into issues concerning policy with regard to selection batteries, cutting scores, cooperative development of new instruments, etc. Discussions with a number of Dutch military psychologists indicate that their general attitude towards the Committee now is quite positive. They anticipate that it will both increase in stature and become more active with the passing of time.

NAVY APPLIED PSYCHOLOGY AND RESEARCH PROGRAMS

With the reorganization of the Dutch military forces in 1964, three major bureaus or staff functions were established in each service. In the Navy, psychological research was made the responsibility of the Flag Officer, Personnel. Selection and training are the responsibility of what, literally translated, means the Chief of Staff. Thus, while the military psychologists have a direct responsibility for developing tests, formulating selection procedures, etc., they are not charged with the responsibility for the operational program in selection and training. Rather, they serve in an advisory role to the Commanding Officer of the Navy Selection Center. It would

appear that the arrangement works quite well in spite of the divided responsibility.

PERSONNEL RESEARCH BRANCH, MINISTRY OF DEFENSE (NAVY)

This office has responsibility for development of selection procedures, human engineering, development of training techniques, and the broad area of social psychology in the Netherlands Navy. The office is quite well known and highly respected among Dutch psychologists. The group is housed in comfortable and somewhat spacious quarters in the main Netherlands Navy Department building, at Lange Voorhout 7, The Hague.

The head of the program, Langelaar, is an extremely active, enthusiastic, and highly respected Dutch psychologist. A man in his early fifties, Langelaar was formally trained in educational psychology prior to entering military service. Although never serving as a line officer, it is obvious that he has a deep understanding of the military, knows how to work within the services, and is highly respected by his line colleagues. At the same time, he would appear to be equally as well respected by his civilian colleagues in psychology -- both in universities and in industry. In addition to his full-time military psychology activity, Langelaar has extensive part-time contacts both in the universities and industry. In fact, he is planning to retire from the Navy this September, and has accepted a position of considerable stature and responsibility in the civilian psychology community.

In addition to Langelaar, there are nine full-time and one half-time professional staff members in the Department, along with the necessary clerical and support personnel. All of the full-time psychologists are trained to a level roughly equivalent to the American PhD, and two staff members are formally trained in sociology rather than psychology. The majority of the staff are civilian, although there are three regular naval officers and one officer doing his conscript service as a uniformed psychologist. The uniformed personnel are required to meet the same academic and professional requirements as the civilians, and there appears to be little, if any, uniform-civilian conflict.

Morale of the group is unusually high; they have no staffing problems and no financial problems. In fact, it is quite refreshing to find an in-service military psychology group in Europe which holds such high status. Recruiting is not a problem. Positions in Langelaar's organization carry considerable prestige and jobs actually are sought out by

Dutch psychologists. There is very little turnover and no-one has resigned from the organization since 1961. Actual growth over the years has been in a large measure through the mechanism of conscript psychologists joining the staff as civilians upon completion of their obligated military service. The salaries are excellent, in all cases equivalent to comparable university positions, and in most cases equivalent to industry. Interestingly enough, the organization does not function on a set budget. Money is provided by the Navy on request, and the only item which requires any advance planning with regard to funds is the buying of computer time from a non-military organization.

The Navy psychology group operates with a minimum of formal structure or organization, and Langelaar has refrained from establishing divisions or branches. As various long-term research programs have been developed, personnel have been added to work specifically in given areas. Thus, each member of the organization has a given area of responsibility, which is based on the needs of the service and the individual psychologist's own professional training and interests. It is obvious that in addition to being professionally competent, Langelaar is an unusually skilled administrator. He has been responsible for anticipating the most productive broad programmatic areas in terms of the Navy's needs and the potential contribution of psychology, but the men responsible for the programs have almost total autonomy for their own work. Langelaar himself no longer participates in the ongoing research. Rather, his time is devoted totally to implementing research results and making it possible for others to work. His retirement this fall undoubtedly will constitute a significant loss to the program. In spite of the professional excellence of other members of his staff, none have the unique relationship with the Navy which Langelaar enjoys.

While there are no direct research contracts with universities, an extremely close relationship exists between the Navy psychology group and several university departments. Cooperative projects are undertaken, and university psychologists, such as Professor Mauk Maulder of Utrecht University, occasionally collect their own data using Navy subjects.

The Navy group does not have a formal series of reports. Results of their studies are contained in reports forwarded to appropriate Navy Department Boards. None of the research is classified, and it is published, usually in Dutch journals, if the nature of the work is of sufficiently broad interest.

SOCIAL PSYCHOLOGY

Drs. Paul M. Bagchus is responsible for the social

psychology program, assisted by Drs. J. Allegro and a staff of four or five conscripts. Their work falls under two broad headings; leadership, and morale or satisfaction.

A three week leadership training course for senior petty officers is conducted at the Naval Training Center in Hilversum. The course was devised by Bagchus and his colleagues, but actually is conducted by an unusually sensitive and effective group of line officers, with the psychologists serving as consultants. The purpose of the course is to enhance leadership effectiveness of the petty officers by developing their awareness of group phenomena and giving insight into the social behavior. Aside from this obviously applied goal, the course provides a basis for the long term leadership research program.

An intriguing aspect of this leadership program, which is one of the single most interesting and sophisticated military psychology endeavors in Europe, is the fact that its entire development and present structure is based on explicit theoretical formulations. Bagchus and his colleagues have been strongly influenced by the Ohio State leadership research, HumRRO studies, and Solomon's work on experimental design.

A variety of tasks are used, some of which involve pre-designated leaders and others that are designed to elicit emergent leadership. All of the tasks are of a problem-solving nature. For example, in one situation, with a designated leader, a group of seven or eight men are required to span a body of water utilizing materials drawn from a substantial source of supply. Before actually working over the water, a period of time is devoted to planning, making the necessary calculations regarding length of planks, weights, leverage, etc. Here specific details are worked out as to the sequence of steps for executing the task. The group then moves to either a large pond or swimming pool where the plan is implemented. The specific problems have been derived in such a fashion that effective and active leadership is required for completion of the assigned task. In some cases an intermediate step is introduced where a practice session is carried out indoors with a model before the actual task is performed over water.

Each evening, after completion of the group's work, the day's activity is analyzed and evaluated in a discussion group led by the instructors. Points brought up for discussion are those recorded during the course of the day by the instructor-observer. Here the emphasis is upon an analysis both of the leader's function and various aspects of group

interaction which were responsible for the ultimate outcome of the task. Obviously, the skill of the individual assigned as the instructor and discussion leader has a major impact on the effectiveness of the program. In fact, obtaining the services of line officers qualified to perform this function constitutes one of the greatest problems in managing the program.

In this program technical planning is considered an integral part of leadership. It is interesting to note that the leading causes of failure to complete the problems appear in a failure to plan and anticipate requirements of the task adequately. Next in order of frequency is the failure of individuals to carry out their roles assigned by leaders.

A field study, utilizing the four-group design, described in Solomon's 1949 Psychological Bulletin paper, is being carried out to investigate the effectiveness of the training. Three months after the petty officers have completed the course and been assigned to duty station, measures are obtained on leadership attitude, leadership behavior, and leadership climate of the ship or station at which they are serving.

Working with Hofstee, Bagchus has developed a scale which includes three dimensions of leadership: (a) individual prominence, (b) consideration, (c) initiating of structure. Reportedly, the variable of social desirability, which consists of 19 forced choice items, has been eliminated from the scale.

Four hypotheses are being tested in the study. The first is concerned with the variable of leadership participation. Here it is hypothesized that the greater the participation in leadership training, the greater the benefit of the training. Secondly, it is predicted that there is a positive relationship between leadership status in training and the effectiveness of the training course. Next, it is hypothesized that men who manifest a higher degree of satisfaction with the Naval service also receive greater benefit from the training program. Finally, it is postulated that the leadership "climate" of the man's duty station will have a mediating influence on the effectiveness of the training program.

All of the various scales and measuring instruments for the research have been developed and pretested. Data collection has commenced but has not progressed to the point of analysis. One cannot help being impressed with the sophistication of this work and the meticulous care with which it is being carried out. Moreover, this is an excellent example of the type of study of a complex research problem area in which a relatively small-sized military service is a distinct advantage.

Many of the problems of data collection, dispersion or loss of subjects, cooperation, etc., which would be encountered in a force of the size of the US Navy are minimized here.

The second problem area in the social psychology program is that of morale or satisfaction. By use of a factor analytic approach, a satisfaction measure has been devised which consists of five subscales: (a) general satisfaction with life in the Navy, (b) satisfaction with specific work assignment, (c) satisfaction with military career, (d) satisfaction with leadership and current duty station, and (e) a present workload and life circumstances scale. Statistically, the five subscales have a high internal consistency and low intercorrelation.

Work has been under way for some time utilizing the scale in a comparative study of personnel assigned to naval aviation and to general fleet duty. Findings to date indicate that among enlisted personnel in both groups satisfaction is high upon entering the Navy but it progressively declines until the individuals make their first advancement in rate. At this time there is an upswing in the satisfaction curve. Secondly, the satisfaction or morale curve appears to show a marked decline as the time of re-enlistment approaches, roughly six years after entering service. Thus it is apparent that changes must be introduced in the Navy which will bring about a reversal of this decline and possibly enhance the current low re-enlistment rates. A third finding growing out of this study is that satisfaction is generally lower among personnel in the Navy-Air wing than among men assigned to other types of duty. This has been attributed to uncertainty as to the future of naval aviation in the Netherlands.

Results of the studies in social psychology, for example past work on re-enlistment, attitude and morale, are forwarded to the Navy policy councils along with proposed recommendations for corrective action. It is reported that a rather high proportion of the recommendations actually are adopted and implemented.

HUMAN ENGINEERING

Human engineering is the most recent problem area to be tackled by the Navy group. Lieutenant J.W. van Borselen, a regular Navy officer who was trained in psychology after initially being commissioned in the line, is responsible for this area. Van Borselen had some exposure to human engineering research and practice during his university training;

however, he is somewhat less experienced than might be desirable for an individual launching a new program. To date, all of his time has been occupied as a consultant, and it is anticipated that an active research program will not be initiated in the near future.

Van Borselen, whose own interest is in interior ship communications systems, sits as a full member of the Shipbuilding Department Committee which coordinates, controls, and establishes policy for new construction in the Netherlands Navy. While van Borselen is a very personable individual and has a distinct advantage in having served as a line officer, it would appear as if he is fighting an uphill, albeit successful, battle to establish his place on the Committee. The line officer members of the Committee, naval architects, etc., are uncertain as to where and how human engineering fits into their shipbuilding activity. Van Borselen has rather wisely approached his task through making available information on accepted research findings in human engineering and problem solving techniques which are appropriate to issues under consideration by the Committee.

Van Borselen also acts as the liaison officer between the Netherlands Navy and the Schusterberg Institute of Perception. Reportedly, there is only one man now working in this area at Schusterberg. He feels that there is a lack of communication between the universities and the Navy on human engineering problems. This could become a significant difficulty if the Navy human engineering effort does develop into a truly active program. Thus, if the present resistances on the part of engineers and line personnel are successfuly overcome, it is almost certain that the question of research laboratories, equipment, and personnel will create additional difficulties.

In passing, it should be noted that van Borselen has a rather intriguing supplementary duty assignment. He serves as adviser to the Recruiting Department of the Navy. In this billet he has the responsibility of reviewing all advertising for recruiting with a view towards persuasion and communication. To date, this has been done on a somewhat informal and ad hoc basis; however, a series of formal studies is now being devised to put this effort on a more systematic and objective basis.

PROGRAMMED INSTRUCTION AND TRAINING RESEARCH

The programmed instruction project is under the general guidance of Drs. M. Beishuizen. Dr. John Nagay recently discussed this work in connection with his NATO review (ONRL-18-66), so only an outline will be given here. Programmed

instruction is not a major activity of the Dutch Navy psychology program, although work has been underway for some five years. The effort started with an attempt to program the teaching of military insignia to recruits. This was followed by programs to teach binary math as well as remedial arithmetic.

An interesting situation exists in the Netherlands Navy whereby new techniques may be developed by the psychology groups, although a completely separate organization is responsible for making decisions as to whether the innovations will be adopted. The Education Branch of the Navy does not employ any professional educators, and programmed instruction was not fully appreciated until approximately two years ago. At that time officers from the Education Branch attended the NATO Conference on Programmed Learning which was held in Naples. Following this Conference there was a marked change of attitude, and work in the area has been stimulated.

Beishuizen conducts courses in programmed writing for officers and petty officers who serve as instructors. The instructors, in turn, write programs for their courses in addition to their regular duties. A conference is held once each week at which Beishuizen acts as a consultant and helps with the effort. A change is planned in this less than desirable makeshift arrangement and the Education Branch of the Navy will employ a full-time professional within the next year to supervise the area of programmed instruction. While Beishuizen will continue to act as a consultant to the Education Branch, his primary duties will be devoted to methodological and development studies in the area of education and training.

SELECTION RESEARCH

Drs. B. Buiten has headed the selection research programs since 1961, when de Wolff left the Navy psychology program. Selection research apparently never has received the emphasis in the Netherlands that it has in many other countries. It appears as though the manpower pool far exceeds military requirements and, as will be discussed later, rejection rates are quite high. Moreover, a large proportion of men assigned to skilled jobs such as machinist, electrician, etc. are trained in civilian life before they enter the Navy.

Until 1961 the basic battery used in the Dutch Navy was a power test which took approximately 3½ hours. Buiten's first research effort in the Navy was to construct a speed battery which would produce comparable results. Using a factor analytic approach, he analyzed a battery of 46 tests used in the Navy and Air Force. Ten factors were identified

and a speed test constructed which, in a period of 1½ hours, including instruction time, produced equivalent results to the power test battery. The new battery was introduced in 1964.

Buiten is currently working with Dr. W. Hofstee, an unusually capable half-time employee of the Netherlands Navy psychology program, in developing a personality test which will be used to supplement the present basic battery in selecting recruits. This test is an outgrowth of Hofstee's dissertation, and is a continuation of work he started during a year at ETS in Princeton.

Buiten also spends time as a consultant in the actual Navy selection program, although the practical work is the primary responsibility of a separate command. In fact, with Langelaar's impending departure from the Navy, Buiten is becoming increasingly occupied with administrative responsibilities and his research program now is relatively inactive.

ROYAL NETHERLANDS MEDICAL EXAMINATION AND SELECTION CENTER, HILVERSUM

All personnel, male or female, officer and enlisted, entering the Netherlands Navy are processed through one central recruiting and examining activity. This command, which was opened in 1961, is physically located at Hilversum, about 40 miles from The Hague. The center is commanded by Captain W.A. de Looze, a line officer who was one of the Netherland's greatest naval heroes during World War II. The center includes four separate subordinate commands: medical, psychological selection, classification, and enlistment or appointment. There also is an intelligence office that carries out security screening procedures.

In addition to the selection and classification procedure, basic and certain advance training for the Netherlands Navy takes place at the Hilversum Center. No attempt will be made in this report to discuss the activities of the training command. Leadership training, which is based on research developed by the military psychology group, has been outlined in a preceding section.

The physical layout of the Center is quite unique. The building was constructed in 1961 and was designed specifically for use as a selection center. The five wings are arranged in a circular fashion with their entrance at the hub. This center or hub area has a covered passageway so it is possible to get from one activity to another without going outside. Approximately 10,000 to 12,000 men and women a year are processed here.

Officer Selection: Selection of midshipmen is somewhat of a problem. It is openly acknowledged that the better quality young men in the Netherlands go to the university. Approximately 70 applicants each year are selected for entry. Almost every man with a secondary school certificate in math and science who meets the necessary administrative and medical qualifications is accepted, and approximately 50% of candidates with language or economics background are accepted. Parenthetically it might be noted that one of the means proposed for increasing the pool of eligible candidates is to raise the academic standards of the Academy so that a military education is in fact equivalent to that received in a civilian university.

The basic officer selection battery has not been changed for a number of years. In addition to a battery of psychological tests, the officer candidates go through a leaderless group discussion procedure as well as a leaderless situation test, modeled after the British War Office Selection Board procedure. There is no standardized scoring for these latter procedures: raters make notes and summarize each individual's behavior on factors such as initiative, sociability, etc. Each candidate is then seen by a team of three psychologists. Two act as interviewers and the third functions as an observer. At the conclusion of the interview all three rate the candidate individually on ten categories. A summary of his assets and weaknesses is prepared which utilizes all available information. The candidates then are rated with a single composite numerical score.

The final selection procedure is conducted by a board of three flag officers, who interview each candidate and utilize the rating supplied by the psychologists, although the degree to which they depend upon the psychologists' material is uncertain in view of the bias towards math and science students as noted above.

This procedure is being studied by Buiten, but progress is slow because of the small number of midshipmen appointed each year. Analysis of data on all cadets appointed between 1960 and 1965 is partially complete. On the basis of this data it would appear that performance on the basic psychological test battery only is predictive of standing at the Naval Academy. As might be expected, there appears to be some positive relationship between age and civilian school grades.

Enlisted Selection Procedure: The Netherlands Navy is composed roughly of 22,000 officers and men, 80% of whom are career personnel and the remaining 20% conscripts. (It is

interesting to contrast this with the figure for the Army, where nearly 90% of the enlisted personnel are conscripts.) Enlisted volunteers are accepted from the age of 15 and serve for a minimum period of six years. However, the volunteer has the option of leaving the Navy at the end of his first three months of training if he does not desire to continue for a full enlistment. Conscripts serve for a period of 21 months. The re-enlistment rate is rather low, as in the US Navy, with approximately 60% to 70% of the personnel leaving.

Of the volunteers processed at Hilversum, only 45%-50% are actually accepted for service. In spite of this amazingly large percentage of disqualification, it should be noted that rejection by the Navy does not in any way exempt a man from subsequent conscripted service in the Army. Less than 5% of applicants for enlistment are rejected because of failure to meet cutting scores on the basic test battery. Some 3%-4% withdraw voluntarily during the course of the selection procedure. The remainder, in excess of 40%, are disqualified for medical reasons.

The largest single source of medical disqualification is on the basis of emotional instability. All recruits are administered an individual Rorschach and Wechsler-Bellevue by student psychologists, who operate under the direction of the Medical Department. One uniformed psychologist, who is also trained as a naval aviator, is attached to the Center as a consultant from Langelaar's program. However, there apparently is an absolute cleavage between the Medical Department program and the psychology program.

It is unclear as to the degree of sophistication and training of the students administering the projective and intelligence tests; however, one obtains the impression that they are enrolled in introductory testing courses. When a question arises as to an applicant's suitability for Naval service on the basis of this testing, he is referred to a psychiatrist for individual interview. This interview, of approximately an hour's duration, culminates in a recommendation for acceptance or rejection for service. It is understood that no formal or informal research has ever been undertaken on the psychiatric selection procedures. Moreover, the Medical Department reportedly is opposed to undertaking any such effort. Probably most fascinating of all is the fact that apparently no questions have been raised regarding the rejection of 25%-35% of applicants for enlistment through this procedure. In the same vein, it is also interesting to note that less than 10% of applicants are rejected for medical reasons unrelated to psychiatric factors.

In spite of the rather startling rejection rates in the case of volunteers, almost 100% of the conscripts processed for naval service are accepted. It would appear that the requirements for conscript service in the Navy are unusually high, so that almost all men who possess the necessary degree of civilian training, skill, and occupational stability will be accepted. For some reason, psychiatric disqualification of this group is insignificant. It likewise is interesting to note that, similar to volunteers, those conscripts rejected by the Navy are returned to a central pool for allocation to the Army. From discussions with staff members at the Selection Center it would appear that this unique position of the Navy with regard to military manpower has existed for years and is not looked upon as being unusual. While this same situation may exist in other countries, it certainly is unique in the experience of this observer.

PSYCHOLOGY AT THE ROYAL NETHERLANDS NAVAL ACADEMY

Approximately five to six years ago, Professor Mauk Maulder conducted an experiment on communication in groups, using Naval Academy cadets as subjects. Just about this period the Navy was becoming concerned with devising more effective and systematic ways of teaching leadership. By coincidence it was also quite concerned with devising methods for raising the academic achievement level and standards of the Academy so that the education would be equivalent to that of Dutch universities. Langelaar, capitalizing on this combination of events, urged that social science be included in the curriculum along with technical subjects.

Last fall a Department of Social Science was formally established. Dr. M.R. van Gils, a sociologist, has been appointed head of the Department. At present he is still attempting to develop a focus and direction for his new Department. The aim of social science training of cadets is seen as an attempt to "give people an insight into social behavior which they can use in daily living." In terms of planning to date, it is anticipated that emphasis will be placed both on individual psychology and a combination of social psychology and sociology. An effort is being made to integrate basic or core principles with actual training experience. This means that in addition to lectures, a training program will be developed which, in terms of the student, is of an involving nature. Accepted theory in group behavior and interaction will be demonstrated through experimental situations in which the cadets themselves participate. Thus, they will not only have an opportunity actually to experience the group phenomena in question but through lectures and discussions will receive appropriate

feedback information. One of the primary problems encountered prior to development of this new leadership program -- and one which still constitutes a major issue -- is the response of students of "What am I going to do with all of this after I have learned it?"

It is planned that social sciences will be taught two hours per week during the first three academic years. The first year will be devoted to individual and general psychology; the second will be concerned with social psychology and sociology. This will be followed by a year devoted to the psychology of organization and the military as an institution. During the fourth year, when the students are at sea on training cruises, an attempt will be made to conduct studies aboard ship in the area of communication, group structure, etc. In the fifth and final year at the Academy, students will be required to make a formal literature survey on a topic of their own choosing which culminates in a thesis. At present it is anticipated that clinical psychology and psychopathology will be omitted from the curriculum.

ROYAL NETHERLANDS ARMY PSYCHOLOGY PROGRAM

The Social Psychology Affairs Office of the Netherlands Army is responsible to the Chief of Army Personnel and has a twofold mission: (a) development of selection procedures, and (b) training of selection officers in interview and group observation techniques. The only psychologist in the program is Drs. J. de Klerk. He is assisted by two regular army officers and three to five conscripts.

The actual operational program for personnel selection in the Army comes under the Chief of General Staff, so, as in the case of the Navy, the operation and research program is separated. De Klerk's office is located at the major Army Selection Center, SCKL Kamp Waterloo, Amersfoort, rather than in The Hague. De Klerk would appear to have a close and effective working relationship with the commanding officer of the Selection Center, although his formal relationship is technically that of a consultant. Some 35,000 men per year are processed at Kamp Waterloo.

The enlisted and conscript test battery was developed some time ago and has not been modified in recent years. Similarly, the officers' selection program, which is modeled after the British War Office Selection Board procedure, has not been changed for many years. Officer candidates are subjected to a leaderless group problem-solving situation and run an obstacle course. Indoors they participate in a leaderless

discussion, prepare autobiographies, and receive a paper and pencil test battery. Finally, they are seen in a semi-structured interview by one of 20 line officers who have been trained in interview technique by de Klerk. Scores and comments accumulated during the two-day examination procedure are summarized in a conference of examiners, and each man is rated on a four point scale. This assessment procedure results in failing approximately 60% of the applicants. Ninety percent of the total disqualifications for all causes in the case of officer candidates is on the basis of "leadership," with the remaining 10% being psychiatric, physical, etc.

Because of the demands made upon de Klerk's time in training interviewers and observers for the WOSB procedure, as well as acting as a consultant in the selection program, he finds it impossible to carry out an active research program. Accordingly, while some information is available on the reliability of the semistructured interview, there is no data on validity either of the procedure as a whole or any given segment of the selection battery, subsequent attrition, etc.

It would appear that the only outside source of professional stimulation in the Army program is the inter-service committee on psychology discussed earlier in this report.

ROYAL NETHERLANDS AIR FORCE PSYCHOLOGY PROGRAM

Psychology in the Royal Netherlands Air Force dates from 1951, when Professor Fokkema was appointed head of the pilot selection program. Prior to that date the Army WOSB procedure also was employed by the Air Force. Fokkema revised the program and introduced a basic test battery.

Drs. F.J.B. Teerink became director of the program in 1964. In addition to Teerink there are two civilian and five conscript psychologists, as well as one sociologist, in the program.

The place of psychology in the Air Force organizational hierarchy is identical with that of the Army and the Navy. Thus, Teerink is responsible to the Chief of Air Force Personnel, although he provides techniques and consultation service for the Selection Center at Gilze-Rijen, which is under the Air Force Chief of Staff. The Office of Air Force Selection Affairs is located at Kalvermarkt 28, The Hague.

While the Air Force program does not appear to have the scope, magnitude, or sophistication of the Navy group, it would appear to be in the process of growth. There is some

active research, although this tends to consist of isolated studies rather than being of a programmatic nature. Probably the largest study undertaken recently is a follow-up of all candidates tested over the past ten years with the pilot selection battery. The goal of this work is to determine if there is any change in the validity of the selection battery as a whole, or its sub-tests, over the years against a criteria of pass and fail in training. Obviously there have been marked changes in the training programs and demands made upon the candidates during this time span which has seen the transition from propeller to jet aircraft. It is expected that this work will be followed by the development of a new battery incorporating any of the old tests which appear to have survived over time.

A study is being made to elicit information which might be used to boost the morale of men assigned to air police and other guard duties. Here depth interviews are being conducted with a representative sample of 20 to 30 men and a scale will be developed on the basis of information elicited during these interviews. Work is also under way on tests for the selection of radio operators and several other specialty rates.

A study recently has been completed on leisure time activity of airmen. This effort was in the nature of fairly straightforward survey research in which leisure time activities and preferences were obtained from a random sample of men. Reportedly, a number of changes have been made in the recreational facilities available to Dutch airmen as a result of this survey.

Teerink's group has not been active in the flight training program to date. However, a literature survey on objective measures in flight training currently is under way. With the passing of time it is hoped that the group will be able to develop a greater influence on training.

There is no formal contact with any of the Dutch universities, but informal relationships have developed in several places, particularly with Fokkema's department.

Pilot Selection: In addition to the paper and pencil test battery, all Air Force cadets go through a modified WOSB procedure at the Air Force Selection Center at Gilze-Rijen. This procedure, developed specifically for use in the Dutch Air Force, is considerably more systematic and theoretically oriented than that used by the Dutch Army.

The subject's performance in the leaderless task is

rated on three factors, prominence, effectiveness, and sociability. Each man is rated three times during the course of his performance on a given task by each of two observers. The ratings then are pooled to give a single compositve summary of the six individual scores. Four different types of task are used in the test procedure: (1) the typical outdoor problem-solving situation, (2) leaderless group discussion, (3) a group mechanical construction task, and (4) a group verbal problem-solving situation in which the subjects are required to plan the location for an airport. Validity studies have been made of this phase of the selection procedure which correlates 0.10 with flight training and 0.20 with officer training. While both the psychologists and line selection officers at Gilze-Rijen feel that procedure does not make any significant contribution, it is retained because of face validity.

In addition to the above, the officer selection battery includes peer ratings, tests on reaction time and depth perception apparatus, and an interview. As indicated above, research currently is under way to determine the relative contribution of each of these procedures to the total test battery.

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This report describes and delineates in some detail the duties and research of the military psychiatry programs in the three military services of the Netherlands Department of Defense.

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