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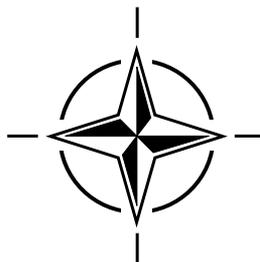
RESEARCH AND TECHNOLOGY ORGANIZATION

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RTO TECHNICAL REPORT 34

Officer Selection
(la Sélection des officiers)

Final Report of the RTO Human Factors and Medicine Panel (HFM) Research and Study Group 31 on Officer Selection.
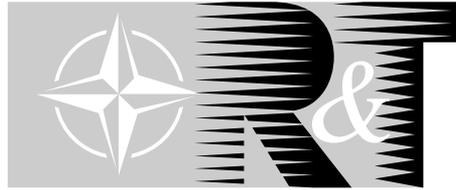
Published May 2001

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Officer Selection
(la Sélection des officiers)

Final Report of the RTO Human Factors and Medicine Panel (HFM) Research and Study Group 31 on Officer Selection.

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The Research and Technology Organization (RTO) of NATO

RTO is the single focus in NATO for Defence Research and Technology activities. Its mission is to conduct and promote cooperative research and information exchange. The objective is to support the development and effective use of national defence research and technology and to meet the military needs of the Alliance, to maintain a technological lead, and to provide advice to NATO and national decision makers. The RTO performs its mission with the support of an extensive network of national experts. It also ensures effective coordination with other NATO bodies involved in R&T activities.

RTO reports both to the Military Committee of NATO and to the Conference of National Armament Directors. It comprises a Research and Technology Board (RTB) as the highest level of national representation and the Research and Technology Agency (RTA), a dedicated staff with its headquarters in Neuilly, near Paris, France. In order to facilitate contacts with the military users and other NATO activities, a small part of the RTA staff is located in NATO Headquarters in Brussels. The Brussels staff also coordinates RTO's cooperation with nations in Middle and Eastern Europe, to which RTO attaches particular importance especially as working together in the field of research is one of the more promising areas of initial cooperation.

The total spectrum of R&T activities is covered by the following 7 bodies:

- AVT   Applied Vehicle Technology Panel
- HFM   Human Factors and Medicine Panel
- IST   Information Systems Technology Panel
- NMSG   NATO Modelling and Simulation Group
- SAS   Studies, Analysis and Simulation Panel
- SCI   Systems Concepts and Integration Panel
- SET   Sensors and Electronics Technology Panel

These bodies are made up of national representatives as well as generally recognised 'world class' scientists. They also provide a communication link to military users and other NATO bodies. RTO's scientific and technological work is carried out by Technical Teams, created for specific activities and with a specific duration. Such Technical Teams can organise workshops, symposia, field trials, lecture series and training courses. An important function of these Technical Teams is to ensure the continuity of the expert networks.

RTO builds upon earlier cooperation in defence research and technology as set-up under the Advisory Group for Aerospace Research and Development (AGARD) and the Defence Research Group (DRG). AGARD and the DRG share common roots in that they were both established at the initiative of Dr Theodore von Kármán, a leading aerospace scientist, who early on recognised the importance of scientific support for the Allied Armed Forces. RTO is capitalising on these common roots in order to provide the Alliance and the NATO nations with a strong scientific and technological basis that will guarantee a solid base for the future.

Officer Selection

(RTO TR-034 / HFM-023)

Executive Summary

In the course of history, different criteria have been used to determine who would command and lead troops: physical power, military skills, nobility and wealth, political power, academic knowledge, personality traits, etc. In modern militaries, commanders are officers; therefore, the primary selection of officer applicants determines who will be available to serve command functions in the future. Therefore, it is important to examine how officer-candidates are selected. This was the central theme of this NATO research and study group (RSG).

Considering that the challenge of officer selection has persisted for many decades and recognizing that current practices are embedded in national culture and tradition, one may question the value of a research group on officer selection. The value of this research, at this time, is that many things have indeed changed:

- New missions have emerged since the end of the Cold War: humanitarian, peace keeping, and peace making missions. The focus has moved from massive, high intensity conflicts to smaller actions in which new tasks are required and new behavior is expected from officers (e.g., to foster cohesion in a multicultural, multilingual, ad hoc force).

- In a number of NATO countries, conscription recently has been or is in the process of being abolished. Commanding professional soldiers will be different from commanding conscripts.

- Due to downsizing, a higher proportion of officer jobs is becoming critical and, as a consequence, there is less tolerance for poor officer performance.

- A number of societal concerns, such as equal opportunities for both genders and race/ethnic minority groups, influence the definition of what selection outcomes are considered acceptable.

- Changes in training goals have an impact on selection. Although weapon systems have reached new heights of sophistication, their operation is easier and no longer requires an extensive knowledge of the theoretical underpinnings. On the other hand, these high tech operations are faster, more integrated and more complex; they require fast thinking, outstanding information processing, and superior communication skills.

- Because of shrinking defense budgets, cost-benefit issues must be examined more closely.

Activities of the RSG

From its start in December 1997 till its last meeting in June 2000, the RSG's attention was focused on the achievement of two goals: the organization of a workshop on officer selection and the redaction of a report on the subject. Both activities were meant to share information and to foster a professional and scientific approach to officer selection. The workshop was held in Monterey, California (US) 9th – 11th, 1999. The Research and Technology Organization of NATO published the proceedings in August 2000 (Report RTO-MP-55 AC/323(HFM) TP/27). The present report is the final report of the RSG.

Structure of the report

The final report is structured as follows. After the introduction, an overview is given of the current officer selection practice. A detailed review of the systems used in the countries participating to the research and study group[1] is given and a summary is provided. Then the main results of a survey on officer selection are presented. This survey covers the current practice in nineteen NATO and non-NATO countries. The actual questionnaire is also included. Following the description of the current practice, the search for an ideal system is commented, a conceptual approach is developed, the qualities of an officer are discussed, a personnel selection primer is given and guidelines for test-use are highlighted.

Conclusions

The RSG recognizes the fact that officer selection systems are embedded in their national contexts. It seems not to be feasible nor desirable to develop and implement a unique system for the different NATO-countries.

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[1] The countries participating in the RSG 31 were Belgium, Canada, Denmark, France, Germany, The Netherlands, The United Kingdom and The United States.

Apparently different approaches can generate satisfactory outcomes. The RSG is convinced however that a re-examination of any national system in the light of the practice in other countries together with the scientific and professional guidelines developed in this report and reported at the RSG workshop, can significantly improve the outcome of the current officer selection practice. Considering the influence of the quality of the officer corps upon the armed forces, improving officer quality by striving for smarter selection systems is something that needs to be pursued.

la Sélection des officiers
(RTO TR-034 / HFM-023)

Synthèse

Au cours de l'histoire, différents critères ont été utilisés pour déterminer qui commanderait et qui mènerait les troupes au combat : la puissance physique, les connaissances militaires, la noblesse et la richesse, le pouvoir politique, les connaissances théoriques, les traits de caractère etc. Dans les armées modernes ce sont les officiers qui commandent; par conséquent, les futurs candidats aux postes de commandement sont déterminés par la sélection initiale des candidats au grade d'officier. Il est donc important d'examiner la procédure de sélection de ces candidats. Tel a été le thème central de ce groupe OTAN d'étude et de recherche (RSG).

Etant donné que le défi présenté par la sélection des officiers existe depuis des décennies, et sachant que les pratiques courantes dans ce domaine sont irrémédiablement ancrées dans les différentes cultures et traditions nationales, la question aurait pu être posée de savoir quel était l'intérêt d'un groupe de recherche sur la sélection des officiers. L'intérêt de cette recherche, à l'heure actuelle, réside dans le fait que beaucoup de choses ont effectivement changé :

- de nouvelles missions ont été créées depuis la fin de la guerre froide : des missions humanitaires, de maintien de la paix et de conciliation. L'accent n'est plus mis sur les conflits massifs de haute intensité mais sur des actions de moindre échelle imposant de nouvelles tâches aux officiers et leur obligeant d'adopter de nouveaux comportements (par exemple, favoriser la cohésion dans le cas d'une force d'intervention multilingue, multiculturelle *ad hoc*).

- La conscription a été abolie ou est en train d'être abolie dans de nombreux pays de l'OTAN. Le commandement de personnels militaires professionnels sera différent du commandement de conscrits.

- En raison de la compression des effectifs, de plus en plus de postes d'officier revêtent une importance critique et par conséquent, de moins en moins de tolérance est accordée aux performances de cette catégorie de personnels.

- La définition de ce qui est acceptable en termes de sélection est influencée par un certain nombre de préoccupations sociétales telles que l'égalité des chances pour hommes et femmes et les groupes minoritaires raciaux/ethniques.

- Tout changement au niveau des objectifs de la formation a un impact sur la sélection. Les systèmes d'armes ont atteint de nouveaux sommets de sophistication, et sont désormais plus faciles à utiliser, sans en posséder des connaissances approfondies. En revanche, ces techniques de pointe sont plus rapides, plus intégrées et plus complexes; elles nécessitent une réflexion rapide, un traitement de l'information très performant et une aptitude à communiquer hors pair.

- La diminution des budgets de défense impose un examen plus approfondi des aspects coûts-avantages.

Activités du RSG

Depuis sa création en décembre 1997, jusqu'à sa dernière réunion en juin 2000, les efforts du groupe ont porté sur la réalisation de deux objectifs : l'organisation d'un atelier sur la sélection des officiers et la rédaction d'un rapport sur ce sujet. Ces deux activités ont eu pour objectif commun de partager les informations et de promouvoir une approche scientifique et professionnelle de la sélection des officiers. L'atelier a été organisé à Monterey, en Californie (US) du 9 au 11, 1999. Le compte rendu de la réunion a été publié par l'Organisation pour la recherche et la technologie de l'OTAN (RTO), au mois d'août 2000 (Rapport RTO-MP-55 AC/323(HFM) TP/27). Le présent rapport est le rapport final du RSG.

Structure du rapport

La structure est la suivante: L'introduction est suivie d'un aperçu de la pratique courante en matière de sélection des officiers. [1]Une étude détaillée des systèmes utilisés par les pays participant au groupe de recherche et d'étude est présentée, ainsi qu'un résumé. Cette étude est suivie des résultats d'une enquête sur la sélection des officiers. Cette enquête porte sur les pratiques courantes en vigueur dans 19 pays OTAN et non-OTAN. Le questionnaire

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[1] La Belgique, le Danemark, le Canada, la France, l'Allemagne, les Pays-Bas, le Royaume-Uni, et les États-Unis.

effectivement employé est également inclus. La description de la pratique courante est suivie de commentaires sur la recherche d'un système idéal, une approche conceptuelle est développée, les qualités d'un officier sont discutées, un guide d'introduction à la sélection du personnel est présenté et des directives concernant la mise en œuvre dans le cadre d'essais sont données.

Conclusions

Le RSG constate que les systèmes de sélection des officiers sont ancrés dans leurs contextes nationaux individuels. Le développement et la mise en œuvre d'un système unique pour les différents pays de l'OTAN ne semble ni faisable ni souhaitable. Des approches apparemment différentes peuvent donner des résultats satisfaisants. Le RSG est, cependant, convaincu que le réexamen d'un système national donné, à la lumière des pratiques adoptées dans d'autres pays, associé aux directives scientifiques et professionnelles présentées dans ce rapport et commentées lors de l'atelier du RSG, peut apporter des améliorations au niveau des résultats de la pratique courante en matière de sélection des officiers. Compte tenu des conséquences de la qualité du corps des officiers pour les forces armées, il y a lieu de poursuivre l'amélioration de la qualité des officiers par le biais de systèmes de sélection plus sophistiqués.

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Chapter 1

INTRODUCTION

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In the course of history, different criteria have been used to determine who would command and lead troops: physical power, military skills, nobility and wealth, political power, academic knowledge, personality traits, etc. In modern militaries, commanders are officers: the initial selection of officer applicants determines who will be available to serve in command functions in the future. Therefore, it is important to examine how officer candidates are selected.

Many changes in the world order have had major effect on the role of the military in today's global society; with these changes have come changes in the role of the officer:

- New missions have emerged since the end of the Cold War, for example, humanitarian, peace keeping, and peace making missions. The focus has moved from massive, high intensity conflicts to smaller actions in which new tasks are required and new behaviour is expected from officers (e.g. to foster cohesion in a multicultural, multilingual, ad hoc force).

- In a number of NATO countries, conscription has been or is in the process of being abolished. Commanding professional soldier will be different from commanding conscripts.

- Due to downsizing, much of the redundancy in officer jobs has been removed, making the performance of individual officers more critical. As a consequence, there is less tolerance for poor officer performance..

- A number of societal concerns, such as equal opportunities for both genders and for different races and minority groups influence the definition of what selection outcomes are considered acceptable.

- Changes in training goals have an impact on selection. Although weapon systems have reached new heights of sophistication, their operation are easier and no longer require an extensive knowledge of theoretical underpinnings. On the other hand, high tech operations are faster, more integrated and more complex; they require fast thinking, outstanding information processing, and superior communication skills.

- Because of shrinking defence budgets, cost-benefit issues in selection must be examined more closely.

The purpose of NATO Research and Study Group 31 – On officer selection was to review officer selection and to present its findings. Meetings were held in Brussels, Ottawa, Paris, Amsterdam, and Copenhagen to discuss officer selection issues and to learn about officer selection systems in the host countries. The RSG used two methods to report the results of the group's work. The first method was to organize a NATO Officer Selection Workshop, which was held in conjunction with the 41st Annual Conference of the International Military Testing Association (IMTA), conducted from 9 to 11 November 1999 in Monterey, California. This workshop was a great success. It included more than 30 presentations from the RSG member countries and many other NATO and Partnership for Peace countries, and covered a broad range of topics. The proceedings of that workshop were published in August 2000[1]. The second method of reporting results was to produce the present paper.

The NATO Research and Study Group 31 – On officer selection reviewed officer selection in a number of ways. One way was to review, in detail, officer selection as it currently exists in the RSG member countries; each member was an expert on their own system and the RSG discussed the similarities and differences in depth. This practical discussion led to the discussion of an ideal, all-encompassing officer selection system. It was proposed that this ideal system could become the NATO standard for officer selection. However, it became readily apparent that officer selection was too well rooted in the cultures, traditions, and legal framework of the individual countries to make any recommendations for changes to well-entrenched systems.

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[1] RTO Meeting Proceedings 55 'Officer Selection'

The RSG did describe an ideal officer selection system because it serves two useful purposes. The first purpose was guidance for setting up a selection system. This is particularly relevant for the Partnership for Peace countries, who find themselves having to re-evaluate many of their institutions, including their militaries. The second purpose is to allow countries to review their own selection systems against an external standard, and to get an idea of other ways of conducting officer selection.

Another way of reviewing officer selection was to refer to the wealth of data contained in the officer selection survey gathered by the RSG Chair, Lieutenant Colonel Francois Lescreve. This survey covered some nineteen NATO and non-NATO officer selection systems. This variety of methods allowed for interesting comparisons and a means to identify unique methodologies. This survey is on going and the database is available to those who are interested in conducting further research.

The format of the report follows the development of the RSG discussions. In the first section, summaries of the systems followed in the RSG member countries are presented: these include Belgium, Canada, France, Germany, The Netherlands, the United Kingdom, and the United States. This is followed by a summary of these summaries, noting similarities and differences among the systems. Further comparisons are made from the data in the officer selection system survey. In the second section, conceptual issues in officer selection are discussed, including the search for an "ideal" officer selection system and a discussion of officer qualities. The third section is intended to give practical guidance in personnel selection. This section includes the "International Guidelines for test-use" adopted by the Council of the International Test Commission, which were endorsed by the European Federation of Professional Psychologists Associations' Task Force on Tests and Testing.

Chapter 2

CURRENT PRACTICE IN THE RSG COUNTRIES

NATO Research Study Group Member Countries
Officer Selection Systems

Reviewed by
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The following section gives detailed summaries of the officer selection systems of Belgium, Canada, Denmark, France, Germany, The Netherlands, the United Kingdom, and the United States. For the most part, these summaries provide some context for the country's officer selection system, including some historical or cultural background and the size of the country's military relative to the population. The summaries discuss the various officer entry programs and the officer selection process. These include descriptions of selection instruments such as tests, leadership exercises, interviews, fitness tests, and medical tests. Finally, the decision process for accepting officer applicants is discussed.

Current Practice of Officer Selection in BELGIUM

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1.   Overview of Officer Selection in the Belgian Armed Forces

According to the Belgian constitution, the King is the Commander-in-Chief of the Forces, but the Defence Minister is politically responsible for this department. To fulfil its task, the Armed forces consists of five large executive bodies: the Army, the Air Force, the Navy, the Medical Service and the Inter Forces Territorial Command (ITC).

At the end of the current restructuring, the Armed Forces will have a maximum of 39,500 personnel on active duty (the total population of Belgium is 10,000,000).

The sources of officer recruitment are as follows:

Type of Recruitment	Status	Main Characteristics
Normal recruitment	Career officer	These officers are entitled to a full career and can serve until retirement age.
Supplementary recruitment	Career officer	These officers are entitled to a full career and can serve until retirement age.
Special recruitment	Career officer	These officers are entitled to a full career and can serve until retirement age.
Exceptional recruitment	Supplementary officer	These officers have a limited career and can serve until retirement age.
Auxiliary recruitment	Auxiliary officer	Only for Air Force Pilots. Limited career and early retirement at the age of 45 years.
Short term recruitment	Short term officer	Two-year contract that can be extended three times for one year if younger than 25.

Normal recruitment looks for applicants who have finished their high school, which is typically completed at the age of 18 years. The bulk of the applicants receive training at the Royal Military School in Brussels. A limited number of applicants are sent to civilian universities or colleges, for example for medical school or the Nautical College. The applicants enlisted in *normal recruitment* can serve until the age of retirement (51 to 62 years, depending upon rank) and they can access all ranks. The applicants entering the Royal Military School belong to one of the Services and receive training in one of the two divisions: the *All Weapons* division or the *Polytechnics* division. *All Weapons* training lasts four and a half years and covers a wide range of topics in order to produce well-rounded officers. The *Polytechnics* training last five and a half years, and is the military version of civil engineer training.

Supplementary recruitment is only activated in cases where applicants from normal recruitment sent to civilian universities or colleges fail to pass their exams. For example, if an applicant is enlisted in 1998 to become a medical doctor and fails at the end of the first year (1999), it can be decided to enlist a new applicant the following year (2000) to replace the original one. The new applicant would be a student who has already succeeded in the first two years of medical training in order to keep the original recruitment plan. These applicants are also entitled to serve until the age retirement and can access all ranks.

Special recruitment aims at the enlistment of specialists who already have a college or university degree. These include, for example, medical doctors, psychologists, computer specialists or engineers.   These applicants are also entitled to serve until the age of retirement and can access all ranks.

Exceptional recruitment was created in the event that insufficient numbers were enlisted through normal recruitment. *Exceptional recruitment* has lower selection criteria than normal recruitment. The applicants enlisted through this recruitment become *supplementary officers* and not *career officers*. They can stay until

the age of retirement but they cannot access all ranks. They cannot be promoted to the rank of Major unless they become career officers, which is possible through special examinations.

Auxiliary recruitment exists solely for Air Force pilots. While it is possible to become a pilot through normal recruitment, pilots recruited through normal recruitment perform a broader range of duties, which include "ground" duties as well as flying duties. Pilots recruited through auxiliary recruitment mainly perform flying duties. Their career is limited to the age of 45 years and they cannot be promoted to the rank of Major unless they become career officers, which is possible through special examinations.

Short-term recruitment was created as a consequence of the suspension of compulsory military service in order to provide the Armed forces with a sufficient number of young officers. Applicants enlist for a period of two years. They can extend their military service for up to three one-year periods, however, they must leave the military before their twenty-fifth birthday.

Recruitment of reserve officers is currently under study. Present reserve officers were former active duty officers or draftees. With the suspension of compulsory military service, it will become necessary to examine other means of recruiting officers for the reserve.

A last form of recruitment is the so-called *Preparatory Division of the Royal Military School*. This is a one-year military school program that prepares applicants for admission to the Royal Military School. To enter the Royal Military School, graduates of this program have to go through the same selection procedures as applicants form civilian schools.

2.   The selection instruments

The following is the selection process for normal recruitment for the Royal Military school, which is the most representative procedure. The selection procedure consists of the following elements:

- the legal conditions
- the assessment of "Morality traits"
- the assessment of "Personality traits"
- the assessment of "Intellectual potential"
- the "Medical selection"
- the "Physical fitness evaluation"
- the examination of the first national language
- the examination of the second national language
- the examination of mathematics

The *legal conditions* necessary in order to apply to become an officer are: the candidate needs to have Belgian citizenship, have completed high school, and be younger than 26 years of age (31 for special recruitment).

For the *"Morality traits"*, the applicant must not have been convicted of a serious offense.

The *personality* of the applicant is assessed by means of:

a. Personality tests and questionnaires: These tests include the California Psychological Inventory, social anxiety tests, a self-description test, a performance motivation test, and the Least Preferred Coworker test. Personality questionnaires include incomplete sentences, a self-description and a self-evaluation. Different motivation tests are also given.

b. Autobiographic form: In this form, applicants are asked things about their background (for example, education, family life, and previous activities) and their motivation to become an officer.

c. Group observation task: Groups of five to seven applicants have to perform four tasks while being observed by two assessors. One task consists of giving a speech before the other applicants on an imposed topic. The next task is a leaderless group discussion in which the group has to organize the relief of foreign refugees who have survived a natural disaster. For the third task each applicant is made responsible for the placement of a special building (for example, a university or cultural centre) on the outskirts of a city. The task is designed in such a way that the candidates have conflicting missions and have to resolve the problem as a group. The last task is a practical exercise where the group uses metal tubes and connection elements to build the frame of an observation post.

d. Semi-structured interview: A psychologist or an officer who has undergone training in interviewing conducts the selection interview (this disparity in background is problematic with respect to standardization and assessment quality). Before the interview begins, the interviewer reviews all available data concerning the applicant (test results, medical profile, physical fitness score, and biographical questionnaire). In general, the interviewer was also one of the assessors for the group tasks. The elements which are addressed during the interview are: physical resistance, dynamism, dexterity, appearance, general aptitude, emotional stability, attitude towards discipline, responsibility, sociability, initiative, authority, decision making ability, and motivation. Each topic is scored and a summary score is computed. A commission composed of a senior officer, a psychologist and the interviewer reviews the personality data and gives a final score on a scale from 1 to 9. Applicants obtaining scores below 4 are rejected.

The assessment of *intellectual potential* is done by a combination of paper and pencil and computerized tests. The test battery includes a reasoning test, a spatial representation test, a verbal factor test, an organization test, and a memory test. The test results are integrated into one score, ranging from 1 to 99, which represent the applicants' intellectual potential. The Chief of the Personnel Division of the General Staff can impose a threshold in order to reject low scoring applicants.

The *medical selection* consists of the following parts:

- assessment of vision by an ophtalmologist
- assessment of nose, throat and ears by an
- otorhinolaryngologist
- analysis of blood and urine
- biometric measurements
- an electrocardiogram
- a full spine radiography
- a final clinical examination

A medical selection commission then decides on the medical aptitude of the applicant. Each applicant receives a medical profile through which non-medical personnel can know the medical suitability of the applicant for the different vacancies.

Physical fitness is evaluated by means of four tasks:

- riding an ergometrical bicycle. The applicant must keep a certain pace while the resistance is increased at regular intervals. The measure is the time that the applicant can keep up to the set rates.
- a shuttle run of four by 10 metres
- a balancing exercise on a balance beam
- a pulling task where the applicant has to pull an isostatic device as hard as possible

Each task is scored on a 20-point scale. To pass the tests applicants must score at least 8/20 on each task and 40/80 in total.

The *examination of the first national language* consists of two parts. The applicants are given a text to read for 15 minutes and are not allowed to take notes; they must then write a summary of the text. In the second part, the applicants must write a comment on this text. In the comment, a number of qustions have to be answered. In order to pass, the applicant must achieve at least 10/20. Belgium has three official languages: Dutch, French and German. The German community is very small and the military offers employment in Dutch and French only.

The *examination in the second language* can be done in French or German for Dutch speaking applicants and in Dutch or German for French speaking applicants. The examination consists of three parts. The first part is a translation from the first to the second language, and the second part is a translation from the second to the first language. In the final part, the applicant answers a number of questions from the previous text in their second language.

The material for the *basic mathematics exam* covers the last two years of the high school curricula in a program with four hours of mathematics per week. Applicants who apply for civil engineering in the Forces complete a supplementary exam based on a program with six hours of mathematics per week. A pass for an All Weapons applicant is 8/20, and for Polytechnics applicants it is 10/20

The medical, physical and psychological assessment is performed at the tri-Service Centre for Recruitment and Selection (CRS). This part of the selection procedure takes three days (not necessarily consecutive days):

Day 1	AM	medical selection
	PM	computerized testing
Day 2	AM	physical fitness test
		biographical questionnaire
		experimental tests
	PM	paper and pencil tests
Day 3	AM	group tasks
		vocational interests questionnaire
	PM	Interview

The examinations are taken at the Royal Military School at the end of June, when applicants finishing high school have completed their tests at school. The language examinations take one day and the mathematics examinations take two days.

3. The decision process

Normal recruitment of officers is organized annually. At the beginning of the year, the Minister decides on the number of officer applicants to be enlisted. After this, candidates are able to apply. They have to undergo the different elements of the selection procedure before mid-July, at which time decisions are made on who will be enlisted, in what service, and in what specialty. Basic training begins in mid-August.

The bulk of decisions made during the selection process are of the "go/no go" type. The applicants who meet all the requirements are ranked according to their results on the first and second language and mathematics examinations, using the following weights:

Examination	All Weapons	Polytechnic
1st language	6	4
2nd language	3	2
Mathematics	6	9

Available spaces are filled on the basis of the ranking. First, the highest ranked candidate is considered, and he or she gets the Service of his or her preference. Next, the second highest ranked candidate gets the Service of their choice. This process continues until the first choice of the applicant is no longer available; at this point the second choice is used, if there are still positions available. The method continues until all vacancies are allotted.

Current Practice of Officer Selection in CANADA

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1. Overview of Officer Selection in the Canadian Forces

While Canada is a large country, it has a small population (estimated to be just under 30,500,000 in 1999) and maintains a relatively small military, called the Canadian Forces. The Canadian Forces is made up of two main components: the Regular Force and the Primary Reserves. The Regular Force is Canada's standing full-time military service; while it is mandated at a strength of 60,000 members, as of November, 2000, the effective strength was approximately 57,430 members, of which approximately 13,100 were officers. The composition of the Canadian Forces reflects the linguistic make-up of the country, with approximately 27% of the Regular Force being Francophones and 73% Anglophones. The approximate strength of the Primary Reserve is 21,000. Where the Regular Force entails full-time, career oriented military service, the Primary Reserve predominately involves part-time military employment. Reserve members typically parade one or two evenings a week with a Reserve unit and participate in weekend exercises. Full-time employment is usually available in the summer; however, some Reserve members do serve on full-time contracts, and often augment the Regular Force.

Applicants to the Canadian Forces are processed at Canadian Forces Recruiting Centres, which are located in major cities throughout the country. Selection processing of Regular and Reserve Force officer applicants is the same, and trained Reserve officers are able to transfer into the Regular Force. In the 1999-2000 fiscal year, there were 1681 Regular Force officer applicants of which 595 were enrolled in the Regular Force. Overall, applications have declined every year from a high in the 1996-1997 fiscal year; however, figures for 1999-2000 are only slightly lower than for 1998-1999. In the 1999-2000 fiscal year there were 455 Reserve Force officer applicants. The files of suitable candidates are forwarded to the Reserve units to make an enrolment decision; 177 files were forwarded.

There are a number of Canadian Forces officer entry programs. The primary Regular Force entry program is the Regular Officer Training Plan. Approximately 380 officer candidates were forecast to be enrolled through this program in the 1999-2000 fiscal year; 321 were enrolled in the 1998-1999 fiscal year. This plan includes education at the Royal Military College or at civilian Canadian universities. The next most common means of entry is as a Direct Entry Officer. These applicants already hold a university degree or technologist diploma in a suitable discipline; 191 applicants enrolled as Direct Entry Officers in the 1999-2000 fiscal year. The Continuing Education Officer Training Plan is a program that allows applicants not possessing a university degree to be enrolled when there are not enough candidates through the "degree associated" production programs to satisfy annual production targets. Only 46 applicants enrolled under this program in the 1999-2000 fiscal year. The final type of entry program includes subsidized special education. This applies to such programs as the Medical Officer Training Plan and Dental Officer Training Plan, where medical and dental students can have up to the last three years of their program subsidized, followed by a period of obligatory service in the Canadian Forces. Six Medical Officers and eight Dental Officers were enrolled in these programs in the 1999-2000 fiscal year.

In addition to the officer entry programs, there are two main programs for in-service officer selection. The University Training Plan – Non-Commissioned Members selects junior Non-Commissioned members to earn a Baccalaureate degree and receive officer training. The Commissioning from the Ranks plan selects senior Non-Commissioned Members to serve as officers in selected occupations. Assessment for both plans is primarily based on the applicant's service employment. The remainder of this summary deals specifically with the assessment of civilian applicants, and not the in-service applicants.

Applicant processing follows the same general sequence for all officer entry programs. Processing is a blend of multiple hurdle and compensatory models. The first step is a check of basic eligibility requirements. All applicants must be between the minimum and maximum enrolment ages, must be Canadian citizens and must not have outstanding obligations to the judicial system; applicants who have engaged in sexual misconduct will normally not be enrolled. All applicants must be willing to comply with the Canadian Forces policy on discrimination, harassment and racism. If a candidate meets the basic eligibility requirements, they must meet

the standard on the Canadian Forces Aptitude Test. If they meet this standard, a reliability check is performed. This procedure includes a check of criminal records and a credit check. The applicant receives a medical examination and must meet military medical standards. If the applicant meets the medical standard, the applicant is then interviewed. The interviewer generates a report, in which the applicant is given a Military Potential rating and, if the program includes academic subsidization, an Academic Potential rating. Included in the interview is an assessment of drug use, which can affect eligibility for enrolment.

Following processing at the Canadian Forces Recruiting Centre, candidate files are sent to a centralized board. This documentation includes the selection interview report, two letters of reference and academic transcripts. For the Regular Officer Training Plan, documentation is also sent to the Royal Military College for an additional assessment of academic suitability. The purpose of the board is to compare all officer candidates on a consistent, national standard. The board produces a "merit list", which rank orders the applicants on the basis of suitability. The final selection decision made at the Canadian forces Recruiting Services Headquarters, which uses the merit list provided by the selection board. Prior to enrolment, all applicants must meet the Canadian Forces minimum physical fitness standard.

2. Officer Candidate Assessment

The selection interview is conducted by two Military Career Counselors whenever possible. The Military Career Counselor is typically a junior officer from a Canadian Forces operational occupation. The Military Career Counselor receives specialized training in recruiting procedures and will serve from three to five years at a Recruiting Centre before returning to an operational environment. In addition, specialist Personnel Selection officers are also employed at major Recruiting Centres.

The "Recruiter's Handbook" clearly lays out the assessment process. The handbook states that "the aim of the assessment process is to evaluate the applicant's potential for successful integration into the Canadian Forces, particularly during basic and initial (military occupation) training". The selection interview format is semi-structured. Applicants are assessed on the following attributes, which are considered as contributing to success in initial military training and employment:

- Academic Achievement,
- Accepting Criticism,
- Conformity to Rules,
- Initiative,
- Motivation towards the Canadian Forces,
- Oral Communication,
- Performance under Stress,
- Perseverance,
- Physical Endurance,
- Team-work,
- Learning Potential, and
- Leadership Skills.

The Recruiters Handbook describes the following as Leadership Skills: "willingness to assume responsibility for group activity; and performance; the ability to prepare and plan group activities; effective communication to a group; the ability to direct and organize others towards the completion of a tasks; the ability to stimulate high group morale and performance; the ability to resolve disputes and maintain group harmony".

Assignment to a specific occupation is also addressed in the selection interview. The Recruiter's Handbook lists the following areas to be probed when assessing suitability for a particular occupation:

- Motivation,
- Work experience,
- Education,
- Occupation knowledge, and
- Applicant interests, likes and dislikes.

These factors must be considered in assigning an occupation, and the Handbook summarizes the process by stating "particular care shall be taken to ensure that the applicant has a thorough understanding and realistic expectations of the occupation being considered".

3. Selection Instruments

3.1. *Canadian Forces Aptitude Test*

The Canadian Forces Aptitude Test is used as a screening measure to ensure officer candidates demonstrate a minimum level of cognitive ability. The test covers three domains: verbal ability, spatial ability, and problem solving ability. The applicant has the choice of writing either the English or French version of the test. Currently, the test is paper and pencil only and takes about an hour to administer; a computerized version has been developed but has not yet been implemented in the Recruiting Centres. The minimum standard is the twenty-fifth percentile relative to the officer applicant normative sample. Separate norms are maintained for the two languages.

3.2. *Medical*

All applicants must meet the medical standards for their respective occupation and the common enrolment medical standard for the Canadian Forces. Six factors are assessed, and these are referred to as a medical category. The factors are visual acuity, colour vision, hearing, geographical limitations, occupational limitations, and the air factor. The geographical factor is "based on the effects that environment, accommodation, living conditions and medical care available would have on the medical status of a member". The occupational factor reflects the limitations that physical or mental disabilities place upon a military member's capabilities and performance of duties. The air factor assesses medical limitations to serving as aircrew.

3.3. *Selection Interview*

The attributes described above in the officer candidate assessment are considered in giving an overall rating of Military Potential. The Recruiters Handbook defines the Military Potential rating as the "probability of initial military success". The rating is given on a nine-point scale, ranging from "1" being substantially below average to "9" being substantially above average. Applicants assigned a rating of "1" or "2" (below average) are considered unsuitable for enrolment. In addition, for programs that include academic subsidization, an Academic Potential rating is also assigned. This rating is also given on a nine point scale, and is based on the applicant's academic achievement.

3.4. *Fitness Test*

A physical fitness test was introduced in June 1997. Prior to enrolment, all applicants must meet the minimum physical fitness standard. The test is conducted primarily by contractors registered with the Canadian Society of Exercise Physiologists. The standards are given in the following table.

Test Item	Age	Men	Women
Push-ups	under 35 years of age	19	9
	35 and over	14	7
Sit-ups	under 35 years of age	19	15
	35 and over	17	12
Hand Grip	under 35 years of age	75 kg	50 kg
	35 and over	73 kg	48 kg
Aerobic Fitness		Equivalent to acceptable rating for 2.4 km run	

Aerobic fitness is measured using a step test, in which the candidate walks up and down a step apparatus at a regulated speed. The candidate's heart rate is measured at prescribed intervals to determine the fitness level. The step test equivalent is the time required to complete a 2.4 km run, with the acceptable and superior standard given in the following table.

Gender	Age	Acceptable	Superior
Men	Under 30 years	11:56-10:13	Under 10:13
	30-34	12:26-10:35	Under 10:35
	35-39	12:56-10:58	Under 10:58
	40-44	13:25-11:12	Under 11:12
	45-49	13:56-11:27	Under 11:27
	50-54	14:25-11:57	Under 11:57
	55 and over	14:56-12:27	Under 12:27
Women	Under 30 years	14.26-12.36	Under 12.36
	30-34	14.55-12.57	Under 12.57
	35-39	15.25-13.27	Under 13.27
	40-44	15.55-13.57	Under 13.57
	45-49	16.25-14.26	Under 14.26
	50-54	16.54-14.56	Under 14.56
	55 and over	17.24-15.27	Under 15.27

4. The Decision Process

All officer applicant files are reviewed by a central board. The board uses rationally developed protocols for each officer occupation which reflect the relative importance of key factors for success. The board members are usually members of the occupation for which the candidate is being assessed and an "honest broker" from another occupation. The board places the applicant on a merit list, from which candidates are selected in a "top-down" method.

5. The System Utility

Present research focuses on the ability of the candidate to pass the Basic Officer Training Course. This is one of the first training "hurdles" that a new officer candidate must complete when accepted by the Canadian Forces. The present research program includes testing of students on the course with various cognitive and personality measures, followed by the correlation of test results with course performance results. The Royal Military College conducts its own research on the factors that predict success, with a focus on academic success. Recently, an analysis has been undertaken of the Naval Officer Assessment Board (described in the next section) which was reinstated in 1996. Finally, validation of the Canadian Automated Pilot Selection System (described in the next section) is ongoing.

6. Special Interest Topics

6.1 Naval Officer Assessment Board

The Naval Officer Assessment Board replaces the selection board in the processing of naval officers. The Naval Officer Assessment Board follows assessment at the Canadian Forces Recruiting Centre. The Naval Officer Assessment Board is typically used in assessing naval officers who will proceed directly to military training, rather than to subsidized academic training.

The Naval Officer Assessment Board is made up of two main components: candidate orientation and assessment. The orientation component is intended to give candidates a realistic expectation of naval training and service. The most recent board included formal and informal information sessions with senior and junior naval officers, and ship tours. The assessment component includes the "Passage Planning Tests", which is intended to measure the cognitive abilities relevant to performing the duties of an entry-level naval officer. The assessment also includes a structured interview board, which is made up of senior naval officers. The stated purpose of the board is to assess "such elements as decisiveness, initiative and achievement motivation". The board also conducts a file review, which evaluates the candidate's background and experience, "addressing such factors as employment history, educational achievement and learning ability".

6.2 Air Crew Selection

Aircrew selection is an additional step in applicant processing which follows assessment at the Canadian Forces Recruiting Centre; the results are central to the final selection board decision. Air Navigator applicants write a battery of five cognitive tests, which require a total administration time of two hours.

Pilot applicants are assessed using the Canadian Automated Pilot Selection System, a single engine light aircraft flight simulator. The Canadian Automated Pilot Selection System syllabus consists of four sessions, each of approximately one hour duration. Over the course of each session, the system monitors and records the output from 10 flight instruments twice per second. The resulting 250,000 data points are converted into Summary Measures, which research found to be predictive of outcomes at Basic and Primary flight training. The Summary Measures assess the following broad areas: accuracy in maintaining prescribed flight parameters; speed of response to errors/warnings; variability in performance; smoothness of operation and avoidance of over-corrections; and, co-ordination of flight controls.

Current Practice of Officer Selection in DENMARK

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1.   Officer Selection in the Danish Armed Forces

Denmark has a compulsory military service and Danish defence relies on mobilization. In peacetime, the active forces are a mixture of commissioned officers, professional noncommissioned officers (NCOs), soldiers, conscripts (officers, NCOs and privates) and civilians. The population of Denmark is 5,310,730 (1999).

Personnel (approximate figures for 1999)	
Officers	4170
Professionals (NCOs and privates)	13012
Conscripts	7925
Civilians	9103
Total peacetime	34210
After mobilization	81200
Home Guard	64000

Psychological selection of officer candidates in Denmark started shortly after the foundation of the Danish Armed Forces' Psychological Division in 1952; the division is now a part of the Danish Defence Centre for Leadership. The Danish officer selection procedure is an assessment centre and had its origins in the British War Office Section Board (WOSB) system, introduced in Great Britain during World War II. The WOSB combined paper and pencil tests with observation of the candidates in group situations and individual interviews. The WOSB model was introduced in Denmark in 1952 and has, of course, been modified since then. The use of group situations has been greatly reduced; today, it is primarily a leaderless group discussion. Psychiatrists have never been used Denmark for this task; most of the investigative work is done by trained military psychologists. The tests are, with few exceptions, of Danish origin, constructed by the Psychological Division, and have been revised several times.

There are three separate officer academies in Denmark (Army, Navy and Air Force). There are minor differences between the selection procedures for these three academies. Pilot training, which in Denmark includes officer training, has special admission requirements and applicants go though some simulation-based psychomotor tests. In 1999, the Danish Armed Forces decided to purchase the computerized test battery from the RAF. The Danish officer selection tests (described below) have been computerized and incorporated into this system. The new system will be used simultaneously with the old system to establish Danish norms. The new system is intended to be put into operation in 2001. The following description deals with the common elements in the procedures of the three academies.

Candidates for the officer academy in Denmark may enter the Armed Forces in one of the following ways:

- as a conscript
- as an enlisted private
- as a reserve officer
- as a directly recruited officer candidate trainee

Whatever the actual recruitment avenue, a certain amount of systematic selection processing will have already taken place, either at the draft station or at the Armed Forces Recruitment Centre. These initial selection procedures include medical and physical testing and varying amounts of psychological testing and interviewing. Therefore, a certain amount of pre-selection will have taken place.

There are about 1000 officer applicants each year and the officer academies have a total intake of about 220 cadets per year. Applicants should be undergraduates and they must have qualified for training as NCOs; if they are already NCOs, they must have completed their NCO training successfully and have performed for some period of time to the satisfaction of their superiors. Other admission requirements are:

- 18 to 25 years of age
- Danish citizenship
- a general certificate or equivalent with good grades in Danish, English and mathematics
- a strong constitution
- be at least 157 cm tall without shoes
- be able to pass a physical fitness test (run at least 2300 m in 12 minutes and pass a muscular strength test)
- be able to pass the officer selection procedure

The applicants are evaluated through the following procedure:

- intelligence, ability, and knowledge tests
- a leaderless group exercise
- a short psychological interview (30 minutes)
- a long psychological interview (60 minutes)
- a conference where the psychologists reach agreements about the evaluation of the
- candidates
- physical fitness test
- an interview by an officer from the Officers Academy
- the selection board

2. The officer profile

Some of the important personality traits that are assessed in officer applicants are:

2.1. *General personality traits in the officer profile:*

Indications of undesirable mental disorders:

- mental suffering
- adjustment difficulties
- irrational/incomprehensible behaviour
- unpredictable behaviour
- loss of control
- inexpedient originality and unconventionality
- repulsive appearance
- offences against regulations and standards of behaviour

Indications of desirable mental health:

- positive and realistic self-concept
- goal-directed behaviour
- independence
- realistic perception and interpretation
- personal growth and self-realization
- social competence and energy

2.2. *Specific personality traits in the officer profile*

Fitness for study:

- intellectual capacity
- knowledge/proficiency
- motivation for studying

Leadership potential:

- analytical power
- judgement/discernment

- breadth of view
- initiative
- energy
- perseverance
- flexibility
- personal power
- resolution
- ambition to lead
- ability to co-operate
- sensitivity to other people/empathy
- situational awareness/alertness to social environment
- ability to communicate
- self-confidence
- assertiveness
- humour
- stress resistance
- potential for further personal development

As the candidates are about 20 to 24 years old when they apply for the officer academy, the development of their personality has not finished. The target of the psychologists is to evaluate the potential for personal development and growth in the context of military service.

3. The selection instruments

The first step in the selection procedure is *psychological testing*. A battery of tests are used:

- Intelligence tests: logical-abstract reasoning, verbal skills, numerical skills and spatial reasoning
- Mathematics test: arithmetic and mathematical skills on an undergraduate level
- Language tests: English and Danish grammar, vocabulary, and text understanding
- Technical/mechanical comprehension test:
- understanding of technical and mechanical matters
- General knowledge test: cultural, political, historical, and scientific knowledge
- Personality test: self-report questionnaire

If the applicants do not perform up to the standard on these tests (except for the personality test, which is used by the psychologist to make hypotheses for the interview), they are excluded from further processing. The "surviving" applicants go on to *the next step* in the selection procedure, which contains the following elements:

- *A leaderless group exercise* (90 minutes) supervised by the three psychologists attached to each batch of six candidates. In this group exercise, the candidates are assessed on their ability to co-operate, their social skills, their sensitivity to other people, their energy, and their initiative.
- *A short psychological interview* (30 minutes), focussing on military experiences.
- *A longer psychological interview* (60 minutes) about upbringing, schooling, job experiences, interests, social relations, motivation and career intentions

Each candidate is interviewed by two psychologist; one for the short interview and one for the long interview. The psychologists have access to all test results and other information on the candidate. After the interviews, the psychologists discuss the case of each candidate until consensus is reached. The psychologists evaluate the candidate's personality to see if it will fit the officer profile.

4. The decision process

The end product of the psychological selection process is an approximately three quarter page verbal personality description and suitability evaluation, as well as quantitative ratings. The targets of the psychological assessment are twofold: to predict success in academic training (*the training prediction*) and to forecast how well the candidate will be able to perform as an officer after graduation from the academy (*the career prediction*). The results of the psychological assessment are presented to the selection board. The chairman of the selection board is an officer, appointed by the Army, Air Force, or Navy Command. Typically, the chairman will be the commander of the Officer Academy or his second-in-command.

Together with the results from the tests of physical proficiency and the ratings from the candidates' military service, the selection board will use the psychological report as the basis for the final evaluation. The chairman of the board makes the final decision. He can decide against the psychological report; this happens in only a few cases, for example, when the ratings from the candidate's military superiors seem to contradict the psychological evaluation.

5.   The system utility

The attrition rate from the academies is very low, less than 10 %, which is less than what is seen in most civilian training and education centres such as universities, nursing schools, or the police training school. This is taken partly as proof of the effectiveness of the selection procedure and partly as proof of the effectiveness of the education at the officer academies. Data from the selection process are recorded in order to compare these data with the examination results of the cadets and to evaluate the validity of the measurements of the selection procedure.

An investigation of the predictive validity showed that it is possible to forecast the examination results of the officer training with a relatively high precision. The investigation included four classes from the three Officer Academies, for a total of 489 cadets. By comparing the actual examination results with different data (previous examination results and results from the selection tests) from the selection procedure the following correlation coefficients were found:

Selection data	Correlation coefficent
Examination result from NCO training	0.30
Upper secondary school leaving examination	0.28
IQ test (verbal, mathematical, spatial and analytical)	0.30
IQ test (logical/abstract reasoning)	0.25
Danish spelling test	0.22
Danish vocabulary test	0.24
German knowledge test	0.10
English grammar and vocabulary test	0.26
Mathematics test	0.35

Through a multiple regression analysis it was possible to calculate a prognosis for the examination result from the Officer Academy. The multiple correlation coefficient with the actual examination result was 0.57 for those who completed officer training. If all the rejected attendees had had the possibility to get an examination result, the correlation for all attendees would be a little higher; correcting for this restricted range resulted in an estimated correlation of 0.64.

To test the validity of the *career prediction*, a follow-up study was done on all commissioned army officers trained from 1953 to 1963. The criterion used was whether the individual officer, 25 years after completion of officer training, had or had not been promoted beyond the rank of major. On average, 32% of these officers were promoted to Lieutenant Colonel. The table gives the proportion of officers with a given psychological assessment promoted to Lieutenant Colonel.

Psychological Assessment and Promotion

	Psychological Assessment							
	2-3	4	5	6	7	8	9	Total
Number of officers	17	63	89	84	75	33	7	368
Percent Promoted	24	19	27	29	40	55	57	32

The table shows that the promotion percent rises with increasing psychological assessment. Only the 17 officers who, despite low psychological assessment (2 = "unfitted", 3 = "not very fitted"), were admitted to the Officers Academy had a higher promotion percent than expected. With these data in mind, there are no strong reasons for making any radical changes to the psychological assessment procedure.

Current Practice of Officer Selection in FRANCE

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1. Overview of the French Military Selection Procedure

The French president, by the constitution chief of the military, made the decision in February 1996, to change from a mostly conscripted to a completely professional military.

The military is now in the middle of a complete change of system, including increasing the number of professional soldiers, which should be completed by 2002.

The selection systems will not be entirely transformed. In the three branches of the military and the Gendarmerie, the selection process is nearly the same.

There are *four major entry programs*, which each count for about a quarter of new entries.

1.1 Direct entry

This is the most prestigious program. Selection is made after an academic competition, and also includes sports trials. This program leads to acceptance at the service academies: Saint-Cyr, l'Ecole Navale, L'Ecole de l'Air and l'Ecole Polytechnique. Applicants must be between 17 and 22 years of age on the first of January in the competition year. The academies have highly competitive entrance standards, but once accepted students have a low rate of loss. The first three academies accept approximately 320 to 350 new officer cadets in total per year.

The service academies give students the opportunity to develop their knowledge in military and cultural subjects. The Polytechnique is different because it is mainly oriented towards the civilian sector. The academies offer three-year programs leading to an engineering degree or a university degree. The officer cadets are ranked according to their aptitude and results in the different subjects, and are able to choose military specialties according to their ranking. Direct appointments are available to professionally qualified personnel such as doctors, lawyers, and computer engineers.

1.2 Semi-direct entry

Selection is made from NCO candidates and officers on short term contracts between 22 to 30 years of age. Selection is based on military assessments, and military and sports trials.

1.3 Late entry

Selection is made from senior NCO candidates between 30 to 35 years of age, typically at the rank of Adjudant and above. Candidates are evaluated on their military record and must pass an examination on military subjects. They are interviewed on career issues and choice of military specialty.

1.4 Contract officers (officier sous-contrat; OSC)

There are two types of OSC officers, OSC specialists and OSC general officers. The OSC specialists include occupations such as doctors, lawyers, and civil engineers. The OSC general officers serve in first-line leadership roles such as platoon commander. Applicants must be between 22 to 28 years of age. There are two types of contracts, short and long term. The short-term contract is for a period of one year and can be renewed for up to five years. The long-term contract is for a period of eight years and can be renewed for up to 20 years.

2. Future Developments

In general, aptitude tests are not used for officer selection, with the exception of pilots and some specific assignments in the Navy. The military is preparing a new system that would include psychological and motivational assessment by testing and interview. These systems are in different stages of development in the different branches of the military:

Army: a study is under way for direct entry officers and a new system will be in place by 2002.

Navy: changes have been made in the selection of certain specialist occupations, for example, aircraft carrier pilot. Research is continuing in other naval occupations.

Air Force: changes have been made in pilot aptitude testing only.

Gendarmerie: research has concentrated on assessing emotional stability in the selection process.

The main difficulty in implementing such a system is that selection for the military is a part of the overall selection for the civil service, and must follow the civil service selection system, in particular for career officers. For military personnel under short term contracts (including soldiers, NCOs; and officers), there are no such constraints.

Current Practice of Officer Selection in GERMANY

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1.   Review of the German Selection System

After the end of World War II, Germany did not have any armed forces of its own for a period of ten years. Military officer selection, for the most part, still takes place according to principles that were introduced in 1955, which had the objective of preventing, as much as possible, any misuse of the armed forces. Only the careers of specialist officers, which were introduced much later, are governed by other rules.

The first applicants for commissioned service to be tested for aptitude during the establishment of the Federal Armed Forces (FAF) were former officers of the Wehrmacht, whose ability to lead military units was usually beyond any doubt because they had already sufficiently proven their ability during the war. Aptitude tests did not, therefore, initially focus on abilities the candidates needed in order to meet certain performance requirements, but on personality traits, attitudes and motives that had been declared selection criteria for political and moral reasons. By filling in questionnaires and talking to examiners in interviews, applicants had to prove that they were prepared, without any reservations, to uphold the values of the new democratic Constitution and to treat their subordinates as "citizens in uniform". The guidelines for officer selection applicable at that time, incidentally, were reminiscent of the classical educational ideal of "*mens sena in corpore sano*". It seemed that there was no demand for much more than a sound mind in a healthy body because elites of all kinds had fallen into disrepute due to the Nazi ideology.

After the first teams of instructors had been accepted for service, more and more young men without prior military service applied; they had to be tested not only for a democratic attitude, but also for the basic ability to learn and discharge leadership tasks. The aptitude test methods were supplemented accordingly, and repeatedly adapted to the changing requirements during the following years. Nevertheless, the following principles have largely remained unchanged:

a. Centralized Selection Procedure:

The selection procedure for applicants for commissioned service is handled by a single central agency for all armed services and functional areas.

Exception:

Every armed service has its own procedure for the admission of qualified noncommissioned officers to the career of "officer specialist" (with captain being the highest rank).

b. Uniform Selection Criteria:

General aptitude for commissioned service is a requirement for both the acceptance of civilian applicants and the admission of military personnel to the career of line officer or of medical officer. In addition, applicants for flying service, whose general aptitude has already been recognized, must pass an additional specific fitness test at the Air Force Institute of Aviation Medicine in Furstenfeldbruck. This requirement applies to pilot applicants in all three armed services.

c. Holism:

A summary assessment is given for all of the applicant's relevant aptitude requirements. There is no standard algorithm for determining the weights for combining different sources of aptitude data.

d. Commission Principle:

The applicant's aptitude, or lack of it, is established in a unanimous vote by three persons with different educational and experiential backgrounds. This is supposed to prevent the risk of placing too much weight on any specific aspect of aptitude, which can happen due to the large amount of discretion permitted by the principle of holism.

Of the current 333,000 FAF service members, 37,000 are commissioned officers. To maintain this level, approximately 2,700 officers need to be replaced every year. In 1998, the distribution of young people accepted for commissioned service were as follows:

	Line officers	Medical officers/ Military music officers	Officer specialists
Persons without prior military service and service members (conscripts or temporary career volunteers	1,763	233	-
Noncommissioned officers	15	-	374
Reserve officers and other reinstated personnel	227	-	-
Personnel with special civilian qualifications (e.g. lawyers, doctors)	17	38	-
Total	2,022	271	374
Actual strength of commissioned officers	24,200	2,800	10,000

The following deals with officer candidates, who are referred to in the first line of the above table, i.e. those who start their officer career at the lowest rank. Two thirds of them are recruited from civilians attending school, shortly before they qualify for entrance to university or technical college. The rest of the candidates are recruited from soldiers who are either serving a ten-month period as conscripts or who have volunteered for two years or more of service. Some candidates are NCOs or reserve officer candidates. For those willing to enlist for at least twelve years, the Federal Armed Forces will subsidize a university degree at one of the FAF Universities at Hamburg or Munich; medical studies can be subsidized at other universities.

The supply/demand ratio (total; 12,500/2,000 = 5.7:1) varies significantly between the different armed services and functional areas. The number of applicants per training slot is most favourable in the medical service (11.6:1), but this is because of the high proportion of female applicants (65%). For line officers, the Air Force and the Navy (with ratios of 6.7:1) have problems finding line officers in only a few functional areas. The Army (with a ratio of 4.3:1) must, in some branches, accept applicants with the lowest acceptable level of aptitude, and can still not satisfy all of its demands. The centralized, uniform selection system applicable to all armed services has the advantage that it is easier for applicants to change between the armed services and functional areas. In 1998, during the selection process about 30% of all officer candidates changed their mind at least once about their original assignment preferences specified in the application forms.

The selection procedure is handled by the Centre for Testing Applicants for Commissioned Service (Offizierbewerberprüfzentrale, or OPZ), which is a part of the FAF Personnel Officer (Personalamt der Budeswehr), located in Cologne. The OPZ has a maximum testing capacity of 7,500 applicants per year. If there are more applicants, their number is decreased to the maximum capacity by a pre-selection based on school reports and on test scores from local recruiting centres. The OPZ assesses two groups of 85 applicants each per week. Usually, every Sunday and Tuesday afternoon two officers give a lecture on the most important aspects of the military professions and training and about courses of study at an FAF university. For successful applicants, tests last about two days and the programme usually ends on Wednesday or Friday, with the planning of the details of their enlistment.

2. Officer Profile

Article 37 of the Legal Status of Military Personnel Act provides the legal basis for the selection of officer candidates. It outlines the mission to establish the fitness of "character, mind and body", i.e. to assess the general aptitude for an officer career in any of the services. Apart from special requirements for certain branches, there are general requirements that every candidate should meet. The Ministry of Defence has never defined this vague concept of "general aptitude" or given precise instructions for the selection of candidates, but has listed the following eleven aptitude factors which are to be assessed and rated on a seven point scale:

- conscientiousness
- leadership potential

- social competence
- style of expression and communication
- judgement, decisiveness
- learning and achievement motivation
- stress resistance
- reasoning
- professional and career orientation
- physical fitness

These aspects of suitability are not listed according to priority, and there are no instructions on how to weight them or evaluate different profiles; scores are simply summed up.

More important than the score is the "qualification degree" or "degree of aptitude" for successfully completing officer training and performing successfully at the lowest officer rank:

- most suited
- well suited
- suited
- unsuited

Applicants are mainly selected with regard to their "general aptitude" for an officer career. All officers are selected to be leaders, and despite their different assignments they have to meet some common requirements. With respect to the checklist of 11 aptitude factors, every applicant must meet a minimum standard. Although it is not exactly defined, it is assessed with a fairly high inter-rater reliability.

There is little doubt that the concept of "general aptitude" is very useful for the purpose of negative selection, i.e. for the identification of applicants who are "not suited" for officer training. There is a question of whether it is also a useful concept for the purpose of positive selection. Traditionally, the German officer is not a specialist, but a generalist. After being trained for a certain rank level, he is expected to cope with any assignment at this level in his branch. Officers who want to reach the rank of general must be willing and able to take on a great variety military assignments in a short period of time. What is needed for success is a high degree of adaptability and flexibility. In the German system of personnel selection and development, someone who is a "jack-of-all-trades" has a better chance of success than someone who is highly, but narrowly, gifted.

3. The Selection Tools

The examiners use the following sources of information:

- The *applicant's personnel files*, which includes a curriculum vitae, school reports, efficiency reports and personal data. Additional questionnaires give information about the applicant's background, hobbies, and self-image.

- *Information about intelligence and other relevant capabilities* (e.g. concentration, mathematical knowledge) is gained by psychological tests.

- A *short essay*.

- An *interview* enables the panel members to identify and assess important personality traits which relate to the requirements of the officer profession

- A *short lecture*, in which the applicant has to prepare and present a subject before other applicants and the panel. This shows the applicant's range of ideas, linguistic skill, and ability to speak freely.

- A *round table discussion*, in which three to four applicants develop ideas in an open discussion. This test permits the assessment of mental and personality factors.

- A *group task* in which the applicants jointly carry out a given task, e.g. prepare a planning document or an action plan.

The applicant's physical fitness is established by a medical examination and a physical fitness test.

4.   The Decision-making Process

The criterion of "general aptitude for commissioned service" is, on the one hand, dichotomous in principle, i.e. an applicant is either "suited" or "unsuited" (go/no go). On the other hand an additional distinction is drawn between the degree of aptitude, using the ratings "mostly suited", "well suited" or "suited".

The assessment of the general aptitude of applicants is delegated to ten commissions (selection panels) which are responsible for eight to nine applicants per run. Every commission consists of an officer in charge (usually a former battalion commander), a captain (usually a former company commander) and a certified psychologist. Each member has one vote.

In an advisory talk, the applicant is counseled about training, particularly university studies, and future assignments. The general aptitude for commissioning training and the ability to study are different areas of assessment. In the case of applicants with a university or technical college qualification, the test report will also contain a statement on the recommended course of study. In principle, every applicant who enlists for a minimum of 12 years and whose training also includes university studies can choose their area of study from the courses offered. However, because of the limited number of places in some courses of study, applicants are required to give at least two alternative choices. Changes can also be made during the officer training courses at the Officer Schools.

If there are more applicants for certain services, branches or subjects of study than are required, a top-down "selection of the best" will be made. On the basis of the aptitude test results, an order of suitability will be established. Applicants who have been assessed as "well suited" or even "most suited" are normally enlisted with specifications about to time, place and unit given the day after the test. Applicants with a lower degree of suitability have wait until all the other applicants who want to be enlisted at the same time for the same service have been tested.

Applicants wishing to enter the aviation service undergo additional tests at the Air Force Institute of Aviation Medicine. This includes assessment of their psychological fitness for flying and medical fitness for military flying duties. After this, OPZ decides on their enlistment.

Current Practice of Officer Selection in THE NETHERLANDS

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1.   Review of the Dutch National Selection Systems

Compared to most other countries, the Netherlands is a relatively small country. It has a total land surface of 41,000 km^2. The distance measured from the capital, Amsterdam, to any point within the Netherlands is no more than 200 km. The population is 15,000,000. The Netherlands, together with six small islands in Caribbean, forms the Kingdom of the Netherlands. These islands have their own autonomous governments, but the Netherlands are responsible for their defence.

The Royal Netherlands armed forces consist of the Navy, Army, Air Force and the Marechaussee (military police). Together, the armed forces have 56,500 military personnel and 18,000 civilians. In 1996, conscription was abolished. From that date, the armed forces employ only voluntary personnel.

The Netherlands are currently experiencing great economic growth. Business and industry are in need of labour, of which there is an acute shortage. In addition, the elderly population is increasing. These factors make the recruitment of military applicants more difficult.

The Dutch population has a neutral attitude towards the armed forces. During the period that conscription was instituted, the armed forces were not seen as a popular employer. Since enlistment has become voluntary, a military career is looked upon as a job like any other. Military personnel have no special status in the community.

The Netherlands have two military academies where one studies to become an officer. One is the Royal Institute for the Navy (KIM), and the other is the Royal Military Academy (KMA), which trains officer candidates for both the Army and Air Force. The Marechaussee recruit their officers from the ranks of the officer candidates of the other armed forces. The military academies do not have an academic status, but are institutes for higher professional learning. Officer status is achieved after three years.

Both academies need 100 students each per year. To achieve this, at least 1,000 applicants are needed. In addition, a total of 50 pilots are needed for the three armed forces. During the selection phase, only two percent of the applicants for the Air Force are deemed suitable for basic flight training.

In 1995, due to budgetary cuts and for efficiency reasons, the Dutch government decided that the selection of Dutch military personnel should be centralized from the four separate organizations into one single organization: the Dutch Defence Organization for Recruitment and Selection (DWS). This organization is now responsible for the recruitment and selection of all military personnel, except for pilots. The officer selection procedure of the four separate armed forces has been amalgamated since 1996. Since 1999 selection has been centralized in Amsterdam.

2.   The Selection Procedure for Officers

- Administrative pre-selection
- Day 1: Psychological examinations (tests, personality inventories and questionnaires)
- Day 2: Psychological examination (interviews)
- Medical examination
- Physical fitness tests for Army and Marine Corps officer candidates
- Practical Officer Selection Test (POST) for Marine Corps officer candidates
- Computer Simulation Tests (GVSS) and Practical Flight Tests (PVS) for all pilot candidates
- Selection Admission Board

3.   The officer profile

There is no standard profile for officers. Each of the four services has its own distinctive profile, which vary greatly in length and detail. In the psychological examination, the following profile is accepted as standard for the selection of officers:

- stability in general, emotional balance
- vulnerability to stress and prolonged strain
- leadership and problem solving capabilities
- suitability and aptitude for missions all over the world
- predisposition to home sickness
- aptitude for working in a team system, social and technical skills
- flexibility, adaptive aptitude, coping styles
- communicative and social skills
- motivation; knowledge of the filed of employment and relevant duties
- intelligence (general mental ability)
- endurance, attitude and towards work

The assessment of officers is not only to ascertain if candidates can pass the requirements of the two academies; later functioning as an officer is also taken into account.

4. The selection instruments

a. Administrative pre-selection

The minimum requirements are:

- Dutch citizenship
- Height: males 1.65 m; females 1.60 m
- Relevant schooling, with at least Dutch, English and mathematics.

For some functions physics is required. Approximately four percent of the applicants do not fulfil these requirements.

b. Psychological examination day 1: tests and personality inventories, questionnaires and capability tests:

- verbal reasoning
- non-verbal reasoning
- logical arithmetic test
- technical aptitude tests
- social functioning
- neuroticism
- extroversion/introversion
- flexibility
- leadership capabilities/dominance
- acceptance/tolerance
- self-esteem
- impulsiveness
- achievement orientation

c. Psychological examination day 2: Interview:

- social functioning
- discipline
- psychological stability
- achievement orientation
- sportsmanship
- suitability for missions all over the world
- leadership capabilities
- motivation for specific branch or field of employment
- knowledge of the desire filed of employment

d. Medical examination:

- visual and auditory examination
- laboratory examination (blood and urine samples)
- rontgenogram where necessary

- medical examination by a doctor
- a short interview with a doctor

e. Physical fitness tests:

- measurement of maximum jumping abilities
- measurement of static muscular strength
- bicycle test (ergometer)

f. Practical officer selection tests of officer candidates for the Marine Corps

This consists of a two-day assessment procedure which includes:

- rope climbing
- carrying another person for a specified time and distance
- general fitness tests
- delivering a short lecture
- a cross country run
- solving problems in a group
- an obstacle race
- leadership tests

g. Computer simulation tests for pilot candidates

Candidates have to execute six flight simulation tests during a four day period. Results and learning speed are judged. Those that pass go on to the practical flight test. This is a five day period in which the candidate, under supervision of a flight-instructor, runs through an accelerated basic flight training program. Again, the obtained results and learning speed are judged, as well as contraindications like airsickness, fear of flying and poor g-tolerance.

5. Utility of the selection system

Several research studies have validated parts of the present psychological selection procedures against results obtained at the two academies. The correlations have been low. One of the difficulties is the absence of appropriate validation criteria. Complicating the research is the fact that the individual academies have their own separate selection processes. An exception is the selection and attrition of pilots since the introduction of the flight simulation test (GVSS) and the practical flight test (PVS). With these tests, the loss in flight training has been minimized, especial in F16 student pilots training in the USA.

6. The decision process

Administrative pre-selection: around four percent of the applicants do not meet the requirments.

Psychological examination day 1: all applicants go on to day 2.

Psychological examination day 2: for each of the nine factors a four or five point scale is used. Each branch of the armed forces determines their own cut-of scores. Around 30 percent of the applicants do not pass the interview phase.

Medical examination: 10 percent of the applicants do not pass this phase.

Physical fitness test for the Army and Marine corps: between 10 and 25 percent are dismissed.

Practical Officer Selection Test for the Marine Corps: this test results in an advice given to the Selection Admission board.

Computer flight simulation test: about 40 percent are not suited

Practical flying test: about 30 percent are not suited

Selection Admission Board: the board prefers to get 1.5 times as many applicants for the available contracts.

Current Practice of Officer Selection in the UNITED KINGDOM

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1.   The British Army

Most officers are recruited by means of a complex network of school and university liaison officers. Their role is to act as a focal point for those interested in an Army career. School liaison officers, in particular, are proactive in identifying potential candidates and nurturing their interest. Generally speaking, officer candidate recruitment is centred around the individual Regiments and Corps. All Candidates attending the Regular Commissions Board (RCB) are usually sponsored by a Regiment or Corps. Those who cannot obtain Regimental support are still entitled to apply and can be sponsored directly by, for example, a university liaison officer.

All candidates are entitled to two Regimental familiarisation visits. Here potential candidates are interviewed and often given short detachments with the regiment, which serves the purpose of providing a realistic job preview. The visit also gives the Regiments the opportunity to see potential candidates in an appropriate milieu. Candidates thought to be unsuitable might be discouraged but also might be to another Regiment or Corps that might be more suited to their interests. However, all candidates have a right to enter an application even if they cannot obtain a Regimental sponsorship. Regiments take a great interest in their candidates.

Following a formal application the next stage is that all candidates must attend a RCB Briefing. The purpose of the Briefing is not primarily a selection process but is designed to familiarise all potential candidates with the type of activity they will encounter tat the RCB main board and thus create a level playing field for all candidates.

The candidates undergo an interview, undertake physical fitness assessment in the form on an obstacle course and gain some experience of practical leadership exercises.

During the RCB briefing, the Officer Intelligence Rating (OIR) Tests are administered. The OIR consists of three computer administered psychometric tests:

- The ARCOM test, which is a more advanced version of the BARB soldier recruit tests. It is composed of 4 sub-tests and is designed as a measure of general (fluid) intelligence.
- A numerical reasoning test designed to measure a candidate's ability understand and draw inferences from numerical data presented in graphical and tabular form.
- A verbal reasoning test designed to measure a candidate's ability to comprehend and draw inferences from written information.

Although the main purpose of the briefing is familiarisation, those candidates who fail to meet a minimum score on the OIR are eliminated from further consideration. Candidates are also graded on their potential likelihood of success at the main board. Some candidates are actively discouraged, others are counselled on potential weaknesses and are told to delay their application. However, candidates who meet the minimum OIR

but are discouraged for some other reason still have the right to proceed to the main board. Results of the final boards are shown below:

	Attended	Cat 1: Ready for RCB	Cat 2: Delay	Cat 3: Success Unlikely	Cat 4: Unsuitable
May-Aug 95	669	398	201		67
Sep 95 - Mar 96	1326	679	238	295	111
Totals	1995	1077	439	295	178
Subsequent Pass at RCB		57%	60%	38%	N/A

The next stage is attendance at the RCB main board. This is a three-day assessment centre based on the original WOSB concept. It is a common procedure for all officer candidates including in-Service candidates, although some professional groups, e.g. lawyers and doctors, take a shortened version.

Day one consists of administrative briefings and written tests consisting of: general knowledge, Service knowledge, current affairs and a written essay.

The second day consists of group activities and interview. The group activities consist of: outdoor tasks requiring co-ordinated physical effort and sense of urgency. These are leaderless tasks in that no one is nominated as leader. Three interviews are also conducted by the Vice-President (a Colonel), the Deputy board President (a Lt Col) and a senior education officer. Finally, candidates participate in group discussions

Day 3 consists of group exercises:

- The command task which is a group outdoor task where each candidate is appointed in turn as the leader. He or she must solve a problem, devise a plan and execute the plan by briefing and directing the team.
- A planning project. Candidates are given a written problem, and candidates are required, individually, to undertake a written analysis and derive a plan. The second part of the exercise is a group discussion in which candidates are required to arrive at an agreed group solution to the problem. Finally candidates are individually questioned on aspects of their own plan, which often involves solving time/distance problems under time pressure.
- An individual obstacle course is used to measure physical fitness.
- A lecturette. The candidate has to prepare a five minute presentation on a topic of their own choice which must be presented to the group.

All exercises are rated using Behavioural Anchored Rating Scales against a number dimensions.

The final board consists of a discussion of the candidates and all assessments are reduced to a final selection rating of the candidate's intellectual potential, practical and planning ability and personality and character.

Successful candidates then proceed to a common officer training course at the Royal Military Academy, Sandhurst (RMAS). Some candidates, generally the younger ones, considered to possess rectifiable weaknesses can attend a variety of pre-RMAS preparatory courses.

A pass is valid for a number of years. Some candidates can be offered university sponsorships and will first complete their university courses before taking up their training place. Other candidates may also attend university unsponsored before RMAS. Additionally, the Army has a sixth-form college (senior high school) where potential candidates for the technical arms can study for university entrance qualifications. Selection is via an analogous system to the main board and is also conducted by RCB staff. Successful pupils are guaranteed a place at Sandhurst and a full career regular commission.

After Sanhurst, many are also offered in-house degree courses at the Royal Military College of Science, which is mainly a post-graduate institution offering specialist technical training courses for serving officers.

2.   **The Royal Navy**

Candidates spend two full days at the Admiralty Interview Board . Other information is usually collected beforehand, including the head teacher's and college principal's report, tutor's report and organised group activity reports. On arrival at the Board, candidates complete a Biographical Questionnaire Form. The aim of this form is to collect up-to-date and comprehensive information on the candidate. Much of the information will have been collected before, but circumstances and achievements may have changed. It is also useful for Board Members to have all the information together on one form, particularly when preparing for the

interviews. In addition, certain items from the form are input to a computer to produce a biographical data score which is used at the final "Wash-up".

a. The psychometric test battery

All the psychometric tests used at the AIB are paper and pencil tests designed to be administered to groups of candidates. The tests are in the form of multiple choice answers, with a computerized marking system used to compile the results. At present, this testing session takes some 2.5 hours, including giving instructions and collecting answer sheets.

The current AIB battery consists of the following tests:

- Verbal Reasoning
- Non-Verbal Reasoning
- Instructions
- Mathematical Ability
- Spatial Orientation

The major aim of the battery is to give an indication of mental ability in relation to the demands of Officer training.

(1) Verbal Reasoning

This is a 20 minute test consisting of four parts or sub-tests:

- "Same and Opposite" uses synonyms and antonyms.
- "Analogies"
- "Jumbled Sentences"
- "Completing Sentences"

(2) Non-Verbal Reasoning

This is 13 minute test in two parts:

- Matrix completion
- Sequencing

Tests of this type provide a measure of general intellectual ability that is less influenced by verbal aptitude and educational opportunities.

(3) Instructions

The 15 minute instructions test requires the test-taker to perform various clerical type operations (checking, filing, classifying and coding printed information) in rapid rotation. Five operations have to be carried out on each item. The instructions are intended to be relatively complicated and hard to follow. Although designed as, and effective as, a measure of clerical ability, the test is also a good measure of general ability, and adds to the prediction of success which can be made on the basis of the reasoning test. This may be because the test demands concentration, efficient working methods and diligence in addition to intellectual ability in order to achieve a good score.

(4) Mathematical Ability

This is a 25 minute test containing three sub-tests:

- -Facility: basic arithmetic and approximations
- -Problems: reasoning with algebra
- -Statistical interpretation using information form graphs and tables

(5) Spatial Orientation

This is a 15 minute test with 15 items involving geographical directions and relative positions in space.

In order to achieve a reliable and valid index of mental ability, a composite score is computed by adding the test scores together. Raw scores are converted to 0 to 9 scores for presentation to the Board. The Composite Test Score is the most valuable of the indicators derived form the written tests and is intended as a measure of general intellectual ability. As such, it would be expected to predict relative performance in a broad range of activities with intellectual content.

The table next page shows how the 0 to 9 Composite Test Score was related to BRNC performance for 840 civilian entrants. The second column show the number of entrants with each score; the next column the percentage of entrants with that score who were withdraw (WFT) or on Report for Professional or Academic reasons; the fourth column the percentage withdrawn or on Report for Character and Leadership (C & L) reasons; the next column the percentage who voluntarily withdrew from training; and the last column the percentage with that score who passed out of BRNC without being on Report or being withdrawn (compulsorily or voluntarily).

It can be seen that the percentage of entrants with Professional or Academic problems steadily decreases as the CTS increases. It should also be noted that the small number of low scorers (0 – 2) is probably atypical of low scores generally since the Board would usually need to have seen compensating qualities to award a Board Mark acceptable for entry to such candidates. It should therefore not be assumed that all low scoring candidates have 40 to 45 percent chance of not having Professional or Academic problems at BRNC. The Composite Test has also shown itself to be predictive of Royal Marine Officer Training assessment, of Fleet Board Marks and Officer of the Watch course Marks

Score	Number	%Prof/Acad WFT/Report	% C & L WFT/Report	% VWFT	% Graduated
0-2	23	57	9	4	30
3	44	41	9	5	45
4	106	29	10	12	48
5	131	24	8	12	56
6	185	19	8	9	64
7	159	16	9	13	62
8	104	11	7	16	66
9	88	2	9	10	79

b. Written Testing

(1)   Service Knowledge Test

This is a 10 minute test with 35 questions. Most of the questions in the test come from DNR publications. There are different versions for the Royal Navy and Royal Marines.

(2)   General Knowledge Questionnaire

This lasts 10 minutes and has 35 questions which cover World Affairs, Science/Technology, and the Arts.

(3)   The Essay

Candidates are given a choice of four essay subjects. Subjects vary slightly between types of entry (e.g. Scholars versus Direct Graduates). They are told to write an essay covering no more than two sides on one of the subjects, with a time limit of 45 minutes. The aim of the essay is to obtain an indication of the candidate's power of expression. Although all Board members see the Essay, the Headmaster has particular responsibility for marking it. He concentrates on overall construction (e.g. paragraphing), sentence construction, style, relevance of points and arguments, vocabulary, impact, legibility and spelling.

(4)   The Summary

Candidates have 20 minutes to summarize a passage of some 240 words in 90 words, preserving the key points, in good English.

(5)   Written Communication Skills Test

Unlike the tests discussed above this test is not used primarily to determine pass/fail but to identify literacy problems amongst suitable or marginally unsuitable candidates. Appropriate remedial action can then be taken. It is in two parts:

- Formal Correction: spelling, punctuation, sentence structure and grammar (20 items, 10 minutes)
- Summarizing and structuring (12 items, 18 minutes)

(6)   New Tests/ Procedures under development

During the development of new selection tests and /or selection procedures, it is often necessary to conduct trials of new tests or procedures.

c. The Gym Exercise

Each task has eight minutes for completion. There are "wet" and "dry" tasks and every effort is made to ensure that they are of roughly equal difficulty. Each candidate in turn takes charge of the group. Each candidate is given 15 minutes to work out a solution to his or her problem. Candidates can make written notes but theses are collected at the end of the 15 minutes. Royal Marine candidates also have a leaderless task.

d. The Group discussion

Candidates are given a scenario to study for 15 minutes. They may make notes. A number of different scenarios are used. Candidates are told as a group that as a group they will have to propose aims and a plan for the problem that they will be given. They have 15 minutes to discuss the problem and five minutes to present them individually for two to three minutes each.

e. The Interviews

There are two interviews, one by the board and the other by the Personnel Selection Officer. Each interview normally lasts 30 minutes. The general aim of the interviews are to probe and add information to that already collected form other sources. The interview is also used to assess the candidate's motivation for a Naval career (i.e. knowledge, interests, and aspirations). In the Board interview, the Headmaster discusses academic opportunities and achievements, extra-curricular activities at school and other non-physical spare time activities. The naval member of the board discusses physical spare time activities, employment record, and naval knowledge and interests (there is a Royal Marine officer on Royal Marine boards). The President of the board discusses awareness of current affairs and any other points requiring clarification.

The Personnel Selection Officer interview is carried out in a slightly less formal atmosphere and is used to probe any areas that are better discussed one to one. The PSO has the particular responsibility for covering family and domestic circumstances but will also cover spare time activities and vocational interests as they relate to Service compatibility, as well as any contacts with drugs and police.

f. The final assessment

After the interviews, the Board hears from the Senior Rate any observations that they have on the candidates outside of the scheduled activities. The PSO reports the interview and gives the major numerical predictors such as the Composite Test Score. The Headmaster assesses the Essay and Summary, and makes assessments of academic achievements and /or future academic performance. Board Members then individually consider all the evidence. Board members give assessment under four headings: Effective Intellect, Leadership Potential, Character and Personality, and Service Motivation; in addition, Physique is assessed for Royal Marine candidates. Each board member rates the candidate and gives a Final Mark (on a 020 to 980 scale). The Final Marks are averaged to produce the Final Board Mark; each Board Member's mark has equal weight. Final Board Marks of 500 or better receive a positive recommendation as Ministry of Defence (Navy) "passes". In times of shortage, some "marginal failures" may have their names forwarded to the Ministry of Defence for consideration

The Ministery of Defence makes the final selection.

3. The Royal Air Force

a. Applications.

Applications for university sponsorship or entry into the Royal Air Force are passed to the Officer and Aircrew Selection Center (OASC) at RAF College, Cranwell from a number of sources such as Careers Information Offices, University Air Squadrons and Senior Careers Liaison Officers, or in the case of those already serving, via their station executive. Thus, most of those applying to be considered at OASC will already have been seen by other and, according to the nature of their application, will have received some advice on preparation for their attendance. The OASC processing staff make up the list of candidates to be called forward to the selection procedure.

b. Attendance at OASC.

The description of the Boarding processes outlined below is that followed by the majority of candidates and assumes success at each stage. Although this brief is written to reflect male candidates, the same procedures apply to females. Clearly, a candidate for aircrew who fails either aptitude or medical testing

would not continue in the process unless he indicated, either by his application or on review, that he was prepared to consider other branch choices.

The Part 1 Selection Procedure

c. Aptitude Testing.

A battery of aptitude tests is undertaken by all candidates. Some of the individual tests are known predictors for pilot, navigator, air traffic control and fighter control, while others, or combinations of others, are used to measure NCO aircrew aptitude and general level of intelligence. Candidates are engaged for up to five hours on the full aptitude testing battery.

d. Medical Examinations

All candidates, even if they are already serving, undergo a rigorous medical examination, involving a number of specialists, to determine their fitness for RAF service and their chosen branches. Those potential aircrew who are accepted after the full selection procedure are required to return to OASC to undergo extended aircrew medical testing.

e. The Interview

Candidates who pass aptitude and medical testing then move on to the final element of the Part 1 Selection Procedure. This is a comprehensive interview, conducted by a Wing Commander Board Chairman and a Squadron Leader Board Member, during which the candidate is questioned about his background, education, interests and activities, awareness of current and military affairs, and motivation towards an RAF career. The interviewing Board have at their disposal the current application form and supporting references, together with the assessments and results of any previous attendances, but, deliberately, they remain unaware of aptitude scores, medical results and vacancies so that these factors cannot colour their judgement of the candidates. The interview lasts for approximately 45 minutes while contemporaneous notes are taken and scores awarded by the non-speaking member of the Board. The candidate is assessed on a 1 – 9 scale, measuring personal qualities, under the following headings:

- Appearance and Bearing
- Manner
- Speech and Powers of Expression
- Activities and Interests
- Academic Level/Potential
- Physical Level/Potential
- Awareness
- Motivation
- Overall Impact

On completion of the interview, the Board discusses and arrives at a Board Grade (BG) which will reflect what they have seen, the marks they have awarded and the relative balance of perceived strengths and weaknesses. Suitable candidates will be passed on into Part 2 of the selection process (assuming that there have been no aptitude or medical problems). Marginal candidates may or may not move on to the next phase depending on the board recommendation made, aptitude scores if applicable, and the requirements for making up the syndicates for Part 2.

The Part 2 Selection Procedure

f. Those candidates who are recommended to go forward to Part 2 are grouped into syndicates of five or six, each of which is allocated to a Board. Syndicates are usually of mixed gender. Generally, candidates will be assessed by a boarding team different from that which interviewed them. The Board has at their disposal the candidate's dossiers, which includes the Part 1 comments and recommendation, but they remain unaware of aptitude problems or medical factors.

g. The Discussion Exercise.

The first element of Part 2 is a 20-minute discussion exercise run by the Board Member. The syndicate members are given three or four general topics to discuss among themselves; the Board plays no part other than introducing the topics. The topics do not require any specialized knowledge, but all have a degree of controversy which, hopefully, will provoke lively and animated debate. During the discussion, the Board will assess such qualities as tolerance, maturity, originality, power of expression, sincerity and intellect. Finally, they award a percentage score to each candidate.

h. The "Leaderless" Exercise.

After Discussion, the Board Member takes the syndicate to the Exercise Hangar for an active exercise lasting for 30 minutes. The purpose of the exercise is twofold: firstly, the Board will be looking for early signs of group compatibility, co-operation, physical characteristics, practical perception, resourcefulness, etc; secondly, it introduces the candidate to the concept of working as a team and acquaints them with the basic rules for subsequent hangar exercises. A percentage score is awarded by the Board to reflect the level of involvement of each candidate and the personal qualities revealed. At the end of the exercise the Board Chairman spends about five minutes with the syndicate, reinforcing the need for a leader in such exercises and offering advice on the requirements for individual command situation section exercises later in the selection procedure.

i. The Group Planning Exercise.

Each syndicate member is given a copy of the exercise setting, rough working paper and a pencil. The setting, chosen from a number available, contains a map and brief of an imaginary situation in which the syndicate team finds itself. There are normally two or more possible solutions to the problem and the aim is for the syndicate to arrive at a group-preferred solution. The exercise is divided into three phases:

(1) The Private Study Period.

After briefing, the team is given 15 minutes for private study during which they acquaint themselves with the brief and setting, making whatever notes they wish and undertaking their own speed/distance/time calculations to arrive at one or more solutions.

(2) The Discussion Period

Next, a 20-minute period is given for the group to discuss the options, check calculations and arrive at a team solution. No chairman is appointed and discussion is on a free-for-all basis. During this phase, the Board, who take no active part in the discussion, will assess which members of the syndicate have influence, perception, comprehension and judgement and note is made of their degree of involvement, co-operation and numeracy.

(3) The Question Period.

There then follows a 20-25 minute phase during which the Board Chairman questions each member of the syndicate about the setting, the problem, the chosen solution, the rejected solutions and the calculations. By the end of the questioning, the Board Member, who will have been marking throughout this period, will have noted the qualities apparent in each syndicate member and, in addition to confirming or not those qualities already mentioned at sub-para b above, the additional qualities of mental agility, flexibility and reaction to pressure will have been assessed.

j. At the end of the Planning exercise, the candidates are briefed on administrative matters and are given a written refresher on how to undertake time, speed and distance calculations in preparation for the next morning's activity. Finally, they undertake a physical fitness test to assess their aerobic standard. The test is based on the Shuttle Test and is conducted under the supervision of Physical Training Instructors. While the syndicate is undertaking the fitness test, the Board has an informal discussion of their findings to date. They confirm the percentage marks to be awarded for the Group Planning exercise and then discuss the major strengths and weaknesses perceived in each candidate during the whole Exploratory Phase. A Board President, a Wing Commander with considerable experience of the selection process, observes each of the syndicates in turn and makes his own assessment of each candidate. After their own discussion, the Board debriefs the President on their findings and, where significant differences of opinion exist, explain their reasoning.

k. The Individual Problem

At the start of the final day, the candidates are briefed on the first exercise, the Individual Problem. This is similar in nature to the Group Planning exercise, and is selected from a number of options. On this occasion, as the title suggests, the candidate is on his own, and has 20 minutes in which to understand and assess the problem, undertake calculations and exercise judgement in deciding on the solution he wishes to present. At the end of the 20 minutes, he is questioned for 10 minutes by the Board Member on the problem, his solution, alternatives considered, and reasons for adopting one solution in preference to another.

While the candidate is being questioned, the Board Chairman is engaged in assessing the level of performance, commenting on confidence, workrate, perception, judgement, comprehension and numeracy.

As the Board Member then leads the candidate through possible alternatives, further assessment is based on receptiveness, flexibility, judgement, mental agility, composure, reaction to pressure, and decisiveness.

At the end of the10 minute question period, the Board discusses the performance and awards a percentage score. This continues until each member of the syndicate has been seen.

The Board President observes the performance of each candidate remotely by closed circuit television and makes his own judgement and assessments. Clearly, he is unable to observe each candidate's performance in full, but he spends sufficient time on each candidate to form an opinion. Any major differences of opinion as to the qualities possessed by any candidate are discussed at the final debrief between the President and the Board Members.

l. The Command Situation Exercise.

A comprehensive briefing on the command situation exercise is followed by a return to the exercise hangar where each syndicate member will have the opportunity to lead an active exercise. Fifteen minutes are allowed for each exercise, selected from a range of 20. Each exercise involves moving both the team and equipment over a course, generally with bridging of some sort. Both Boarding Officers assess each exercise and note the key qualities which emerge; those sought include influence, assertiveness, drive, confidence, judgement, comprehension, decisiveness and flexibility. Further, they will also be looking at physical characteristics and reaction to pressure. The Boarding Officers consult on several occasions during the exercise, while ensuring safety and watching for infringements of the rules. As the 15 minutes comes to a close, a percentage score is agreed upon and the next exercise selected. This continues until each member of the syndicate has led an exercise.

Post-Exercise Procedures

m. At the end of the exercise phase, a debrief is conducted by the Board Chairman, covering the general administration and organization of the candidates' stay at OASC. The candidates leave after this short debrief and the Board then discuss their findings from Part 2 of the procedure.

n. The overall presence or absence of qualities are collated and a Part 2 BG is awarded. The Board will add any 'credits' due from the Part 1 interview, make any adjustments to take into account the Fitness Test result, and arrive at an Overall Board Grade and a recommendation on acceptance or otherwise. If the recommendation is not to accept the candidate, they also indicate what sort of encouragement or advice to give the candidate in respect of a future application.

o. The Board then debriefs the Board President on their findings and recommendations. Where there is a divergence of opinion between Board Chairman and Member, it can be reflected but the Chairman decides the Overall Board Grade. Similarly, if the President has seen a candidate differently from the Board, he will reflect this in his final grade, taking precedence over the Board's opinion. The Presidents in turn present their findings to the Deputy Director of Recruiting and Selection (OASC) and regular selection meetings are held to fill training courses.

p. The Board Chairman and Member then write up an assessment of their candidates and, before passing the dossiers back to the President for his comment, they will also complete a report on the candidate's strengths and weaknesses which will go back to the appropriate Careers Information Officer or RAF station for debriefing purposes.

q. Selection procedure statistics for 1997 are as follows:

Attended OASC	Voluntarily Withdrew	Medically Unfit	Aptitude Failure	Onwards to Part 2	Selected
2446	32	29[1]	99[2]	1839	690

Notes:

1. This figure includes only those candidates who were permanently unfit military service or those who were unfit for their chosen branches who were unwilling to choose a less medically stringent branch.
2. The aptitude failures listed include only those candidates who failed their aptitude test and who were unwilling or unqualified to choose a non-aptitude dependent branch.

Current Practice of Officer Selection in the UNITED STATES

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1. Overview of United States Military Officer Selection Procedure

United States military officers are exposed to varied experiences and professional military education opportunities while on duty in the Armed Forces. Individual development and achievement moves officers through the ranks and provides advancement in their careers. The basic advancement policy is "up or out:" failure to achieve promotions within specified periods typically results in discharge from service.

The commissioned officer corps provides the senior leadership and management of the armed forces. At the end of Fiscal Year (FY) 1999 there were 204,909 active duty officers across the branches of the military. In terms of active duty officers, the Air Force has the highest number (70,625 officers), the Army has 66,263 officers, the Navy has 51,885 officers, while the Marine Corps has 16,136 officers.

Officer candidate programs can be separated into two basic categories: those for college students and those for college graduates. Programs for college students may provide an education or offer varying levels of financial assistance to help cover the costs of a college education. These programs include the service academies and Reserve Office Training Corps (ROTC). ROTC programs can be divided into two types: scholarship ROTC, which offers up to four years of financial assistance, paying for college tuition, required educational fees, textbooks, supplies, equipment and a monthly stipend; and non-scholarship ROTC, which provides a stipend only.

Programs for college graduates are covered under the general heading of Officer Candidate School (OCS; this program is called Officer Training School, OTS, in the Air Force). Individuals may also be commissioned by direct appointment. These commissions are granted to persons who are professionally qualified in the medical or health field, as well as lawyers and chaplains. Officers who enter under this program are given a brief military orientation course (e.g., military dress, customs, etc.) and are often commissioned at a higher rank.

The largest proportion of FY 1999 officer accessions (40 percent) came from the ROTC programs across the branches of the Armed forces. Direct appointments account for 28 percent of the new officers and academy graduates accounted for 17 percent of incoming officers. Officer Candidate/Training Schools produced about 17 percent of the new officers for FY 1999.

A typical distribution of officers commissioned by each source is provided in the table below.

Percent of Officer Accession by Source of Commission
and Service for FY 1998

	ARMY	NAVY	MARINE CORPS	AIR FORCE
Academy	14	19	12	19
ROTC	48	18	13	42
OCS	6	37	60	10
Direct Apptmt.	9	15	0	19
Other	17	6	15	0
Health Pro.Sch.	6	6	0	10

a. Service Academies

The service academies include the United States Military Academy at West Point (Army), the United States Naval Academy (Navy and Marine Corps), the Air Force Academy, and the Coast Guard Academy. The service academies give students between the ages of 17 and 22 the opportunity to develop the knowledge, character, and motivation essential to leadership, which is necessary in order to be successful in their military career. All Service academies offer four years of college education leading to a bachelor of science degree. Cadets and midshipmen receive tuition, medical care, room and board, and are paid $600

monthly for uniforms, books and incidental expenses. Upon graduation, those commissioned are obligated for an active duty period of at least five years.

The overall academic and physical preparation of candidates is of vital importance to success at all the academies. The three major academies (Army, Navy, and Air Force) have highly competitive entrance standards, each accepting approximately 1200 new cadets per year, which annually produce a thousand new commissioned officers for their parent Service. To apply to the academies, a junior or senior high school student is required to take the College Board Scholastic Achievement Test (SAT) or the American College Testing (ACT) program; they also must have received high grades in all areas of study while in high school and meet the standards for the Candidate Fitness Test upon entry. The fitness test evaluates the individual's physical fitness in terms of, for example, pull-ups, push-ups, sit-ups, a short run, and the standing broad jump. To gain acceptance into an academy, the student also must receive a nomination from a member of the Congress, a presidential nomination, or a vice presidential nomination. The nomination procedure is not mandatory for the Coast Guard Academy. The tables below depict the officer production flow from the service academies.

Officer Production: Academy Application Flow
by Service Academy and School Year

US Military Academy (Army)

Class	2000	2001	2002	2003
Number of Applications	12,886	12,744	12,442	11,491
Number of Fully Qualified Applicants	2,030	2,058	2,088	2,106
Number of Cadets Entered	1,187	1,187	1,246	1,133

Naval Academy

Class	2000	2001	2002	2003
Number of Applications	9,962	10,119	9,827	10,145
Number of Fully Qualified Applicants	1,920	1,728	1,774	1,814
Number of Midshipmen Entered	1,212	1,175	1,231	1,232

Air Force Academy

Class	2000	2001	2002	2003
Number of Applications	9,165	9,802	10,035	8,828
Number of Fully Qualified Applicants	2,164	2,122	2,129	2,195
Number of Cadets Entered	1,230	1,117	1,216	1,330

b. Reserve Officer Training Corps

The Reserve Officer Training Corps (ROTC) is a program composed of about 475 Army, Navy, and Air Force units at public and private colleges and universities nationwide. ROTC is traditionally a four-year program. There are different scholarships available to the college student to help pay for expenses. These scholarships are competitive and are given to applicants who show a high level of academic ability, are physically qualified, involved in extracurricular activities, and are of good moral character. The criteria for selecting scholarship winners include: 920 points on the SAT or 19 on the ACT, academic standing in high school (class rank and class size), evaluation or letter of recommendation from three high school officials, a personal interview, and documentation of achievement in extracurricular activities and leadership positions.

The scholarships are worth up to $16,000 per year, along with a stipend of $200 per month. ROTC training (elective courses in most schools) consists of two to five hours of weekly military instruction and some summer training programs in addition to the regular college program. The first two years of the program are comprised of classroom studies in subjects such as military history, leadership development, national defence, and practical leadership laboratories. A student may enroll in the program for the first two years at college as an elective with no military obligation. During the next two years, the student uses skills learned in the first two years and summer training to organize and mange new ROTC students. In addition, each of the Services has a special program which allows interested students to enroll in the last two years of ROTC. Upon graduation from college, the student will be commissioned as a second lieutenant or ensign in their respective service and incur an eight-year service obligation (generally, four years active duty and four years reserve duty).

c. Direct Appointments

Direct appointments are available to individuals who are professionally qualified as doctors, nurses, and other health care providers, as well as lawyers and chaplains. Military lawyers must be graduates of law schools accredited by the American Bar Association. Lawyers usually enter active duty at an advanced rank. Military chaplains must possess 120 semester hours of undergraduate credits from a college or university and possess a Master of Divinity degree. Chaplains may also enter at an advanced rank. Direct appointments can be applied for through the Army, Navy, Air Force, and the Coast Guard.

2. Aptitude Measures Used to Select Officer Candidates

Several aptitude tests are currently used by the armed services to select officer candidates. The academies, like most undergraduate colleges in the United States, use the Scholastic Achievement Test (SAT) or the American College Test (ACT) in conjunction with high school (H.S.) class rank. ROTC programs primarily use SAT and ACT scores to determine eligibility, but some programs require additional tests.

The SAT and ACT play an important role in the selection of officer candidates in college programs. These are the traditional measures of academic ability used for incoming college freshmen in the academies and scholarship ROTC programs, much the same as in undergraduate colleges and universities throughout the country. Because these programs involve a substantial monetary investment in the candidate's post-secondary education, the foremost concern at this point is the selection of individuals who will succeed academically .

The SAT, developed by the Educational Testing Service for the College Entrance Examination Board, is a college entrance test designed to measure general verbal and mathematical reasoning ability. The ACT, developed by the American College Testing Program, is also designed as a college entrance examination, measuring general verbal and mathematical comprehension.

The tests used in selecting candidates for OCS and OTS programs are intended to assess more specific aptitudes or characteristics that predict officer performance, since virtually all of the applicants, as college graduates, have already demonstrated their academic capabilities. Many ROTC non-scholarship programs, geared mainly for college juniors and seniors, likewise use tests that are aimed at predicting success in the military, since most of the upper-class students are expected to complete college.

With the exception of the Marine Corps, Officer Candidate School (OCS) programs employ aptitude tests that have been developed specifically for officer selection. The Army uses the Officer Selection Battery (OSB) and the General Technical (GT) composite of the Armed Services Vocational Aptitude Battery (ASVAB); the Navy uses the Officer Aptitude Rating (OAR), the Academic Qualification Test (AQT) and the Flight Aptitude Rating (FAR), all of which are composites from the Aviation Selection Test Battery (ASTB); and the Air Force uses the Air Force Officer Qualifying Test (AFOQT). The Marine Corps requires applicants to all of its pre-commissioning programs (except for the Naval Academy and Naval ROTC, which are administered by the Navy) obtain a qualifying score on the SAT, the ACT or the Electronics Repair (EL) composite of ASVAB. In addition, aviation applicants in the Marine Corps are required to achieve passing scores on the AQT-FAR. The table below presents a summary of the aptitude tests and academic achievement measures used to select officer candidates for each of the service programs.

Aptitude Tests and Criteria Used to Screen Officer Candidates by Program and Service

Program	Army	Navy	Marine Corps	Air Force
Academy	SAT/ACT H.S. Rank	SAT/ACT H.S. Rank	SAT/ACT H.S. Rank	SAT/ACT H.S. Rank
ROTC Scholarship	SAT/ACT H.S. Rank H.S. and College Grade Point Average (GPA)	SAT/ACT H.S. Rank H.S. and College GPA	SAT/ACT H.S. Rank H.S. and College GPA	SAT/ACT H.S. Rank H.S. and College GPA AFOQT
ROTC Non-scholarship	OSB 3 & 4	Varies by unit	Varies by unit	AFOQT SAT/ACT College GPA
OCS/OTC	OSB 1 & 2 GT of ASVAB	OAR	SAT/ACT EL of ASVAB	AFOQT College GPA
Aviation OCS	N/A	AQT-FAR	SAT/ACT EL of ASVAB AQT-FAR	N/A

3. Selecting Officer Candidates

a. Academies

All three service academies use the "whole person" concept for evaluating applicants. At West Point, a "whole person score" (WPS) is derived from weighting three factors: academic aptitude, which combines SAT or ACT scores with high school rank (60 percent); leadership potential, which is estimated from athletic participation in high school and high school teacher recommendations (30 percent); and physical aptitude, which is measured with the Academy's Physical Aptitude Examination (10 percent).

The Naval Academy assigns each applicant a numerical score, called the "candidate multiple," calculated from the following variables: SAT or ACT scores; high school class rank; evaluations by high school teachers; participation in extracurricular activities; and specially adapted scales from the Strong-Campbell Interest Inventory, which is designed to assess areas of interest and to predict career retention.

The Air Force Academy's "selection composite is similar to West Point's "whole person score" and is derived by weighting and combining the following elements: academics, which adds together SAT or ACT scores with high school rank (60 percent); extracurricular activities (20 percent); an admissions panel rating (20 percent), and an interview and physical fitness test (no specific weighting).

Cutoff scores at the academies may be waived for applicants who demonstrate exceptional potential in other areas of qualification. Those who meet the minimum qualifications of the institution then have their files reviewed by an admissions board. Subjective appraisals of an applicant's qualifications may be made at this point. In fact, at the Naval Academy, the admissions board may adjust an applicant's "candidate multiple" by up to 20 percent. The rationale is that the reviewers may be able to see something important in a candidate's background that has been omitted from the "whole person" rating.

b. ROTC Scholarship Programs

The Army employs a WPS in selecting candidates for its four-year scholarship program. The WPS is composed of the following weighted factors: SAT or ACT score (25 percent); high school class standing (25 percent); participation in extracurricular activities and other elements that show leadership ability (40 percent); and the Physical Aptitude Examination (10 percent). The Army's WPS has a range of 1 through 999; cutoff scores may vary from one year to the next, depending upon the number and quality of applicants. Nevertheless, the four-year scholarship program does establish specific cutoff scores for the SAT and ACT; if these minimums are not met, the candidate is rejected without further review.

The Navy's four-year scholarship program uses a two-step process in selecting students: initial screening followed by final selection. SAT or ACT scores serve as the sole criterion for initial screening. A selection board reviews those who qualify. Applicants who achieve the minimum required test scores are then evaluated on the basis of several weighted factors: SAT or ACT scores (19 percent); high school rank (56

percent); results of a structured interview by a naval officer (10 percent); results of the Strong-Campbell Interest Inventory, used to predict career tenure (9 percent); and scores derived from a biographical questionnaire designed to predict retention (5 percent).

In the initial screening for the Air Force four-year scholarship, applicants are required to meet the following criteria before any further consideration is given: high school grade point average; high school class standing; and SAT or ACT score. An applicant's intended major in college is also very important in awarding scholarships (i.e., science and engineering are favored over humanities courses). A selection board evaluates applicants who have achieved the minimum test scores and high school grades are then evaluated by a scholarship selection board. The board reviews academic records, test scores, leadership experience, extracurricular activities and work experience. A personal interview, responses to a questionnaire and evaluations by high school officials also are used by the board in awarding scholarships.

c. ROTC Non-scholarship Programs

Currently, the Army's non-scholarship program uses the Pre-commissioning Assessment System (PAS) for selecting candidates. Pre-commissioning selection normally occurs at the beginning of the junior college. Applicants are evaluated on the basis of physical fitness, grades, participation in extracurricular activities, writing skills and motivation (as determined through a structured interview). Applicants must also achieve a passing score on the OSB. Candidates who do not meet the minimum may be accepted if a "whole person evaluation" finds outstanding performance in another area that is seen to compensate for the lower OSB score.

The non-scholarship portion of the Navy's ROTC program is called the college program. College program students are selected by individual units and standards vary by unit. There are no centrally established admission criteria (selection for scholarship programs of less than four years also take place at the various units, with no uniform criteria).

The Air Force uses the AFOQT in screening applicants for it non-scholarship programs. Minimum required scores must be met on the Verbal and Quantitative composites. Pilot and navigator candidates additionally must meet minimum scores on the Pilot and Navigator-Technical composites. Applicants are then given a Quality Index score. The Quality Index score is made up of both academic and non-academic factors that are weighted roughly equally. Non-academic factors include the detachment commander's overall rating; review board rating of self-confidence, human relations, extracurricular participation and communication skills (from a structured interview and written exercise); and a physical fitness test. The academic component includes cumulative grade point average and the scores of the AFOQT Verbal and Quantitative composites. An applicant must also be in "good standing" with the academic requirements of their college; if not, they must possess a high enough cumulative grade point average.

d. OCS Programs

Factors considered in the selection of candidates for Army OCS include the Physical Aptitude Examination, college grade point average, letters of recommendation from former employers and professors, college major, and an interview by a selection board. Scores on the OSB and GT composite of the ASVAB are also used in the selection process. To be eligible to apply to Army OCS, an applicant must have a minimum score ion the technical-managerial leadership (cognitive) subtest of the OCB and a minimum score on the GT composite. The applicant's file is then sent to a selection board. The board, in turn, assigns a numerical rating to each applicant. The highest rated applicants are selected, based on the number of available positions in OCS.

The Navy OCS and AOCS programs consider an applicant's college grade point average, extracurricular activities, employment record, and physical examination results. However, before an individual is allowed to apply he or she must achieve a qualifying score on one or more of the ASTB composites. Navy OCS uses the OAR composite as a preliminary screening device. As a part of the Navy's affirmative action program, racial and ethic minorities who score below the cutoff on the OAR can be accepted as students at the Officer Candidate Preparatory School before being placed in OCS. The Navy's Air Officer Candidates School (AOCS) program uses the AQT-FAR composites for preliminary screening.

Persons who wish to enter the Air Force equivalent of OCS, Officer Training School (OTS) program are required to first achieve a minimum score on the AFOQT. The individual's application is then submitted to a central selection board for evaluation. The selection board considers factors such as college grade point average, AFOQT scores, college major, work or military experience and leadership potential. The board does not use a weighting formula to evaluate candidate qualifications.

The Marine Corps may commission up to 16 percent of graduates from the Naval Academy each year and the same proportion of students completing Naval ROTC. Students who enter ROTC under the Marine Corps option are required to have a slightly higher SAT score than Naval candidates. Applicants who are able to achieve the required minimum scores for Marine Corps programs are then evaluated under the "whole person" concept. For most of the Marine Corps programs, the following factors are considered: recommendations from professors or employers; college transcripts; physical examination results; and the individual's work or military records. These factors are not weighted in any formal manner by Marine Corps reviewers.

4.   Summary

Officer selection and commissioning in the U.S. is notable for the variety of programs, both within and between Service branches. Although the initial selection process is central to the development of a volunteer, professional cadre of officers, the emphasis is more on "growing" military officers than on the initial selection process itself. Selection and training are continuous processes revolving around an "up or out" philosophy; in fact, the promotion system, beyond the scope of this paper, is an integral part of the process of developing U.S. military officers. As noted earlier, the U.S. approach to officer selection is to identify intelligent men and women of good character who can be trained to provide the leadership and management of the armed forces.

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Chapter 3

SUMMARY OF THE RSG 31 SELECTION OF OFFICERS

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This summary gives an overview of officer selection for the eight NATO countries that participated in the RSG-31. These countries are Belgium, Canada, Denmark, France, Germany, The Netherlands, the United Kingdom and the United States.

1.   The political and cultural backgrounds which effect the officer selection.

All countries have a legislative framework in which the prerequisites needed for eligibility as an officer candidate are legally predetermined. The manner in which the prerequisites are formalised is different for each country.

In most cases candidate officers must be citizens of the resident country. Sometimes it is enough to possess a permanent residence document (landed immigrant status). Subsequently some countries have specific age and education requirements.

In Germany a legal requirement states that officer candidates must have "fitness of character, mind and body". In Belgium and France the order of entrance to officer academies is determined by comparing the exam results of each individual officer candidate.

Cultural differences between the United States, France and the other countries further determine the selection process.

In the United States military social structure is determined by the principle "up or out"; failure to achieve promotions within a specified time frame often results in a service discharge. Selection is therefore a continuous process. Guaranteed employment for life is in any case not assured.

The stringent requirements are already known prior to enrolment in the officer candidate program. In high school the student should strive for excellence in academics, athletic programs and extracurricular activities. Hence, those in the United States who want to become officers, already know that intellectual abilities alone are not all that is required

In France, entrance to the military academy can only be accomplished by successfully completing the "grandes écoles". This demands an excellent graduation certificate and the passing of extremely difficult entrance examinations, whose level equals that of first diploma examination in scientific subjects. Those who pass are normally employed for life with the prospect of a fine career.

2.   The different ways to become an officer.

All RSG-31 member countries have more than one way to achieve the officer rank. All countries except Belgium have more than one military academy, all of which have long-standing traditions. Entrance requirements to these institutions are highly competitive. Their selection procedures are explained below.

Graduation from a college or university ensures in most cases direct eligibility for the officer program. This is especially the case for doctors, dentists and clerical counsellors. This also applies to certain technical specialists. In some cases the Ministry of Defence (MOD) pays for a specific or relevant study. In Canada all applicants for the officer corps require a university level education.

In most countries a limited number of non-commissioned officers (NCO's) with a good service record are accepted into the officer rank. In some cases no repeated psychological selection takes place. In Denmark where there are still conscripts, candidates are only eligible if they have successfully passed the NCO training school and have served as NCO for a specified period of time.

Because of the high costs for flight training, all RSG-31 countries are known to have special selection procedures for this category of officer candidates. Besides the standard requirements for entrance to a military

academy, specific aptitude tests like eye-hand co-ordination tests, flight simulator tests, and in some instances practical flight tests are given.

3.   The selection of students for military academies.

Although in a number of countries the MOD decides who can be an officer, the service branches of all countries have a great deal of influence on the selection procedure for their force. In no country but Belgium the requirements for selection are the same for all forces.

a.   Reliability and security clearance checks and moral character screening.

Dependability, security risks and the moral character of prospective candidates are standard parts of the screening process by all RSG-31 countries in order to ensure quality control in the form of a risk profile. This is to minimise entrance of persons likely to become disciplinary cases or security risks, which might disrupt good conduct, order, morale and discipline. In Canada all applicants must be willing to comply with the Canadian Forces policy on discrimination, harassment and racism.

b.   The officer profile.

There is no uniform officer profile used for all countries. Except in France, in the other RSG-31 countries more is expected than intellectual performance alone. In some countries the selection is especially focused on supplying the students needed for the military academies. Others include in their selection variables in the profile outline such as the functioning of the prospective student as a future officer, which is not always the same thing.

c.   Intelligence and aptitude tests in psychological selection.

With the exception of France and some services in the Netherlands, all other countries use, in some form, cognitive ability, aptitude, or achievement tests as a basis in their selection of candidates prior to admission. Officer candidates applying for the more technical fields of work are given specific technical skills and mechanical comprehension tests.

Some countries use a great number of tests and adjudge fixed values to them; others use a limited number.

In the United States certain minimal scores on nationally used achievement tests are used. In France till now, one only has to pass the exams given by the "grandes écoles". From 2002 some sort of selection will be introduced so that candidates, who are obviously emotional unstable or who lack leadership qualities are detected. Some of the services in the Netherlands make no use of intelligence tests because school results have been found to give better predictors.

d.   Personality questionnaires used in the psychological selection.

Personality questionnaires are used in all countries at some point in the selection process except in Canada and France. Their value and implications differ per country. Some countries use them as an aid for the interview, in others (The Netherlands for instance) personality questionnaires are part of the standard selection model. Candidates with unsatisfactory scores on these questionnaires are not selected.

e.   The interview as part of the psychological selection.

The interview is a standard part of the psychological selection used in all countries except France, which does not include it in their procedure. It incorporates, among other things, the assessment of the candidate's curriculum vitae, motivation, orientation concerning duty- related demands and personality. In the United States, the interview is taken at the respective academy itself.

f.   Assessment as part of psychological selection.

A number of countries make use of group behaviour observation or leaderless tests. Giving a lecture and group problem solving are sometimes part of the selection model. In the United Kingdom and The Netherlands candidates for the Marines are put through strenuous physical assignments: some are of an individual nature, others are meant to be solved by the group as a whole.

g.   Medical selection.

All countries subject their candidates to an extensive medical examination before enrolment. The extent of the examination is different for each country. When the examination takes place in the selection phase is also country dependent. In certain countries it takes place in the beginning, in others at the end of the selection process.

h. Physical fitness tests.

Most countries demand that candidates meet certain physical fitness requirements before they are eligible for enrolment. Those who do not meet the standard requirements are phased out of the selection process.

i. Recommendations.

Only the United States and Canada require officer candidates to obtain recommendations in order to qualify for enrolment. In the United States nominations are also needed from the President, the Vice President, or a member of Congress. Members of the regular armed Forces with a good service record can obtain commissions from the President for their children. The result of this system is that candidates across the whole country have an opportunity to be nominated and that children of the regular armed Forces have a preference. In Canada, the recommendation is a letter of reference from a teacher, employer, or minister.

j. Selection admission boards.

In order to be accepted to a military academy all countries except France require that candidates pass a selection admission board usually consisting of high-ranking officers. In some countries psychologists advise the boards. The influence of the board on the selection process is different in each country and sometimes in each branch of service.

k. The selection ratio.

Despite the many different methods and procedures, the selection ratio, which is the total percentage of finally selected candidates, is similar for all the RSG-31 countries except France. Between 12 % and 30 % of the candidates are accepted for enrolment. Due to the different way of selection in France there are no data known at present.

l. Validation research.

In a number of countries there is ongoing research into the predictive value of the selection instruments. This research faces always a number of difficulties. One of them is the question of which criterion must be used to decide whether a selection instrument has added value: is the criterion a combination of graduation rates at the military academy or performance later as an officer? Another problem is that the selection instruments often change in the years that the data for this kind of research are collected. A third challenge is that only those candidates who are admitted to the academies can be evaluated. To assess the predictive value of the instruments, the candidates who were not admitted should be taken in consideration.

However, studies in a number of countries show that the results from cognitive and aptitude tests and school performances predict success in the military academies. Further, candidates who rated highly in the selection procedure tend to achieve higher ranks in the officer corps.

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Chapter 4A

NATO RESEARCH AND STUDY GROUP 31 'ON OFFICER SELECTION' SURVEY

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1. Introduction

This chapter gives an overview of current officer selection methods used in different countries. The information was gathered by way of a survey 'on officer selection' that was sent to both NATO and non-NATO countries. Nineteen countries have completed and returned the survey. This report doesn't have the intention to excel in completeness or to go in great detail. Gathering both accurate and detailed information about (evolving) selection systems proved to be challenging. It is therefore likely that the presented data still contain some errors. We apologize for that. We are convinced however that this analysis will give the reader an interesting overview of current practice against which a particular selection system can be put into perspective. Below only the most striking findings are mentioned. For further exploration we refer to the appendices and the endnotes. The actual survey is included at the end of this chapter.

2. Selection Identification

This section is meant to identify the selection(s) that will be described below.

Nineteen countries have participated in the survey 'On Officer Selection': (in alphabetical order) Australia, Belgium, Bulgaria, Canada, Denmark, Finland, France, Germany, Italy, the Netherlands, New Zealand, Norway, Poland, Singapore, Slovenia, Sweden, Switzerland, the United Kingdom and the United States. In some of these countries another selection procedure applies to each service, so that these distinct selections are treated below as separate units. This is the case in New Zealand and Norway, where Army, Air Force and Navy adopt distinct procedures. In Canada there is an additional process for the selection of Pilots and Air Navigators. In Denmark and the Netherlands there is also a different procedure for pilots. In Switzerland there is an important distinction between the selection procedure for Career Officers and Reservists. The Polish survey contained only data with regard to the Air Force. In case no distinction is made in the text below, this implies that the regarding subject applies to all services and all career-opportunities, although there may be a different procedure for each service.

3 Legal Framework

In the majority of countries there is a legal framework governing *some* aspects of the selection procedure. But on the other hand we have to say that not many countries have a legal framework with regard to *all* aspects.

In all countries with a legal framework there are rules with regard to nationality.

In almost all countries[i] there are statutory regulations with regard to age.

There are no statutory regulations with regard to juridical antecedents[2] in Finland and the Netherlands.

In Canada there is a strict regulation that sees to the equal treatment of men and women. In Germany on the contrary women can only apply for a job in the Medical or Musical Corps. Applicants also have to comply with gender requisites in Poland, Bulgaria and Italy. However, it is not clear whether these regulations are restrictive to women or not.

In Canada and Poland there are strict regulations that see that the selection procedure is non-discriminative with regard to ethnic minorities.

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[2] This is about involvement with the judicial systems (arrests, condemnations)

In Italy applicants have to be unmarried for their application to be acceptable.

It is noteworthy that only a few countries have issued a legal framework with regard to the main parts of the selection procedure (psychological interview, physical fitness tests, group observation tasks[3], and academic exams).

The same remark goes for the use of a selection and classification method. Only in Belgium, Bulgaria, Germany, Italy, Poland and the United States there are regulations with regard to the use of a selection and classification method. All above-mentioned countries have to classify applicants according to statutory criteria. In Belgium, Bulgaria and Poland there is a regulation with regard to the overall thresholds to be met. In these countries there are also rules with regard to the action of the selection board.

4. General Options

The enlistment resulting from the described selection procedure usually takes place annually. In Denmark (Pilots), New Zealand (Army, Air Force) and Switzerland there is an enlistment every six months. Dutch pilots are enlisted three times per year, and in Singapore the intake takes place quarterly. The frequency is even higher in France, where an enlistment takes place every month. In Australia there can be up to ten intakes of Royal Australian Air Force (RAAF) Direct Entry Officers per financial year, depending upon target numbers allocated by strategic planners and training schools. The intake of RAAF Reserve Officers can be appointed at any time, in response to an identified need, and the enlistment of Navy Reserve Officers can be appointed at any time throughout the year. The system for Army Reserve Officers is currently reconsidered. In Slovenia there can be up to 25 intakes per year, depending upon the occurring needs. Finally, in the United Kingdom the training schools (RMAS) determine the number of intakes.

In Denmark (General) as well a selection centre as the training facility for which the applicants are selected are in charge of the selection procedure. In addition military psychologists are brought in as consultants. In the other countries it's either the training facility or a (local) selection centre/recruiting unit that's in charge.

5. General Sequence

A schematic overview of the different selection procedures is given in 'Appendix A'[4].

In the majority of countries accommodation is provided to the applicants in case some of the days within the selection procedure are consecutive. Exceptions are Belgium and Slovenia. Lodging is mostly located within military quarters, but in Australia, Canada (Pilots), Switzerland (Career) and the Netherlands (Pilots) lodging is located outside military facilities. In Denmark (General) accommodation is possible both inside and outside military quarters. The transportation from home to the place where the applicant undergoes the selection is often reimbursed, although there are still several countries where the applicant him- or herself has to pay for the transportation[ii].

6. Recruiting Station

In the larger part of the countries[iii] there are 'Recruiting Stations' where applicants can receive information, where they meet recruiters and where they can complete application forms. Sometimes[iv] applicants are obliged to pay a visit to the Recruiting station. In Germany only men who are liable to military service, and in France only those with a limited time contract have to pay a preliminary visit to the Recruiting station. The reason for this obligation is that during the visit the Recruiting stations can not only gain information and encourage self-selection, but can also make initial assessments of suitability.

In case of an initial assessment the applicants are always asked to take aptitude or ability tests. In New Zealand (Army) they also have to complete medical documentation, and in Germany there is even a complete medical check-up. These tests are used as screening tools to prevent applicants with low scores to start (or continue) the selection procedure.

In several countries the applicants receive material to prepare themselves for taking the selection tests. The material consists of information about tests and procedure, with or without examples of test questions. In Belgium and Denmark (General) special attention is drawn to the physical tests. Applicants receive a physical

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[3] These are situations where a (leaderless) group of applicants is observed while performing some standardized task such as used in assessment centers or selection boards.

[4] The overview is incomplete because some of the countries didn't fill in the scheme, or because some of them were illegible.

training scheme or program. The United Kingdom provides an extensive 24Hr briefing, although it's not clear what this means.

7. Application

In all countries with the exception of Singapore and Slovenia there are requirements related to the applicant's age. The applicants' minimum age varies between 16 and 20. The average minimum age is 17,5. The maximum age varies between 22 and 50 (candidates of this age are accepted in Canada only in special circumstances). The average maximum age is 30,5.

In Australia, New Zealand (Army, Air Force and Navy) and the United Kingdom the applicants don't have to belong to the nationality of the country organising the selection procedure.

There are two countries where only men can apply for the selection procedure: Italy and Poland. In Germany women can merely apply for medical or musical service, in Bulgaria women can apply only if there is a vacancy for a female job. In all other countries both genders can apply for the selection procedure, although this procedure isn't always equal to men and women (e.g. Singapore).

In all countries there is a minimum level of education required to be eligible to apply. Usually the applicants must have a secondary/senior high school leaving certificate. In Norway (Air Force and Navy) one can only apply after both high school and NCO education. To become a Norwegian Army officer one even has to practice one year as a sergeant. In Slovenia one needs a secondary high school certificate to apply for NCO, and a bachelor degree to apply for CO.

In Singapore and Sweden applicants can not be rejected because of judicial antecedents. In all other countries certain criminal convictions (e.g. crime of violence, drug dealing, drug abuse, sexual misconduct, use of arms, six months' imprisonment) will debar an applicant from entry. This implies that in these countries the recruiting officer has to check the applicant's police records.

In Singapore, Slovenia, Switzerland (Career) and the Netherlands (Pilots) an applicant who failed for the selection procedure can not apply a second time. However, the majority of the countries permit a new application after a twelve-month waiting period. In Australia and New Zealand (Air Force) declined applicants can already try again after six months. Swiss (Reserve) applicants can apply again during the compulsory repetition courses that take place for each unit every two years. Canadian applicants who were declined because of LSD use have to wait three years (these candidates are not eligible for air crew occupations), and in case of refusal because of criminal conviction they have to wait until pardon is received.

8. Psycho-technical assessment

8.1. Testing

In the United States applicants only have to go through a medical and a physical aptitude exam, in contrary to all other countries where applicants receive additional psychometric testing.

The total testing time for Dutch pilots during the selection procedure comes to 80 hours. This is because of the extensive use of an 'Automated Pilot Selection System' and a practical flying selection. The opposite is Singapore where psychometric testing consists of an ability test battery that merely takes 26 minutes. Swiss reservists, who are tested when they are conscripts, receive a single test that measures verbal and figural abilities, and that takes 30 minutes. The average testing time during the selection procedure comes to 6 hours 18 minutes. Without the minimum and maximum the average testing time comes to 3 hours 35 minutes.

In the larger part of the countries[v] the traditional paper and pencil method is still widely used. In Bulgaria, Germany and Singapore on the other hand only computerised testing is used.

The test development methodology that is used by most countries is the classic theory and not the item response theory. A few countries[vi] combine both methodologies.

The majority of the countries use speed tests as well as power tests. Australian applicants receive merely speed tests.

In most countries[vii] poor test scores can lead to the rejection of an applicant, regardless of other parts of the selection procedure. Ability tests are often used as a mean to reject applicants. These tests measure the applicant's verbal, spatial and number-mathematical abilities, selective attention, perceptual speed, memory span, and general reasoning. In some countries applicants receive additional tests for psychomotor abilities if they apply for the Air Force. Examples of these abilities are reaction time (the Netherlands) and hand-eye-foot

co-ordination (New Zealand). For these ability tests usually minimum cut-off scores are specified on the basis of which the decision to reject an applicant is taken.

A more cautious approach applies to personality tests: applicants can only be rejected in case of extreme scores (e.g. the Netherlands) or in close consultation with the selection board (e.g. New Zealand Army). Personality tests are not as often used as ability tests: half of the countries don't use personality tests while there is no country (except the United States) that doesn't use ability tests. Examples of well-known used personality tests are the MMPI, GLTS, 16PF, PRF, GPPI, EPQ, and the Tree test. Projective tests are clearly in the minority.

Other kinds of tests that serve the assessment of applicants are motivation and vocational interest tests. Normally these tests can't lead to the rejection of applicants, but they yield a lot of additional information, which can and practically always will be used during the interview. Belgium is the only country that thoroughly examines the grounds underlying the application by way of psycho-technical assessment, and in Norway several tests are used to assess the applicant's interest profile.

8.2. Bio-data and biographical questionnaires

The majority of the countries[viii] include the use of biographical questionnaires in their selection procedure. Undoubtedly the primary use of these biographical data is to help the interviewer. In the United States however the primary use is of the data is to be coded and included in the decision making process, and in Australia the bio-data serve the ongoing selection and classification research.

8.3. Psychological interview

Practically all countries set great store by the interview. With the exception of the United States all countries' selection procedure includes one or more psychological interviews.

In most countries the interview is used as a tool to assess occupational motivation, general and social background, reaction to stress and personality factors (e.g. sociability, emotional stability, extraversion, conscientiousness, leadership potential). In Germany the interview is only used to assess all relevant aspects that can not be assessed with other methods (e.g. maturity, communication skills, presentation), or where the available information is inconsistent. In Norway (Army) the interview is used to make a final impression in cases of doubt, or to find the candidates potential for fulfilling the military academy. In Finland a short interview is conducted to help the psychologist to make an overall impression.

The number of persons conducting the interview varies between one and three. In case of one interviewer this is usually a civilian psychologist, civilian psychiatrist (France) or officer being psychologist. Also possible is that the interview is conducted by a selection board, which is normally composed of at least one psychologist and one specialist officer from the stream applied for. A third possibility is that there are more interviews conducted: one or more selection interviews at an earlier assessment stage, and a decisive interview conducted by the selection board at an advanced phase (e.g. Bulgaria, Sweden, New Zealand Army).

A typical psychological interview takes an average of an hour and a half. During this time the interviewer has to prepare his documents, interview the applicant and write a report. In France and Singapore the whole interview procedure takes 10 minutes, in Finland merely 3 minutes. In these countries of course less or no attention can be given to preparation and report writing.

In all countries interviewers have disposal of the applicant's biographical data. In the majority of countries the interviewer is free to consult the applicant's test scores before starting the interview. Though in the Netherlands and the United Kingdom interviewers may not have disposal of previous test results, probably because in these countries the interview is considered to be an independent measure and interference is feared. The same methodological remark counts of course for the applicant's scores on group observation tasks[ix] and academic examinations (which are part of the selection)[x].

In most countries[xi] the applicant's medical profile and physical fitness scores are not at the disposal of the interviewer either because these parts still have to come, or because these scores are of minor importance to the interviewers.

Other sources of information that can be at the disposal of the interviewer are: application forms including school reports, employment history and birth certificate (Australia), pre-selection documents and a pre-selection psychologist reports (New Zealand Army), service records, attestations and job evaluation forms (Norwegian Air Force and Navy), peer assessments and military grades (Sweden).

In Belgium and New Zealand (Army, Navy) the interview style can be described as structured. The advantage of this style is the comparability between applicants and the accompanying increased validity, the disadvantage is the lack at flexibility and the chance that possible valuable information will be overlooked. Three countries

have chosen for the free interview style: Denmark (General), Slovenia and Switzerland (Reserve). Most countries steer a middle course with the semi-structured interview.

In the majority of countries the psychological interview can lead to the rejection of an applicant. Where this is not the case[xii] the interview information is integrated in a (non-) mathematical decision process.

8.4. Observation tasks

In several countries[xiii] the selection procedure includes tasks during which the applicants are observed. Usually applicants have to perform these tasks both in a group and alone. In Denmark the observation tasks for pilots contain merely individual performances, while in Finland, Australia and Denmark (General) observation tasks are exclusively in-group exercises.

Most of the countries use observation tasks to assess personality factors, such as sociability, motivation, initiative, assertiveness, energy level, self-confidence, stress management, etc. Beside these personality factors observation tasks are widely used to assess certain skills, such as communication skills (written and oral), presentational techniques, leadership and organisational skills, etc. Thirdly, observation tasks are used to assess the cognitive abilities: problem solving, general knowledge, quickness of understanding, etc. In some countries observation tasks are considered to be an exquisite method to assess the applicant's physical capacities. This is the case in New Zealand (Army), Switzerland (Reserve), the United Kingdom and the Netherlands (General). In Singapore and Norway (Army) the group tasks also require physical strength, courage and manual dexterity, but apparently these qualities are not to be assessed.

The number of assessors to observe these tasks varies between 1 (Belgium, Norwegian Army and Danish pilots) and 10 (Switzerland Career), with an average of 3 observers.

Observers usually are civilian psychologists and/or specially trained officers.

The number of tasks applicants have to perform varies between 1 (Denmark, Finland) and 25 (Singapore), with an average of 8 tasks.

There is a great variability in length of time: in Denmark (Pilots) the observation time is restricted to 10 minutes, while in New Zealand (Army) the observation tasks take more than 22 hours. On average the tasks all together last more than 6½ hours.

In the majority of countries[xiv] observers confer on the applicant's case in order to achieve a unique set of scores for each applicant.

With regard to the reliability and validity of group tasks we find that apparently no country has conducted a serious statistical analysis on this matter. Moreover, often there are no existing norms (e.g. Norwegian Army, Singapore), or no scores are produced (e.g. New Zealand Air Force). In the latter case the maximum result of the observation is merely a qualitative description of the applicant. Exceptions are the New Zealand Army (norms are established from candidates, who attend the Regular Force Officers Selection Board and Territorial Force Officer Selection Board), and the United Kingdom.

In view of the lack of profound research it isn't very surprising that in most countries[xv] group tasks can't lead to rejection of an applicant.

9. Academic Exams

The most frequently used exams are tests for language (mother tongue and/or second language) and mathematics[xvi]. Other matters that are only examined in one or two countries[xvii] are physics, chemistry, biology, geography, history, general knowledge, cartography and social studies. Dutch pilots have to take a theoretical pre-test for 'Automated Pilot Selection'.

An unsatisfactory mark on these exams doesn't necessary lead to rejection[xviii]. Only in Belgium and Poland the examination scores are used in a mathematical decision process. Everywhere else scores are integrated in a non-mathematical decision process, which usually means that the obtained results are given to the interviewers. In Germany examination scores are used to make a prognosis of academic success.

Often school transcripts are part of the selection procedure. These transcripts can lead to rejection[xix]. Sometimes the transcripts are used in a mathematical decision process[xx], but usually they are integrated in a non-mathematical decision process.

10. Medical Assessment

In all countries with the exception of Sweden and Switzerland (Reserve) the selection procedure includes a medical assessment. For the latter this is rather obvious because the Swiss recruit school select future officers among the NCO's, whose medical status is known.

The medical assessment always includes a general clinical examination and an eyesight test. Hearing is tested in all countries with the exception of Singapore. In several countries[xxi] applicants are tested to detect drug-abuse and HIV (AIDS). Often[xxii] applicants are obliged to do a standard blood and urine test, which is not used to detect drug-abuse or HIV. The majority of countries[xxiii] insert a test to detect disorders of ear, nose and throat, and to examine lung and cardiovascular functions[xxiv]. Often a dental examination is held[xxv]. In some countries X-rays of the thorax[xxvi] and the vertebral column[xxvii] are taken. Night vision is tested in Denmark, Germany, Poland and the Netherlands. The medical assessment for Dutch pilots also includes an allergy skin test. A psychiatric examination is held in France, Germany, Italy and the United States.

The primary aim of the medical assessment is of course to detect disorders on the basis of which applicants can be rejected. For that in Canada and Germany the medical profile scores are integrated in a non-mathematical decision process.

11. Physical Fitness

In Australia, France, New Zealand (Air Force, Army) and Switzerland (Career) the selection procedure doesn't include physical fitness tests. Sit-up, push-up, sprint, shuttle run and long distance run (e.g. Cooper test) are frequently used tests. In 'Appendix B' the different fitness tests and standards per country are summarized. For some countries tests and/or standards were not available.

Physical fitness tests practically always can lead to the rejection of physical minor applicants. Exception is the New Zealand Navy where these tests are used to inform the applicants about the required fitness levels.

12. Classification

After completion of all selection tasks applicants are classified in order to decide which applicants can enlist and for which entry they're admitted. Belgian applicants are ranked according to the results on the academic exams (mathematics and language). In Italy applicants who overcome all six consecutive test are ranked according to the marks obtained in written and oral exams. The New Zealand Navy takes into account following criteria: academic, leadership and personal qualities, potential and job person fit. These criteria are not weighted though. In Singapore peer appraisal receives the highest weight (30%), followed by cognitive tests (28%), education (14%), situational tests (14%) and platoon commander assessment (14%). The Finnish classification system contains a large number of weighted criteria (e.g. results on psychometric tests, results on physical fitness tests, marks at secondary high school). The psycho-technical part receives the highest weight (34%), the physical part the lowest weight (8,5%). Dutch pilots are ranked according to their performance on the 'Practical Pilot Selection' and the 'Automated Pilot Selection System'. In Germany four overall degrees of aptitude are taken into account. In addition to these ten criteria scored on a 7-point scale are used to differentiate between applicants. On the basis of the criteria scores an overall non-weighted sum-score is calculated.

In Poland a classification algorithm optimizing overall allocation payoffs, processes the results.

In the majority of countries the results are reviewed by a selection board which decides who's admitted in a more clinical way. The board usually consists of a civilian or military psychologist and one or more representatives from the service command. In Norway (Air Force and Navy) the selection board makes final decisions based on the different selection components, which are weighted. Again the physical fitness tests are of less importance (10%). The highest weight goes to the academic exams (25%) and the officer and psychological interview (both 20%).

A somewhat different scenario is followed in Australia: once all applicants have appeared before the board, they are graded as either 'recommended' or 'not recommended' for further consideration by the relevant single-service career managers. Recommended candidates are considered in competition with other recommended candidates from across the country. Available positions are filled on a top-down basis as per the philosophy of positive selection. Each of the three services has specific manning targets according to current and projected future requirements.

Another approach applies to Swiss career officers. The different services look for the appropriate number of applicants. They know every candidate personally and hope they will pass the Assessment Center. If applicants fail at the AC the services will look for new applicants.

13. On Enlistment Day

In some countries applicants have to take additional tests on enlistment day in order to be allowed to sign up. In France and Switzerland (Reserve) applicants receive additional academic exams and physical fitness tests. On enlistment day Swiss reservists have to prove their general military knowledge and their knowledge of general tactical decision making, and they have to march 15 km.

In one or two countries[xxviii] there is a brief medical checkup (e.g. urinalysis, dental check, height and weight, general checks for recent illness and injuries).

14. Special Issues

In some countries special attention is paid to the enlistment of female officers. In Canada emphasis lies on recruiting females by 'target recruiting', e.g. aim to recruit 500 females into combat arms. In Norway (Army, Navy) a female applicant is chosen if her total score equals one of the male scores. In the Netherlands (General) there is an explicit minimum and maximum number of women required. While all these preceding regulations are meant to facilitate the enlistment of females, women are simply not admitted in Italy, and in Poland women are not allowed to join the Air Force as pilots.

The Canadian selection procedure also contains elements, which are meant to facilitate the enlistment of certain ethnic groups or minorities. This is realized by means of the 'Northern Native Entry Plan', a 2-week course to help make transition to southern and military culture.

The Canadian selection procedure includes official inputs from the Canadian Human Rights Commission, an authority not belonging to the ministry of defense, which functions to ensure that selection does not include prohibited criteria.

In several countries the selection procedure includes the gathering of information in the natural environment of the applicant. In Australia and Canada schoolteachers' reports and reference letters are used to build up a character profile. In Italy data on criminal convictions of parents, relatives (if any), bankruptcies and similar judicial issues are collected. New Zealand (Air Force) candidates provide copies of testimonials and references of their choice. These are collected by the recruiting staff and are available to all members of the board to consider. Candidates also complete a peer assessment exercise, which is administrated and used by the psychologist in their overall assessment. The New Zealand Army sends an academic performance questionnaire to the candidate's school principal, which is used in the assessment by Recruiting Officers and at the Selection Board when the candidate's academic potential is in doubt. A similar procedure applies to the New Zealand Navy, where the school principal's comments on various criteria are provided to each member of the board. The Norwegian Navy sends 'job evaluation forms' to all former 'leaders' of the applicant, which are used during the interviews. In Sweden information is gathered from soldiers the applicant is commanding as a NCO under training to become a group, platoon or company officer. In Switzerland (Career and Reserve) applicants have to name persons who would recommend them. In addition, authorities would ask career officers under whom the applicant served as a reserve officer. They would be asked about their opinion about the applicant's personality and qualifications.

APPENDIX A: GENERAL SEQUENCE[5]

Australia:

Psychometric testing and interviews are generally completed on Day 1, with the exception of Aircrew candidates, who are often required to return for interviews on the 2nd day. The general sequence is as follows:

Generic Officer Selection Process RAAF/Army/Navy – Day 1
07:30	Arrive for pre-medical check
08:00	Test day briefing by recruiting and psychology staff
08:30 – 13:00	Psychometric testing
13:00 – 15:00	Psychologist interview/debrief + medical examination (run concurrently)
15:00 – 17:00	Recruiting Officer interviews/debriefs

RAAF Aircrew Selection Model – 2 Day Processing
D1 AM	Preliminary Medical
	Psychometric testing
D1 PM	Psychometric testing (continued) – finishes approximately at 15:30
	Unsuitable applicants debriefed by psychologist and Recruiting Officer
D2 (usually, but not necessarily the following day)	
D2 AM	Full Medical
	Psychologist and Recruiting Officer interview/debrief

Belgium:

Day	AM	PM
Day 1	Medical assessment	Physical fitness testing
Day 2	Psychometric testing (Computer)	Paper & Pencil testing
Day 3	Group tasks	Interview

Bulgaria:

Day	AM	PM
Day 1		Arrival and welcome at school Lodging is organized Information with regard to examination halls
Day 2	Mathematics (8:00 – 13:00)	
Day 3	Language (Bulgarian)	
Day 4	e.g. Physical tests (8:00 – 14:00)	
Day 5	e.g. Psychometric tests (8:00 – 14:00)	
Day 6	e.g. Medical examination (8:00 – 14:00)	

The applicants, who're hold back after completion of mathematics and language, are divided into three groups. The first group receives on Day 4 the physical tests, on the 5th Day the psychometric tests, and on Day 6 the medical examination. The second group receives on Day 4 the psychometric tests, on Day 5 the medical examination, and on Day 6 the physical tests. The third group receives on Day 4 the medical examination, on Day 5 the physical tests, and on Day 6 the psychometric tests. Testing takes place from 8:00 till 14:00.

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[5] A chronological overview of the applicant's activities during the days of the selection procedure is roughly sketched. The succession of days is mentioned in case that this question was answered.

Canada (Pilots): *Canadian Automated Pilot Selection System (CAPSS)*

Day	AM	PM
Day 1	Navigator test	Session I (CAPSS)
Day 2	Session II	Session III
Day 3	Session IV	Medical
Day 4	Medical	Medical
Day 5	Medical	Medical

Days are successive.

Canada (Navy): *Naval Officer Assessment Board (NOAB)*

Day	AM	PM	Evening
Day 1	Realistic Job Preview Tours & briefing	Realistic Job Preview Tours & briefing	
Day 2	Essay	Realistic Job Preview	Fireside chat with officers
Day 3	Testing	Realistic Job Preview	Fireside chat with NCO's
Day 4	Interview Board	Realistic Job Preview	Meet & greet with staff and board

Days are successive.

Denmark (General):

Day	AM	PM
Day 1	Paper & pencil tests	Group observations Psychological interviews
Day 2	Physical tests	Psychological interviews
Day 3	Board	

Days are successive.

Denmark (Pilots):

Day	AM	PM
Day 1	Paper & pencil tests	Paper & pencil tests Autobiographical questionnaires
Day 2	Psychomotor tests	Psychomotor tests
Day 3	Interview	Selection Board

Days are successive.

Finland:

Day	AM	PM	Evening
Day 1	Registration Opening ceremony Lunch	12:00 → … Interview Physical fitness tests Psychological tests 1 Dinner	17:00 → … Psychological tests 2 Group tests
Day 2	Medical examination Lunch	Psychological tests Dinner	Psychological tests
Day 3	Psychological tests 12 minute run (Cooper)	Psychological tests Farewell speech	

The above overview is an example. Timing and chronology vary with groups.
Days are successive.

France:

Day	AM	PM
Day 1	Medical examination Psychological tests (ESPACE)	Information Interview
Day 2	Information Interview	

Germany:

Day	AM	PM	Evening
Day 1			Welcome adress Information Autobio. Questionnaire
Day 2	Essay test Intelligence test Career counseling	Board interview Mathematical test Study counseling	
Day 3	Group observation task Medical check-up Special tests	Physical fitness tests Information results	
Day 4	Enrolling discussion and enlistment		

On Day 2 ad 3 there are nine different sequences. Days are successive.

Italy:

Day	AM	PM
Day 1	Preliminary test of general culture	If necessary
Day 2	Test of physical efficiency	Idem
Day 3	Medical check-up	Idem
Day 4	Psychological test	Idem
Day 5	Written exam	Idem
Day 6	Oral exam	Idem

The selection days are not consecutive: selection procedure starts normally in April and ends in September.

The Netherlands (General):

Day	AM	PM
Day 1	Recruiting station	
Day 2	Ability tests	Personality tests
Day 3	Interview	
Day 4	Medical examination	Physical fitness test
Day 5	Selection Board	

The Netherlands (Pilots):

Day		
Day 1	Personality questionnaires Ability tests Biometry	
Day 2	Interview	Medical examination
Day 3	Flight medical examination	
Day 4-7	Automated Pilot Selection System	
Day 8-11	Practical Flying Selection	

New Zealand (Air Force):

Day	AM	PM
Day 1		Arrival Socialize / Get together Dinner
Day 2	Psychological aptitude testing	Group exercises
Day 3	Group and individual exercises	Interview by psychologist Assessment
Day 4	Interviews	Final interview or debrief Medical examination (if successful)
Day 5	Breakfast Medical examination (x-rays) Depart for home	

Days are successive.

New Zealand (Army):

Regular Officer Selection

Day	AM	PM	Evening
Day 1		Candidates arrive	Briefing
Day 2	Board President opening address Personality quest. Interviews	Interviews continue Essay continues	Interviews continue if required, otherwise free social time
Day 3	Interviews Autobiography Range shoot	Interviews continue Autobiography Range shoot	Free social time
Day 4	Candidates meet military testing officers Leaderless group activity	Individual problem solving Planning exercise Physical assessment	Individual problem solving Planning exercise Buddy rating exercise Free social time
Day 5	Group problem solving Public speaking exercise APC notes	Chairmanship exercise Command tasks	
Day 6	Buddy rating exercise Returning equipment President interview	Successful candidates interview with military secretary	Candidates depart for home

Days are successive.

Territorial (Part-time) Officer Selection

Day	AM	PM	Evening
Day 1		Candidates arrive	Briefing Board President opening address
Day 2	Personality quest. Essay Interviews	Interviews continue	Interviews continue if need be
Day 3	Candidates meet military testing officers Leaderless group activity	Group problem solving Individual problem solving Planning exercise Physical assessment	Chairmanship exercise
Day 4	Command tasks Buddy rating exercise President interview	Returning equipment Successful candidates interview with military secretary	

Days are successive.

New Zealand (Navy):

Day	AM	PM	Evening
Day 1	Psychometric testing Ship visit Run test (to provide info about standards only)	Practice at planning and leadership exercises	Discussion with officer from specialisation applying for
Day 2	2 min speech about self Group discussion ex. Management exercise Group planning exercise Leadership exercise	Interviews	

Days are successive.

Norway (Air Force & Navy):

Day	
Day 1	General theoretical ability tests English test Society-orientated test
Day 2	Officer interview Psychological interview Physical fitness test Medical tests

Norway (Army):

Day	
Day 1	General theoretical ability tests English test Society-orientated test Group tasks
Day 2	Physical fitness test Group tasks Medical requirements
Day 3	Group observation task Psychological interview
Day 4	Group observation task Officer interview

Days 2, 3 and 4 are successive.

Poland:

Day	AM	PM
Day 1	Medical and physical examination	
Day 2	Psychological testing	
Day 3	The applicants perform flight on the simulator (2 trials)	Centrifuge examination
Day 4	The applicants perform flight on the simulator (2 trials)	Low pressure chamber examination
Day 5	The final conclusion and ranking list	

Slovenia:

Day	
Day 1	Medical examination
Day 2	Psychological testing
Day 3	Fitness examination

The selection days are not (necessarily) consecutive.

Sweden:

Day	
Day 1	Psychological tests
	Scoring takes 14 days ↓
Day 2	Fitness examination
	1 or 2 days in between ↓
Day 3	Selection board

The selection days are not consecutive.

Switzerland (Career):

The subsequent information refers only to the final part of the selection procedure, the so-called Assessment Center.

Day	AM	PM	Evening
Day 1		Arrival Exercise 'presentation'	Psychometric tests
Day 2	Several exercises: Leaderless group discussions Motivational talks, …		Different tasks that are carried out individually
Day 3	Several exercises: Short cases, giving a lesson		

Days are successive.

The United States:

Day	AM	PM	Evening
Day 1	Medical exam		
Day 2	Physical aptitude exam		

The selection days are not consecutive.

APPENDIX B: PHYSICAL FITNESS TESTS

Belgium

1) Balance beam: forward (second attempt possible)
2) Shuttle-run (4 x10 meters sprint): 12,6 sec
3) Trial of strength: 860 Newton
4) Endurance test: 330 sec

These are the minimum scores to obtain 8/20 on each test. However applicants should reach 40/80.

Bulgaria

1) 100 m sprint:
   Male: 15,6 sec   Female: 17,2 sec
2) 1000 m
   Male: 4 min 10   Female: 4 min 40
3) Pull-ups (only for males)
   6 times
4) Sit-ups (only for females)
   15 times in 30 sec

Canada (Army, Navy and Pilots)

1) Step test (equivalent to time to complete a 1.5 mile run)
   <30 years 11.56   >30 years 14.26
2) Push-ups
   Male <35= 19   >35= 15
   Female <35= 9   >35= 7
3) Sit up
   Male <35= 19   >35= 17
   Female<35=15   >35= 12
4) Hand grip (combined total of both hands)
   Male <35=75kg   >35=73kg
   Female <35=50kg   >35=48kg

Denmark (General)

Running 12' (Cooper test)
Minimum 2400 meters for both males and females

Finland

1) Running 12' (Cooper test)
Minimum 2600 meters for both males and females
2) Abdominal muscle fitness
   32 times for both males and females
3) Dorsal muscle fitness
   40 times for both males and females
4) Push-ups
   22 times for both males and females (females with knees on the ground)
5) Putting the chin to the bar
   6 times for both males and females

Germany

1) Pendulum-run
    Male: 9,9 sec Female: 11,0 sec
2) Sit-ups
    Male: 24   Female: 19
3) Long jump from standing
    Male: 2,05 m Female: 1,57 m
4) Push-ups
    Male: 16   Female: 14
5) Running 12' (Cooper test)
    Male: 34   Female: 29

Italy

1) 1000 m flat racing
    Less then 4 min 15 sec
2) High jump
    1 meter
3) Long jump
    3 meter
4) Bar traction
    3

The Netherlands (Pilots)

1) Sit-ups
2) Push-ups
3) Jump from stand still
4) Arm - shoulder hanging
5) 10 x 5 m. sprint
6) Interval run test with increasing speed limits

New Zealand (Navy)

2 mile running test

-   <30 year minimum
    Male = 15:30 min   Female = 17:30 min
-   30 - 39 year
    Male = 16:30 min   Female = 18:30 min
-   40 - 49 year
    Male = 17:30 min   Female = 19:30 min

Norway (Air Force)

1) 3000 m run
    Male: 13 min Female: 14.30 min
2) Push-ups
    Male: 20   Female: 12
3) Sit ups
    25 times for both males and females
4) 200 m swimming

Norway (Army)

1) 3000 m run
   Male: 13 minFemale: 14 min
2) Pull-ups
   Male: 5   Female: 6
3) Push-ups
   Male: 20   Female: 12
4) Sit-ups
   Male: 25   Female: 25

These are requirements for a 2, the lowest passing grade on a scale from 1 to 6. For pull-ups, push- ups and sit-ups, a median grade of 2 is required to pass.

Norway (Navy)

1) 3000 m run
   Male: 14 minFemale: 15 min
2) Pull-ups
   Male: 4   Female: 5 (different exercise)
3) Push-ups
   Male: 16   Female: 10
4) Sit-ups
   Male: 20   Female: 20
5) 200 m swimming
   Male: 5 min Female: 5,15 min

Poland

1) Swimming 50 m
2) Running 100 m
3) Running 1000 m
4) Pull-ups minimum 2

Singapore

1) 2,4 km run
   Male: 13 minFemale: 17 min
2) Individual physical proficiency test
3) Sit-ups
   Male: 28   Female: 21
4) Standing broad jump
   Male: 207 cm   Female: 150 cm
5) Chin-up
   Male: 4   Female: 4 (inclined)
6) Shuttle run
   Male: 10,9 sec   Female: 12,7 sec
7) 500 m swim
   Male: 15 minFemale: nil
8) 8 km cycling
   Male: 19 minFemale: nil
9) Standard obstacle course
   Male: 10min30sec   Female: 10min30sec (in clean fatigue)

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Slovenia

1) Speed of reaction (target hitting)
2) Power of arms (hanging in joint)
3) Taping (speed of simple movement)
4) Polygon-backwards (co-ordination)
5) Lifting of body (power of body)
6) Pulling in crouch (power of legs and body)
7) Reverence-bow (mobility)

Sweden

Running 12' (Cooper test)

Switzerland (Reserve)

There is a standard test in the army but the selecting officers are free
- to administer it or not
- to fix cut off scores

U. S. Military Academy (Army):

Physical Aptitude Exam (PAE) (For entrance):

	Men	**Women**
Pull-ups (men)	*	*
Flexed arm hang (women)	*	*
Standing Long Jump	*	*
Basketball Throw	*	*
300-yard Shuttle	*	*
Push-ups	42	19

* There are no minimums in these categories. All applicants are tested and scored, and then the population is divided into quintiles. Passing is then defined as scoring above the median (halfway through the middle quintile). Applicants may fall below this line in one or more categories and still be considered passing based on performance in other events.

Army Physical Fitness Test (APFT) (For graduation):

	Men	**Women**
Push-ups	40	17
Sit-ups	50	50
2 mile run	16:36	19:36

U. S. Naval Academy:

Physical Aptitude Exam (PAE):

	Men	**Women**
Push-ups (2 min)	40	18
Sit-ups (2 min)	65	65
1,5 mile run	10:30	12:40

U. S. Air Force Academy:

Candidate Fitness Test (for entrance):

	Men **Minimum/Average**	**Women** **Minimum/Average**
Pull-ups	4/10	1 / 2
Push-ups (2 min)	24/41	9/24
Sit-ups (2 min)	49/69	46/68
300-yd shuttle run	65/60 sec.	79/69 sec.

Physical Fitness Test (PFT) (For graduation):

	Men	**Women**
Pull-ups	7	1
Long Jump	7'	5'9''
Push-ups	35	18
Sit-ups	58	58
600-yd run	2:03	2:23

This test must be completed within 15 minutes. Each event is scored for points, and a total of 180 points achieved, including passing each event. Simply achieving minimums in each area will not equate to a assing score. In addition, a 1,5-mile run must be completed at a separate testing event with maximum times
of 12:25 for men or 14:17 for women.

Endnotes

2.   Legal Framework

[i] Not so in Finland and Switzerland (Career)

4.   General Sequence

[ii] Belgium, Bulgaria, Finland, France, Italy, Poland, Singapore, Slovenia and the United States

5.   Recruiting Station

[iii] Australia, Belgium, Bulgaria, Canada, Denmark (General), France, Germany, Italy, the Netherlands (General), New Zealand (Army, Air Force and Navy), Norway (Navy), the United Kingdom and the United States
[iv] Australia, Canada (Army), Germany, France and New Zealand (Army and Air Force)

7.   Psycho-technical assessment

[v] Australia, Canada, Denmark (General), Italy, the Netherlands (General), New Zealand (Army, Navy), Norway, Slovenia and Switzerland
[vi] Bulgaria, France, Poland, Slovenia, New Zealand (Air Force) and the United Kingdom
[vii] Exceptions are Bulgaria, Canada (Navy), Sweden, Singapore, Germany, Poland and New Zealand (Navy).
[viii] Exceptions are the United Kingdom, Slovenia and Finland.
[ix] Information is available to interviewers in Belgium, Denmark (General), Germany and New Zealand (Army, Navy).
[x] Information is available to interviewers in Denmark, New Zealand (Air Force, Navy), Norway (Air Force, Navy) and Switzerland (Reserve).
[xi] Exceptions are Australia, Belgium, France, Poland and Slovenia with regard to the medical profile, and Belgium, Poland, Slovenia and Switzerland (Reserve) with regard to physical fitness scores.
[xii] Bulgaria, Denmark, Germany, Poland, the Netherlands (General), New Zealand (Air Force, Navy), Norway (Air Force, Navy), Slovenia and the United Kingdom

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[xiii] Australia, Belgium, Denmark, Finland, Germany, the Netherlands (General), New Zealand, Norway (Army), Singapore, Switzerland and the United Kingdom

[xiv] Exceptions are Finland, Germany, New Zealand (Army, Navy) and Singapore where the co-observers are not consulted.

[xv] In Switzerland and Norway (Army) group tasks can lead to rejection, which always takes place on the basis of a non-mathematical decision process. In practically all other countries where group tasks are used the observation information is integrated in a non-mathematical decision process. This usually means that the obtained information is used in the interview setting for further exploration of the applicant's personality (e.g. Belgium). Only in Singapore group task scores are used in a mathematical decision process.

8. Academic Exams

[xvi] Language is assessed in Belgium, Bulgaria, Denmark, France, Italy, New Zealand (Air Force), Norway, Poland, Switzerland (Reserve), the United Kingdom and the United States; Mathematics: Belgium, Bulgaria, Denmark, France, Germany, Italy, New Zealand (Navy, Air Force), Norway, Poland and the United States

[xvii] Physics: New Zealand (Air Force), France and Poland; Chemistry and biology: New Zealand (Air Force); Geography, history: France and New Zealand (Air Force); General knowledge: Denmark (General), Italy; Cartography: France; Social studies: Norway

[xviii] In Belgium, Bulgaria, France, Italy, the Netherlands (Pilots), Norway (Army), Poland, the United Kingdom and the United States

[xix] In Norway, Sweden, New Zealand (Army), Germany, Australia, Canada, the United Kingdom and the United States

[xx] In Finland, Singapore and Norway (Air Force, Navy)

9. Medical Assessment

[xxi] In Germany, Italy, New Zealand (Navy), Slovenia and the United States applicants are tested to detect drug-abuse. In Italy, Poland and the United States there are tests to detect HIV (AIDS).

[xxii] In Belgium, Italy, Bulgaria, Denmark (Pilots), Canada, Poland, New Zealand (Air Force), Germany, Slovenia, the Netherlands (Pilots) and the United States

[xxiii] This is not the case in Denmark (General), New Zealand (Army) and Singapore.

[xxiv] Lung functions are tested in Canada, Denmark (Pilots), Germany, Italy, New Zealand (Air Force, Navy), Norway (Air Force, Navy), Poland and the United States. Cardiovascular functions are tested in all countries with the exception of New Zealand (Army), Norway (Air Force) and Singapore.

[xxv] In Bulgaria, Denmark (Pilots), Poland, Italy, Germany, France, the Netherlands and the United States

[xxvi] In Bulgaria, Italy and Poland

[xxvii] In Germany, Belgium, Italy, Poland and the Netherlands (Pilots)

12. On Enlistment Day

[xxviii] Australia, Belgium, France, New Zealand (Air Force) and the United Kingdom

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Chapter 4B

REPRODUCTION OF THE ACTUAL QUESTIONNAIRE

NATO Research and Study Group 31
'On Officer Selection' Survey

Introduction

This survey on officer selection was initiated for the NATO Research and Study Group 31 'On Officer Selection' (Defence Research Group/Panel VIII). Its primary purpose is to gather information about the current officer selection methods used in different countries in a structured way. That information will then be reviewed to obtain an overview of current practice and the Research and Study Group will address major differences between the used methods. It is intended to produce a NATO-report covering both the results of the survey and the subsequent research findings. A workshop on officer selection is also to be held, probably by the end of 1999.

We'd be very pleased if you would take some time to complete this survey. In return we offer you to send you a copy of the report when it's published and keep you informed about the workshop.

We'd also appreciate when you would join some available material such as existing descriptions of the selection procedure, information sent or distributed to the applicants or advertising material on the officer careers.

If you experience some difficulties in completing the survey or have problems understanding the meaning of some questions, please don't hesitate to contact us. You'll find the address of the Point of Contact for this survey on the last page.

Part 1. Selection identification.

This first part is meant to identify the selection(s) that will be described below. For each distinct selection (Army versus Air Force, Career personnel versus reservists, ...) a separate copy of this survey needs to be completed. If the same procedure is applied to different types of selections however, one copy is sufficient to describe them all.[6]

Q 1.1.   In which country does this selection procedure apply?

Country: ....

Q 1.2.   For which Service(s) does this selection procedure apply?

☐ Army   ☐ Navy   ☐ Medical corps
☐ Air Force   ☐ Marines   ☐ Coast Guard
☐ Military police force (Marechaussee, Gendarmerie,...)
☐ Other (specify): ....

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[6] In the event that two selection procedures only differ on a very limited number of aspects, you can complete one form only and specify the differences at the end of the survey.

Q 1.3.   For which career-opportunity (-ies) does the selection procedure apply?

        ☐ Career officer
        ☐ Limited time contract
        ☐ Reserve officer
        ☐ Specialist (requiring an educational degree, higher than highschool)
        ☐ Other (specify): ....

Part 2. Legal framework

Q 2.1.   Is there a legal framework governing some aspects of the selection procedure?

        ☐ Yes
        ☐ No (if no, please go to Q 3.1.)

Q 2.2.   Please check the aspects that are specified by law.

☐ Prerequisites to apply:	☐ Age
	☐ Nationality
	☐ Educational level
	☐ Juridical antecedents[7]
	☐ Gender
	☐ Ethnicity
	☐ Other (specify):............................
☐ Psychometric tests	☐ Content of the tests
	☐ Test names
	☐ Standards to be met
☐ Psychological interview	☐ Content of the interview
	☐ Qualifications of the interviewer(s)
	☐ Standards to be met by the applicant
☐ Group observation tasks[8]	☐ Content of the tasks
	☐ Qualifications of the observer(s)
	☐ Standards to be met by the applicant
☐ Medical requirements	☐ Content of the examinations
	☐ Standards to be met
☐ Physical fitness tests	☐ Content of the tests
	☐ Standards to pass the tests
☐ Academic exams[9]	☐ Content of the exams
	☐ Standards to pass the exams
☐ Selection & Classification method	☐ Criteria to rank the applicants
	☐ Overall thresholds to be met
	☐ Selection board

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[7] This is about involvement with the judicial systems (arrests, condemnations)
[8] These are situations where a (leaderless) group of applicants is observed while performing some standardized task such as used in assessment centres or selection boards.
[9] Such as university entry exams or scholastic aptitude tests

Part 3. General options

The preceding part dealt with what is specified by law. In this and subsequent parts, we will ask you to describe the actual selection procedure regardless of the fact whether the elements of the procedure are defined by law, by policy-makers or by other people involved in the selection process.

Q 3.1.　What is the frequency of the enlistments resulting from the described selection procedure?

    ☐ Annual
    ☐ Semi annual
    ☐ Monthly
    ☐ Other (specify): ....

Q 3.2.　Who is in charge of the selection procedure?

    ☐ The training facility for which the applicants are selected (e.g. Military Academy)
    ☐ A Selection Center
    ☐ Other Please specify: ....

Part 4 General sequence

Q 4.1.　Can you sketch a rough chronological overview of the applicant's activities during the day(s) of the selection procedure? (Please add additional days if necessary)

Day *	AM	PM	Evening
Day 1			
Day 2			
Day 3			
Day 4			
Day 5			
Day 6			

Q 4.2.　Are the different days successive? Please circle the days that usually correspond to successive calendar days. (Please add additional days if necessary)

    D1-D2   D2-D3   D3-D4   D4-D5   D5-D6

Q 4.3.　If some days within the selection procedure are consecutive, is there accomodation provided to the applicants?

    ☐ Yes
    ☐ No (if no go to Q 4.5.)

Q 4.4.　Is that lodging located within military quarters or outside (e.g. in a hotel)?

    ☐ Inside military quarters
    ☐ Outside military quarters

Q 4.5.   Has the applicant to pay for his transportation from home to the place where he/she undergoes the selection?

    ☐ Yes
    ☐ No Who pays for it?: ....

Part 5 Recruiting station

The next questions concern the 'Recruiting Stations'. These are typically places where the applicants can receive information, where they meet 'recruiters' and where they can complete application forms. Usually these Recruiting stations do not perform selection operations as such and are not to be confused with the 'Selection Centers' that are discussed below.

Q 5.1.   Are there Recruiting stations to help with the recruitment for which the selection procedure is described in this survey?

    ☐ Yes
    ☐ No (if no, please go to Q 6.1.)

Q 5.2.   Are the applicants <u>obliged</u> to pay a visit to the Recruiting station?

    ☐ Yes. Please specify why: ....
    ☐ No

Q 5.3.   Do the applicants take (screening.-) tests at the Recruiting station?

    ☐ Yes. Please specify which: ....
    ☐ No (if no, please go to Q 5.5.)

Q 5.4.   What is the purpose of these tests at the Recruiting station?

    ☐ To prepare the applicants to take the tests at the Selection center.
    ☐ To inform the applicants about his/her abilities and probabilities of success.
    ☐ To provide vocational counseling.
    ☐ To prevent applicants with low scores to start the selection procedure.
    ☐ Other. Please specify: ....

Q 5.5.   Do the applicants receive material to prepare themselves for taking the selection tests?

    ☐ Yes Please specify what kind of material: ....
    ☐ No

Part 6 Application

The next questions are related to the prerequisites that have to be met by the applicants for their application to be acceptable.

Q 6.1.   Are there requirements related to the applicant's age?

    ☐ Yes
    ☐ No (if no, please go to Q 6.3.)

Q 6.2.   Which are the minimum and/or maximum age of the applicants?

    Minimum age: ....
    Maximum age: ....

Q 6.3.   Do the applicants have to belong to the nationality of the country organizing the selection procedure?

☐ Yes
☐ No

Q 6.4.   Can both genders apply for this selection procedure?

☐ Yes
☐ No Please specify: ......……...

Q 6.5.   Is there a minimum level of education required to be eligible to apply?

☐ Yes Please specify level and indicate the age at which a 'normal' youngster would have reached that level: …....................................
☐ No

Q 6.6.   Can applicants be rejected because of certain judicial antecedents?

☐ Yes Please specify: ..…………………...
☐ No

Q 6.7.   Can an applicant who failed for this selection procedure apply again?

☐ Yes Please specify how long they have to wait before applying again: ………….
☐ No

Part 7 Psychotechnical assessment

7.1. Testing (This part excludes academic examinations)

Q 7.1.1.   Does the selection procedure include psychometric tests[10]?

☐ Yes
☐ No   (if no, go to Q 7.2.)

Q 7.1.2.   What is the total testing time during the selection procedure? (Including time for instructions)

…...hours   …... minutes (in average)

Q 7.1.3.   How are these tests presented?

☐ Paper and pencil only (if p&p only, go to Q 7.1.5.)
☐ Computer only
☐ Both

Q 7.1.4.   Please check hardware features available for the computer testing.

☐ Joysticks Please specify one or two: ......
☐ Pedals Please specify one or two: ....
☐ Specially designed keyboard
☐ Regular keyboard
☐ Mouse
☐ Color screen
☐ Specific devices to prevent an applicant to watch another applicant's screen
☐ Other special feature. Please specify: ....

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[10] By tests we understand measurement instruments developed according to rigorous psychometric rules. Exams are not to be considered as tests.

Q 7.1.5.   What test development methodology has there been used?

       ☐ Classic theory
       ☐ Item response theory
       ☐ Both

Q 7.1.6.   How are the tests presented?

       ☐ Sequentially (all applicants are supposed to take all items)
       ☐ In an adaptive way (item choice is based upon previous answers)
       ☐ Both

Q 7.1.7.   Are these tests speed tests or power tests?

       ☐ Speed
       ☐ Power
       ☐ Both

Q 7.1.8.   Can poor test scores lead to rejection of an applicant, regardless of other parts of the selection procedure?

       ☐ Yes
       ☐ No (if no, please go to Q)

Q 7.1.9.   Which kind of tests can lead to rejection? Please specify if possible

       ☐ Abilities: ....
       ☐ Personality: ..…...
       ☐ Motivation: ....
       ☐ Vocational interests: ....
       ☐ Other: ....

NOTE: Please copy this sheet in sufficient numbers before completing it!

We now would like you to complete a separate copy of this sheet for <u>each</u> test used in the described selection procedure.

Please specify the name of the test: ………………………………………………..............

Q 7.1.10. Which aspect does this test attempt to measure? (<u>Please specify</u>)
    ☐ Abilities: ....
    ☐ Personality: …………………………………….............................
    ☐ Motivation: ....
    ☐ Vocational interests: ....
    ☐ Other: ………...................………………………………..............

Q 7.1.11. What is the number of items (usual number if adaptive): ..……...........

Q 7.1.12. What is the testing time (Excluding instructions) (usual time if adaptive): …………

Q 7.1.13. Please check the appropriate boxes:
    Test construction: ☐ Classic   ☐ Item response theory
    Test presentation: ☐ Paper & pencil ☐ Computerized
    Test presentation: ☐ Sequential   ☐ Adaptive
    Test kind: ☐ Speed   ☐ Power

Q 7.1.14. What is the origin of the test?
    ☐ Own development
    ☐ Purchased or developed by contractor
    ☐ Obtained from foreign Military organizations
    ☐ Adapted from existing test
    ☐ Other: Please specify: ....

Q 7.1.15. Test reliability: Please specify used method and obtained reliability coefficient:
………………………………………………….......................................

Q 7.1.16. Test validity: Please specify used method (and if applicable, used external criterion) and obtained validity coefficient:
…………..

Q 7.1.17. Existing norms: Please specify against which group or population the scores of the applicants are compared:
....
....

7.2. Biodata and biographical questionnaires

Q 7.2.1. Does the selection procedure include the use of biodata or biographical questionnaires?

      ☐ Yes
      ☐ No (if no, please go to Q 7.3.1.)

Q 7.2.2. What is the primary use of these biographical data?

      ☐ To help the interviewer
      ☐ To be coded and included in the decision making process
      ☐ Other. Please specify: ....

7.3. Psychological interview[11]

Q 7.3.1.   Does the selection procedure include one or more interviews aimed at the assessment of the applicant's personality?

      ☐ Yes, one interview
      ☐ Yes, two or more interviews
      ☐ No (if no, please go to Q 7.4.1.)

Q 7.3.2.   Who conducts the psychological interview? If more than one person conducts the interview, please specify the number of each qualification (If for instance two civilian psychologists conduct a psychological interview, check the box preceding 'Civilian psychologist(s)' and indicate 2 as 'Number'.

      ☐ Officer psychologist(s). Number: …………………........
      ☐ Civilian psychologist(s). Number: …………….............
      ☐ Officer(s) (not being psychologists, but specifically trained). Number: ………….
      ☐ Other Please specify qualifications and numbers: ....

Q 7.3.3.   How long were these interviewers trained <u>specifically</u> for these interviews (Excluding e.g. training to become psychologist)?

      Theoretical training: ………
      Practical training: ….……..

---

[11] This is not a specific <u>recruitment</u> interview which can be described in questions 7.4

Q 7.3.4.   How long does a typical psychological interview last?

    ☐ For the preparation: ......…............minutes
    ☐ For the interview: ....…............minutes
    ☐ For writing the report: ..……........minutes

Q 7.3.5.   Which information does the interviewer have before starting the interview?

    ☐ The applicant's test scores
    ☐ The applicant's biographical data
    ☐ The applicant's medical profile
    ☐ The applicant's physical fitness scores
    ☐ The evaluation of group observation tasks
    ☐ The applicant's scores on academic examinations (which are part of the selection)
    ☐ Other. Please specify: ....

Q 7.3.6.   How is this information provided to the interviewer?

    ☐ By means of a file
    ☐ On a computer screen
    ☐ Other. Please specify: ....…………………………...

Q 7.3.7.   How would you describe the interview style?

    ☐ Structured
    ☐ Semi structured
    ☐ Free

Q 7.3.8.   What aspects are assessed during the psychological interview? (If available, please attach an interview sheet, used by the interviewer)

    ……………………………………………………………………………………….

Q 7.3.9.   What elements are contained in the interview report?

    ☐ A <u>qualitative</u> evaluation of the applicant (in classes such as 'very good', 'good', ...)
    ☐ A <u>quantitative</u> evaluation of the applicant (score(s)
    ☐ A written psychological portrait of the applicant
    ☐ Specific recommendations to help the instructors when the applicant is enlisted
    ☐ Other. Please specify: ....

Q 7.3.10.   What is the use of the psychological interview within the selection procedure?

    ☐ It can lead to rejection of an applicant
    ☐ The interview scores are used in a mathematical decision model
    ☐ The interview information is integrated in a non-mathematical decision process
    ☐ Other. Please specify: ....

7.4. Other interviews

Q 7.4.1.   Does the selection procedure include other interviews?

    ☐ Yes
    ☐ No (if no, please go to Q 7.5.)

Q 7.4.2.   Could you please describe for each additional interview: its aim, who conducts it, how long does it last, what is its outcome (scores, qualitative evaluation, ...) what is its use within the whole procedure.

....
....
....………………………………………………………
…………..

7.5. Observation tasks

Q 7.5.1.   Does the selection procedure include tasks during which the applicants are observed?

    ☐ Yes
    ☐ No (if no, please go to Q 7.6.1.)

Q 7.5.2.   Does the applicant have to perform these tasks alone or in group?

    ☐ Alone (if alone, please go to Q 7.5.5.)
    ☐ In group
    ☐ Both

Q 7.5.3.   How many applicants are there in each group?

    Minimum:....   Maximum:....

Q 7.5.4.   How about the gender composition of the groups?

    ☐ The groups are <u>not mixed</u> with respect to gender
    ☐ The groups are <u>mixed</u> with respect to gender

Q 7.5.5.   The group tasks require ...

    ☐ Physical strength
    ☐ Courage
    ☐ Manual dexterity
    ☐ Leadership capabilities
    ☐ Communication skills

Q 7.5.6.   How many observers are there to observe the tasks?

    ☐ one   ☐ two   ☐ three   ☐ four   ☐ more: ....

Q 7.5.7.   What are the qualifications of the observers?

(E.g. 1 senior officer with two weeks of training, 1 civilian psychologist,...)
....
....
....

Q 7.5.8.   How many tasks do the applicants have to perform?

Number of tasks: ......

Q 7.5.9.   Are these tasks performed inside buildings or outside?

☐ Inside
☐ Outside
☐ Both
☐ Depending on the weather conditions

Q 7.5.10.   How long do all these tasks last together? (<u>Observation time only</u>)

.... hours .... minutes

Q 7.5.11.   If there are more than one observer, do they discuss their observations in order to achieve a unique set of scores for each applicant?

☐ Yes
☐ No

Q 7.5.12.   What dimensions are to be assessed? (If available, attach a scoring sheet used by the observers)
....
....

Q 7.5.13.   Group task reliability: Please specify used method and obtained reliability coefficient:
....
....

Q 7.5.14.   Group task validity: Please specify used method (and if applicable, used external criterion) and obtained validity coefficient:
....
....

Q 7.5.15.   Existing norms: Please specify against which group or population the scores of the applicants are compared:
....
....

Q 7.5.16.   What is the use of the group tasks within the selection procedure?

☐ It can lead to rejection of an applicant
☐ The group task scores are used in a mathematical decision model
☐ The observation information is integrated in a non-mathematical decision process
☐ Other. Please specify: ....

Part 8. Academic exams

Q 8.1.   Does the selection procedure include academic examinations?

☐ Yes
☐ No (if no, please go to Q 8.4.)

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Q 8.2.   What subjects are assessed?

☐ Language
☐ Mathematics
☐ Physics
☐ Chemistry
☐ Biology
☐ Geography
☐ History
☐ Other Please specify: ...……………...

Q 8.3.   What is the use of the academic examinations within the selection procedure?

☐ They can lead to rejection of an applicant
☐ The examination scores are used in a mathematical decision model
☐ The examination scores are integrated in a non-mathematical decision process
☐ Other. Please specify: ....

Q 8.4.   Are school transcripts used in the selection procedure?

☐ Yes
☐ No (if no, please go to Q 9.1.)

Q 8.5.   What is the use of the school transcripts within the selection procedure?

☐ They can lead to rejection of an applicant
☐ The school transcripts are used in a mathematical decision model
☐ The school transcripts are integrated in a non-mathematical decision process
☐ Other. Please specify: ....

Part 9. Medical assessment

Q 9.1.   Does the selection procedure include a medical assessment?

☐ Yes
☐ No (if no, please go to Q 10.1.)

Q 9.2.   What elements are assessed during the medical checkup? Please indicate who performs each examination.

Examination	Nurse	Medical doctor (general practitioner)	Medical doctor (specialist)
☐ Test to detect drug-abuse	☐	☐	☐
☐ Test to detect HIV. (AIDS)	☐	☐	☐
☐ Blood test (not for drugs or HIV)	☐	☐	☐
☐ Urine test (not for drugs or HIV)	☐	☐	☐
☐ General clinical examination	☐	☐	☐
☐ Eyesight	☐	☐	☐
☐ Night vision	☐	☐	☐
☐ Hearing	☐	☐	☐
☐ Ear, nose and throat	☐	☐	☐
☐ Lung functions	☐	☐	☐
☐ Cardio vascular functions	☐	☐	☐
☐ Dental examination	☐	☐	☐ dentist
☐ X-rays of the thorax	☐	☐	☐
☐ X-rays of the vertebral column	☐	☐	☐
☐ Psychiatric examination	☐	☐	☐
☐ Other: specify:..	☐	☐	☐

Q 9.3.   What is the use of the medical examinations within the selection procedure?

☐ They can lead to rejection of an applicant
☐ The medical profile (scores) is used in a mathematical decision model
☐ The medical profile (scores) is integrated in a non-mathematical decision process
☐ Other. Please specify: ....

Part 10. Physical fitness

Q 10.1.   Does the selection procedure include physical fitness tests?

☐ Yes
☐ No (if no, please go to Q 11.1.)

Q 10.2. Please describe briefly the different fitness tests and mention which standards have to be met (when applicable, specify different standards for males and females)

Physical fitness test (Please add rows if necessary)	Minimum for males	Minimum for females
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....

Q 10.3.   What is the use of the physical fitness tests within the selection procedure?

       ☐ They can lead to rejection of an applicant
       ☐ They are used in a mathematical decision model
       ☐ They are integrated in a non-mathematical decision process
       ☐ Other. Please specify: ....

Part 11. Classification

Q 11.1.   Once all applicants went through all selection tasks, how are they compared in order to decide which applicants can enlist and, if applicable, how is it decided for which entry they're admitted?

    ☐ They are ranked according to a single set of criteria. Please mention which criteria and their respective weight: …………….....................……………………….....……………….
      ....…...............

    ☐ They are ranked according to a separate set of criteria for each entry. Please specify how allocation to the different entries is achieved: ....……………..
      ....

    ☐ The results are processed by a classification algorithm optimizing overall allocation payoffs

    ☐ The . Please specify who are the members of the board: ....…….
      ....

    ☐ Other: Please specify: ....…….
      ....……

Part 12. On enlistment day

Q 12.1.   Are there additional tests an applicant has to take on enlistment day in order to be allowed to sign up?

       ☐ Yes
       ☐ No (if no, please go to Q 13.1.)

Q 12.2.   Which tests does the applicant have to take on enlistment day?

       ☐ Academic examination. Please specify:..
       ☐ Medical checkup. Please specify: ....……..........
       ☐ Physical fitness tests. Please specify:..
       ☐ Other. Please specify: ....

Part 13. Special issues

Q 13.1.   Does the selection procedure contain elements or regulations, which <u>are meant</u> to either facilitate or prevent the enlistment of males (females)?

       ☐ Yes Please specify: ………………………………….......................................
       ☐ No

Q 13.2.   Does the selection procedure contain elements or regulations, which <u>are meant</u> to either facilitate or prevent the enlistment of certain ethnic groups or minorities?

       ☐ Yes Please specify: ....
       ☐ No

Q 13.3.   Does the selection procedure include official inputs from politicians or other persons not belonging to the ministry of defense?

☐ Yes Please specify which persons and what their input is: ....……………………. ....
☐ No

Q 13.4.   Does the selection procedure include the gathering of information in the natural environment of the applicant (e.g. parents, teachers, peers,...)? If so, please explain briefly what data are collected, by who, how are these data used in the selection process?

☐ Yes: ..…………………………………………………………………………
☐ No

Part 14 Other issues

Q 14.   If you think that some specific additional things concerning the selection procedure described here are worth mentioning, please write them down. Also if you gave the description of different selection procedures that show only minor differences, this is a good place to specify which aspects of those procedures are typical.

………………………………………………………………………………………………………
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………………………………………………………………………………………………………
………………………………………………………………………………………………………
………………………………………………………………………………………………………
………………………………………………………………………………………………………
……………..

Point Of Contact for more information

At this point we'd like to thank you for completing this survey. We'd also appreciate if you would identify yourself. This is in order to allow us to eventually contact you for additional information and to send you a copy of the results of this survey comparing several Officer selection procedures.

Name: ....………...……….
First name: ...………...
Title/position: ……………...……
Address: ....……………………………...
                  ....
                  ....………………………………………………………………

Commercial phone: ....……
Commercial fax: ....…
e-mail address: ....………………………..

I would like to receive a copy of the report on the Officer selection survey:

☐ Yes
☐ No

Please send this completed survey to	Major F.J. LESCREVE
	Center for Recruitment and Selection
	BRUYNstraat
	B-1120 BRUSSELS (N-O-H)
	BELGIUM
	Phone: +[32] 2 264 5304
	Fax: +[32] 2 264 5431

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Chapter 5

IN SEARCH OF THE IDEAL SYSTEM
(REMARKS ON INCONSISTENCIES)

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51140 KöIn, Germany

1.   Introduction

The first organised exchange of experiences on the subject matter of officer selection took place at the 20th International Congress of Applied Psychology in Edinburgh in 1982, where half a dozen military psychologists from various NATO countries met for a joint symposium. The participants were confident that it was the beginning of intensive co-operation, and that they would sometime succeed in developing an ideal system based on the most reliable components of the various national selection procedures.

Nine years later (1991), the Handbook of Military Psychology, a book representing an international team effort, was published, edited by the Israeli R. Gal and the American A. D. Mangelsdorff. In it, the Briton Alan Jones describes "The Contribution of Psychologists to Military Officer Selection." As the basis of his essay, he had used the proceedings compiled by his compatriot Roger Miles for the above-mentioned symposium. However, the hopes for mutual benefit and adaptation had obviously not come true, because the selection procedures as described by Jones differed just as much as they had nine years before.

The dream of developing an ideal selection system to serve as a model for all NATO members was revived when, in multinational operations, it became increasingly evident that co-operation would be facilitated if standardisation was achieved not only of equipment, but also of the selection criteria and training objectives. On 24 October 1994, NATO's Defence Research Section convened an expert team that was to establish an RSG to deal with the subject matter "Officer Selection and Development". With Decision Sheet M;/243DS 65 dated 17 September 1996, RSG 31 was tasked to develop some sort of, model solution based on scientific principles. "The work of RSG 31 will primarily consist of harmonising and building active collaboration on officer selection."

However, as early as their first meeting in Brussels (12/97), the eight members of RSG 31 realised that they would not come up to the expectations of their sponsors. There is no internationally valid model solution, because the assessment of a selection system can only be made within those national parameters within which it is designed to serve very specific purposes. It is not usually possible to achieve all of these purposes to the desired extent, because they partly compete with each other, and some of them can only be optimised at the expense of others. For this reason, a selection system can only be called "ideal" if it meets all legitimate requirements on the basis of a balanced compromise.

2.   Points of View and Priorities

Presumably not a single selection system among those currently applied by the NATO countries was designed and installed as a whole on the basis of a comprehensive problem analysis; rather, over the decades and under the influence of changing priorities and necessities, they have all been developed into what they are today. Because of most varied partial responsibilities, many people keep changing the system, and normally they are only interested in those aspects which are associated with their function. Unfortunately, these people's power to make changes to the system is barely so balanced as to incidentally permit an optimum compromise in the free play of forces.

In the following, a number of very simplified role positions describe how different the priorities are from the viewpoints of the various.

2.1. The Politician's Point of View

In countries where the armed forces have a say in domestic policy, access to military careers is usually controlled so as to permit only those to become officers who are from the "right" social circles and who are

politically reliable. However, even in democracies where the principle of the separation of powers prevails and where the armed forces are non-partisan, there are politically motivated measures influencing the selection procedures irrespective of a person's aptitude. Especially where there are tensions ethnic, religious, regional or other groups, the armed forces are frequently assigned a model function in overcoming rivalries. What is sought in those cases is a representative composition of the officer corps, in order to demonstrate equal opportunities. Another example of socio-political interference with the selection procedure is the selective promoting of women.

The ideal requirement that the armed forces should represent the whole nation and that, consequently, a cross-section of all social strata should be found in the officer corps, is meanwhile nearly as remote in the Western democracies as it was when officer careers wore still a privilege of the no except for the fact that this profession increasingly tends to become a "privilege" of the lower strata of society.

2.2. The Jurist's Point of View

Those who have to deal with complaints and petitions from rejected applicants and who possibly have to represent decisions in court have, in most cases, a very one-sided interest in the way aptitude is diagnosed. They press for reducing the complex and contradictory reality to fact cate9pries; as simple as possible and for defining clear, conclusive decision making rules.

Selection criteria, such as maximum or minimum values for age, height and weight a most popular, because there is no point in experts arguing. On the other hand, jurists would prefer to eliminate such vague criteria as honesty, courage and self-confidence, or they would at least like to prescribe that the degree of their manifestation be expressed in scores (numbers!) instead of being described verbally. Cumulative scores are very popular, because they obviate the need for weighing contradictory impressions, That method, however, implies such questionable elements as the assumption that there is a linear correlation between the degree of manifestation and aptitude, and that defects can be compensated by merits, which have no psychological causal connection with these defects.

From a jurist's point of view, the selection system should be primarily designed so as to rule out any doubts about the conformity of the decision-making processes with the laws in force, and to ensure that all decisions are legally "watertight' - even if this can only be done by abandoning, as a precaution, the considering of important aspects of aptitude.

2.3. The Budget Expert's Point of View

Because the official in charge of administrating budgetary funds permanently has to deal with exaggerated reports and urgency motions, he basically assumes that military officer selection, too, is carried out by too many too highly paid personnel and that funds for infrastructure and material are being wasted. He is sceptical of the claim that expensive examination methods are needed for obtaining relevant findings - if he takes note that claim at all. He determines, for instance, the number of required post only based on his own rigorous and formal criteria, such as net working time per year. The approved structure and financing framework usually does not permit design of the assessment system that would be ideal in terms of aptitude diagnoses.

2.4. The Scientist's Point of View

Those who work on research projects at institutes specifically established for this purpose tend to reduce the problem of military officer selection to its epistemological core and to deal with it, as it were, irrespective of space and time, and irrespective of unrelated influences of the type described in paragraphs 2.1 to 2.3. They want the aptitude test to be organised in a way that they are able to statistically analyse the causal connections between the individual factors and the criteria of career success in an accurately controlled manner. The question of whether, apart from characteristic values obtained in representative samples taken among the population, results of practical use are really obtained in view of the outstanding alternatives of decision, only becomes interesting for them when the want to translate their scientific investigation results into modifications of the assessment system.

2.5. The Field Worker's Point of View

Those who must take selection and placement decisions are chiefly interested in individual cases, rather than in average values. From the assessment system, the field worker expects, on the one hand, that it offers extensive data sources and possibilities of observation and, on the other hand, that it gives him or her the freedom to divert from the predefined assessment and decision-making rules whenever they do not match the existing combination of findings and whenever they lead to conclusions that make no sense.

3. Central Aspects of the Selection System

While the points of view described above may be legitimate and plausible, they have little to do with the core of the problems, to which the following considerations are supposed to lead.

3.1. Officer Requirements

According to the textbook on aptitude diagnosis, the construction (or revision) of a selection procedure is to begin with an occupational analysis or, alternatively, with the plausibly justified identification of requirements: What is expected from the future officer and, consequently, what qualifications must a suitable applicant have in order to be selected for officer training?

Already during the Cold War era, when the mission of the armed forces in NATO countries was relatively indisputable, there existed no clearly defined picture of the officer from which conclusive selection regulations could have been derived. At present, the political leadership can barely be expected to establish such parameters because the purpose the armed forces will have to serve in future remains yet to be defined. As long as their mission is not determined, no statements can be made as to the tasks the officers will face or the personality profile future officers should have. While military theorists like Martin van Creveld, adviser to U.S. and Israeli governments and author of The Transformation of War (1991), give convincing reasons why they already now regard modern armed forces as being improperly structured, equipped, motivated and trained, they are not in a position to predict what "The Future of War" (the title of the German translation of Crevelt's book, published in 1991) will look like.

From these remarks it follows that one should beware of applying one-sided principles when it comes to recruiting and selecting future officers, as they would lead to a very homogeneous officer corps. The reason is that, in the event of a markedly changed situation involving an unexpected requirements structure, it should be possible to fall back on officers whose personality profile fits the new tasks. "Officer diversity" will in the long term promise more success than homogeneousness, even though the latter must not be completely neglected in the interest of cohesion.

Although the demands and requirements characterising future scenarios are not yet fully known, it is rather unlikely that only relief workers, medics, transportation personnel, observers, mediators (peacekeepers) and other such personnel will be needed, and that there will be no need for combat troops. Until the genocide of Albanians by the Serbs, the RSG noted that many western armed forces had a strangely distant relationship towards such units which, owing to their physically very challenging training programme, cherish a combative-elitist self-image and hold on to traditional soldierly values. By contrast, it is rather those traits meeting the expectations of the public that are presently encouraged. What the public demands is a sensitive officer whose thinking is characterised by differentiation, who does not commit the slightest violation of Political Correctness, and who does not risk to voice any pride in his profession lest he be suspected of being a militarist. On the one hand, we complain about the lack of applicants' intrinsic motivation, and on the other hand, we are virtually frightened when one of them exhibits an unusually large amount of it, wondering whether we should turn him down as a precaution.

3.2. Operational Performance Criteria

Another attribute that aptitude diagnosis textbooks demand from a qualified selection system is the proof of prognostic validity: The better a person did in the aptitude test, the better his or her professional performance should at least tend to be.

In order to serve as a suitable measure of the usefulness of the selection procedure, the operational performance criterion itself must be demonstrably valid, i.e. it must possess construct validity with respect to "true professional competence": What characterises a truly good officer? Against which indicators can his or her aptitude be measured in concrete terms? If professional competence is defined as the "fulfilment of occupational requirements," no entirely satisfactory answer to these questions can presently be given (cf. para. 3.1). If staff reports were reliable indicators of true professional competence, it would not be necessary to reform the pertinent regulations at ever shorter intervals.

Given the lack of unambiguous operational performance criteria, the validity examination (in the military sector also referred to as achievement and performance evaluation) is frequently based on criteria related to training success (in the military sector, that means training course marks obtained at officer training and service schools). This is done despite the fact that, for many years, it has been proven time and again that in nearly all professions the correlation between performance during apprenticeship and during the exercise of the profession is low.

If - in the face of the many problems - one refuses to give up or to agree with Feyerabend's thesis ("anything goes"), there is still the possibility of using as an operational performance criterion the consensus of the persons affected. For despite all the uncertainties and doubts, it does happen now and then that one meets an officer whom nearly everybody who has hitherto worked with him or her claims to be an exemplary officer. On the other hand, there are officers of whom it is said just as unanimously that they have taken up the wrong profession.

It is therefore suggested that the operational performance criterion be defined as follows: Officers prove their military aptitude the better, the more they live up to the expectations of the following three groups of people at the same time:

- their superiors, whose tasks they are to fulfil loyally and as effectively as possible;
- their peers, with whom they should work in a comradely and co-operative manner;
- their subordinates, who expect convincing leadership ("leadership is a social process and depends, to a large extent on the followers' favourable perception" (Jones)).

What is called 360-degree ratings is increasingly gaining ground with private companies. The RSG regretted to state that this method is still met with such violent opposition in the armed forces that it has been impossible to date to employ it even for narrowly limited examinations.

3.3. Development

Even if the operational performance parameters - derived from the demand analysis (para. 3.1) or the personality traits of exemplary officers (para. 3.2) -- are known, one still does not know what to concentrate in young applicants on and how to design the aptitude test for them, because the applicants cannot but still lack many characteristics of a fully trained officer (especially his technical competence); they only have the aptitude enabling them (without guaranteeing anything) to acquire expert knowledge and professional skills. The younger an applicant, and the larger the relative portion of those operational performance parameters, which are yet to be created through training and through maturation by tackling situational factors, the more difficult an aptitude test will be to conduct.

Decisions with long-term effects or even irreversible decisions should therefore be postponed until a fairly reliable cognitive basis has been established.

3.4. The Wrong Alternative (Gap or prop)

Every judgement on aptitude implies an operational performance prognosis. The prediction of the probability (p) of career success is mainly based on the knowledge and the assumptions the diagnostician has with regard to the three following areas:

a. The aptitude profile, i.e. the structured totality of the applicant's intrinsic qualification to successfully complete a designated training scheme (c) in the allowed period of time and to attain a developmental level from which the requirements (b) of the qualification area in question can be more or less met.

b. The requirements profile of the qualification area in which the applicant is to prove his or her professional ability (e.g., career, assignment, field of study) in the future.

c. The training programme and the educational influences designed to raise the applicant's operational performance capabilities (a) to the developmental level necessary for meeting the requirements (b).

d. The interrelation between these three factor areas can be displayed in the following formula:

$$p = \frac{a \cdot c}{b}$$

In times when the applicants' quality gets poorer, the value of (a) and thus the overall value of the probability (p) of career success decreases on average. This causes the instructors to accuse the selecting institution of applying inappropriate selection procedures, saying: "You are sending us the wrong people".

Apart from the fact that it is not possible to send other, better qualified applicants than those taking the relevant test, the matter can be remedied by both recruiting more qualified applicants, thus increasing the value of (a) again, and intensifying the training (c), e.g. by selectively correcting aptitude deficiencies among certain groups of applicants. When these tools have been exhausted, the decreasing average value of (a) may ultimately be compensated for by partially establishing less stringent requirements (b), for example by splitting some of the careers open to generalists into ones for specialists with a limited requirement spectrum, so that applicants with one- sided aptitudes can be accepted as well.

3.5. Competing Alternative Decisions

So far this discussion has been limited to some of the problems which arise when it comes to the question of whether or not one (particular) applicant is suitable for the (one) assignment he or she seeks. Even if the answer is affirmative, it does not guarantee that this person is scheduled and subsequently also recruited to fill a corresponding post, because normally the following factors apply:

- Apart from the desired assignment, other training and assignment cycles (other combinations of armed service, sphere of competence, and field of study) are possible;
- Other persons are eligible for the same assignment as well.

As a rule, every decision on manning should therefore be subject to the answers to the questions of the following pattern:

One assignment	*Several assignments*
How well are this person and this assignment suited for each other? **Aptitude test**	To what degree are the other assignments suited for this person? **Career counselling**
How well are the other applicants suited for this assignment? Which of the persons to choose from is most suited for this assignment? **Selection of the best**	Which allocation of persons to assignment guarantees that the manpower eligible for scheduling covers the manpower requirements structure in the best way possible? **Scheduling**

As far as the most complex quarter of this four-field pattern – bottom right - is concerned, it should be noted that the optimal solution to the distribution problem may in an extreme case be characterised by the fact that not a single applicant is given that assignment which is most suited for him or her and that no position is filled by the persons best qualified for it.

This may be the case when there is no other way to avoid manpower deficits on the one hand, and to avoid, on the other hand, turning down applicants because the positions for which they are suited have already been occupied by more qualified persons (applicants who are still qualified for assignments for which no one else is qualified).

How much the quality of manning (ranging from the distribution of conscripts to the scheduling of officer candidates) is dependent upon the experience farsightedness, and skillfulness of those responsible for scheduling is underestimated at all levels, is reflected in the salaries they are paid. In Belgium, there is a computer programme, written by Senior Psychologist Francois Lescreve, available to solve this complex distribution problem.

For those responsible for scheduling to be able to draw the necessary comparisons between persons and assignments, the assessors must have evaluated the two objects of comparison, applying uniform criteria and standards. Trying to do this roughly is a tremendously difficult task and requires a lot of methodical arrangements.

3.6. Selection as Part of Personnel Augmentation

When talking about officer selection, one generally has only the entrance examination procedure in mind which decides whether the applicant is admitted to the temporary-career, officer career or to the regular

officer career. The usefulness of an entrance examination procedure can only be assessed in a qualified manner if previous and subsequent selection procedures are included in the consideration. A preliminary selection based on schools and on school marks is only viable without major problems in those countries where there is a centralised and tightly controlled educational system. Otherwise the armed forces must allow for a standardised filter themselves, if they attach any importance to the equality of opportunities.

The necessity to carry out, as correctly as possible, expensive and time-consuming aptitude tests is all the greater the more difficult it is, for reasons of labour law, to later dismiss the persons who have not proven themselves, or the more importance is attached by applicants, who would otherwise not enlist, to the protection from dismissal.

For a country like the U.S., whose people are accustomed to the principle of "employment at will" and the associated high degree of personnel turnover (hire and fire), it would probably be inefficient to establish costly Assessment Centre procedures for entrants to the officer's career. The government can afford to brutally ask its military officers, at each step along the career path, the question of "up or out". In Europe, hardly anybody would apply under these conditions. What is much appreciated in the public service, especially in Germany, is job security.

In discussing various issues, the RSG noted time and again that it would have been better to retain the original interdisciplinary subject matter of "Officer Selection and Development", because the usefulness of a selection procedure can only be understood in connection with the training and personnel development systems.

3.7. For the time being, we have not an expert system but experts within the system.

While officer selection used to be a more or less arbitrary discretionary decision taken by some individuals (such as regimental commanders), it has developed into a complex structure in which many persons are involved either directly (e.g. as observers, interviewers, evaluators, etc.) or indirectly (e.g. as researchers, test designers, organisers, budget experts, suppliers of data, etc.). The relative involvement of psychologists, for instance, in he process, and the influence they do (or can) exert, from the preparation of a cognitive basis to the concrete selection decision, differ greatly from country to country. France, for instance, has never had any psychologists in its armed forces; in the U.S., they work for the most part in service-run institutes far away from real life. Their work, namely the preparation of research reports, has a more indirect effect. In Denmark, psychologists are in every area at least. in overall charge, if not the only persons to decide.

As far as aptitude evaluation in the actual individual case is concerned, it is the autor's opinion that close co-operation between psychologists and officers will remain essential in the foreseeable future. The reason for this is twofold. On the one hand, aptitude diagnosis is a highly psychological affair which should be dealt with professionally; on the other hand, decisions on aptitude are the result of a comparison of the applicant's characteristics and demand parameters, i.e. they cannot be made in a qualified manner without knowledge of the training parameters and operational conditions (cf. Para. 3.4). Otherwise, this would be like applauding using one hand only.

It is theoretically possible to replace the officer's knowledge by a definition and operationalization of demand parameters, which enable those persons to make an aptitude evaluation who themselves have no concrete and clear idea of the working and living conditions prevailing in the operational performance situation in question. Experience shows, however, that demand analyses even for simple, manual activities are very difficult to make, time-consuming, costly and, once completed, obsolete.

Most likely, there will be no operational expert systems in the foreseeable future, which means that officers and psychologists continue to rely on close and trustful collaboration. The rules of procedure may either facilitate or obstruct this collaboration.

4. Summary

The dream of developing an ideal selection system, to which RSG 31 ows its temporary existence, could not be kept alive so stubbornly if it were obvious that it cannot come true. At first glance, the theoretic concept recommended by textbooks on aptitude diagnoses for the development of ideal systems seems to be viable. However, with the first approximate time and cost estimate, one already realises that just one cycle of the loop system - from demand analysis to development, testing and standardisation of the diagnostic methods to the feedback of career access data - will certainly be a very expensive and time-consuming project. On the one hand, there is reason for concern that the procedure, once completed, will be obsolete; on the other hand, the entire working programme would have to be based on the definition of the demands the officer candidate selected in five years (at the earliest) will face after their training. Nobody can predict which will be the main tasks of the armed forces in 10 to 15 years.

Another weak point in the theoretical concepts is that the selection system cannot be developed in a laboratory like a device or isolated module that is handed sometime over to the operator for use, because it is an integral part of the whole manning, training and development system. Also, it is not taken into account that very effective constraints are produced, in part, by persons who pursue other objectives than those pursued by the designers of diagnosis models which are based on scientific principles.

Still, the idea of the ideal selection system will remain a mere illusion only as long as an ideal situation is sought that is far from reality. It is possible to organise available means in an ideal manner within the framework of the existing parameters, so that a balanced compromise between all legitimate interests is achieved. This implies that, in the case of a change of relevant conditions or of an opening up of new possibilities, the optimum of yesterday will no longer be that of today.

Chapter 6

A CONCEPTUAL APPROACH TO OFFICER SELECTION

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1. Introduction

This chapter deals with officer selection system issues. More detailed contributions related to the assessed qualities, the selection tools and current officer selection practices are covered in other chapters of this report.

The scope of this chapter is limited to the selection and classification of officer-applicants. As a consequence, we will not discuss the issue of improving the propensity for enlistment but rather assume that sufficient numbers of officer candidates apply. Neither shall we discuss possible subsequent selections such as screenings for participation in peacekeeping operations or selection procedures for promotion.

2. Fundamentals

This discussion assumes that all armed forces have a requirement to enlist junior officers and that there are a number of applicants, mainly civilian, who are prepared to join. Typically, in NATO countries, enlistees will go through an initial training phase, including both academic and military training, as a first step for a full military career. Such a setting is often thought as being very natural but in fact it is built on a series of fundamental options.

For example, not all armed forces recruit officers from the civilian population. For instance, the Israeli Defense Force recruits its officers from among the enlisted NCO's other countries such as Austria recruit officers amongst draftees. This form of internal recruitment has the advantage that the applicants are experienced and proficient in the subordinate role and know the organization well. Moreover, such a system gives many opportunities to assess the suitability of an applicant to become an officer. Under such a system however, it is likely that a number of potential officer-applicants will refrain from joining the Forces in the junior ranks because of the less appealing job and the uncertainty that his service as private will have the intended outcome, namely of becoming an officer.

Large organizations require a wide variety of people with diversified competencies. The times where persons were able to become proficient in any speciality have now passed and it is one of the main challenges to the Human Resource Management (HRM) staff to provide the organization with the right set of people, proficient in particular fields. The way in which the HRM attempts to do so can vary. Some Forces hire large numbers of officers who already have a university degree, whereas others still rely on the recruitment of high school graduates and organize in-house academic training in a limited number of specialities. Further academic training at civilian universities is then frequently needed to provide the Forces with the required specialists. New models whereby officers leave the military to gain new competencies in civilian organizations and then come back to the military are currently being studied. These fundamental options of HRM undoubtedly influence officer selection. However, within the scope of this chapter we will reduce the officer selection issue to a generic situation in which a number of unknown candidates apply for a set of diversified officer jobs.

3. Setting up a selection system

This section will discuss issues that should be taken into account when setting up a new selection system for officers. Some readers might object that this is a situation that never happens. As Officer selection systems exist in most countries the question that should be addressed is how to improve existing systems rather than how to establish a new one. The idea of setting up a totally new system, however, offers the advantage of intellectual independence. Existing officer selection systems are often heavily loaded with tradition. Tradition is highly valued in many military academies and the military commanders for whom the end product of traditional selection and training has been very successful seldom criticize existing selection systems. Tradition

may be valuable in many instances but one major drawback is that the implementation of new and more effective methodologies is not favoured in settings where, in the past, tradition has been seen as a guaranteed way of maintaining quality. In conclusion we will discuss elements related to the development of a new officer selection system that can be used to assess and improve the quality of existing systems.

3.1. General context

Selection situations cannot be considered without reference to the context in which they occur. Let us review some elements that influence the selection systems.

First what is the selection ratio? How many applicants are there for each vacant position? With low selection ratios, one should take care not to reject applicants too easily whereas high selection ratios will risk imposing a major burden on the selection institution.

The overall number of applicants and vacancies is also important. When these are large, it is possible to use a stable normative population against which you can assess an individual applicant. When the numbers involved are small, this is no longer possible because of the fluctuations that are typical in small numbers. In order to assess an individual and to decide whether s/he can be enlisted, it is then necessary to compare all persons applying for the same set of jobs. This leads to batch classification.

Another important point is that of the legal dispositions and ethical guidelines which are applicable for most selection situations. For instance, there is no choice other than to comply with the existing rules and laws. One should, however, always attempt to have legal texts modified when such changes would permit sounder selection practices.

Societal awareness is also key. The managers of an officer selection system must recognize that the military is embedded in the broader society, as is their recruitment. This is not only relevant for marketing purposes, which are not discussed in this chapter, but also for the whole organization of the selection system. For instance, in some countries, if the applicants are mainly attending school, it is not too hard to ask them to spend a couple of days for officer selection during the week, whereas if the applicants are mostly working, you risk losing a good proportion of them if you can't organize their selection outside their working hours. Other issues related to societal awareness can be highlighted by some questions: Are the applicants computer literate enough to use computer testing without problems? Is it necessary to pay their travel costs to be sure that they will show up? Is it necessary to provide lodging? Is the time between application and enlistment comparable to an average civilian selection system? As one can imagine, the list could go on. The fundamental point is that it probably would be counterproductive to design an officer selection system without acknowledging the fact that the applicants typically live in a civilian world which has its own, inherent set of characteristics. A good way to be aware of the expectations, beliefs and problems of the applicant group is to use surveys.

3.2. Systemic approach

It is particularly interesting to see the selection problem within a systemic context. Considering that the ultimate goal is to provide proficient persons for vacant jobs, it is useful to see both selection and training as means to achieve this goal. When analyzing the competencies required to perform a job well, or, in other words, conducting a professional occupational analysis, it becomes possible to decide whether each of the competencies has to be present either before enlistment or at the end of the training period. The specific selection methodology must then ensure that applicants meet the selection requirements and the training-methodology can guarantee that the applicants meet the training requirements.
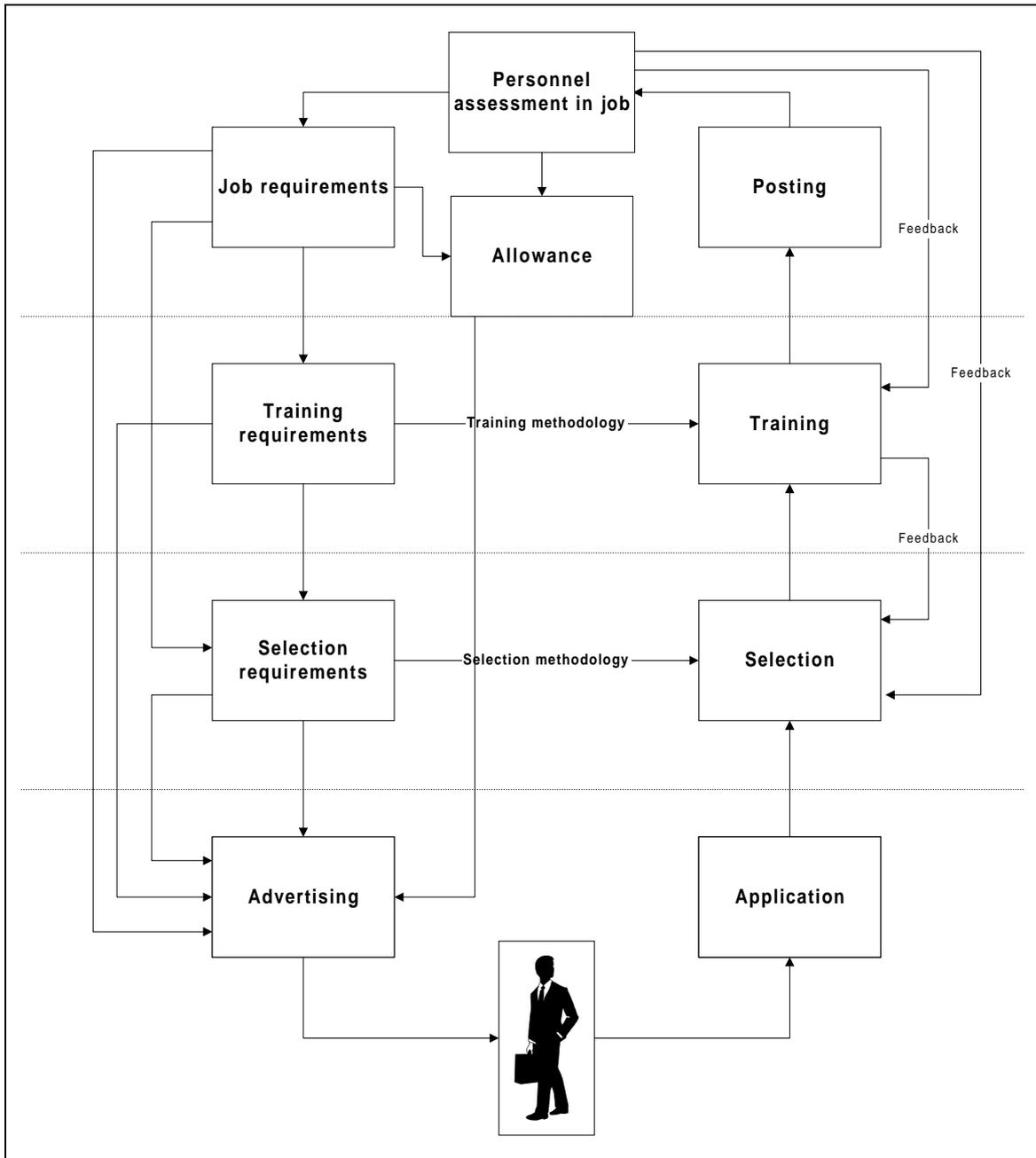
Figure 1

In terms of data processing, the selection and classification issue can be described as follows: when new candidates apply, they are often totally unknown to the Forces. During a short period of time, usually just a few days, a lot of useful information about them is gathered. All selection instruments measure some aspects of the individuals on a specific scale and with a particular error. This set of data can be seen as the competency profiles of the applicants. In order to estimate the appropriateness of the enlistment of an individual, it is necessary to compare his or her profile with the requested competency profile for particular entries.

3.3. What qualities need to be assessed?

If one of the major parts in the selection process is to measure particular qualities in order to estimate whether an individual is able to become an officer, the subsequent question is clear: What are the qualities that need to be assessed?

This question is far from easy. A typical approach consists of having some experts enumerating the qualities that are believed to be important for officers. Unfortunately, such an approach invariably leads to a very long list of qualities that probably describe Alexander the Great well, but not the kind of persons we are likely to

encounter in a normal applicant group. In other words, the enumeration of desired officer qualities describes the archetypal officer rather than typical people and is therefore of little help in the selection and classification process.

In theory, one should perform a job analysis to find out what qualities are important to achieve success in the officer job. Those qualities could then be assessed during selection in order to predict later success. The difficulty of the implementation of such a model is that the jobs that junior officers have to perform are quite varied. In most Forces, it is normal that junior officers are eventually promoted to more senior positions, which will generally require an additional set of qualifications and qualities. Accordingly, it is hard to define a limited set of required attributes.

To have efficient Forces it is necessary to have an officer corps composed of individuals with a broad range of competencies. A limited set of quite universal abilities is probably essential for any officer. For instance, these can include physical fitness, intelligence, emotional stability and good communication skills. Beyond these, differentiation is the key issue. The idea that an individual can be well suited to perform any function is becoming more and more anachronistic. Modern HRM systems will therefore recognize the individual competency profiles and capitalize on them through smart allocation. Yet it is surprising to see how persistent this idea of 'the universal officer' is. This is due to the fact that although it definitely leads to mediocrity, it is by far the easiest – not the best - solution for HRM.

3.4. Organization

In setting up an officer selection system one has to deal with a number practical issues. This section will review and comment on a number of them.

3.4.1. Qualifications of personnel involved.

A professional selection system requires professional personnel. This is quite obvious yet not always realized. In particular, there is the issue of who is conducting the selection interviews. Should psychologists be used, providing that they have sufficient knowledge of the jobs they assess for, or should we use officers who would be trained as interviewers? This debate should conclude in favor of the psychologist. The only argument in favor of the officers is that of their experience in the military. The question is then how relevant that experience is. In most cases, it will be limited to a more or less specific trade and bears the risk of being completely obsolete. In such conditions, the military experience could prove to be rather counter-productive. On the other hand, it is quite obvious that a psychologist is much better trained to detect indicators of possible personality and motivational problem areas. Of course, a better solution, but an expensive one, is to have both psychologists and officers conduct an interview and then integrate their findings.

3.4.2. One tiered or multiple tiered selection process?

If the Forces are lucky enough to have a much larger number of applicants than is needed, the question arises of how to reduce that number in an appropriate way to prevent the selection centers being either unnecessarily large or unable to cope with their workload. Another reason to reduce that number is that it is unethical to impose a long and intense selection program on applicants for whom it is quite obvious from the beginning that their probability of enlistment is minimal. A typical approach to counter this consists of including cheaper screening instruments such as psychometric tests in the beginning of the selection program. A cut-off score can then be set to reduce the number of applicants that would be allowed to continue the selection process. Measurement of general intelligence is usually the number one favorite to play this role. A word of caution is necessary however. The cut-off score should be set in such a way that enough applicants are allowed to continue. One should anticipate the proportion of applicants that will be rejected at each stage of selection, leaving sufficient applicants to allow a sound choice in the end.

3.4.3. Sequential or batch classification.

In general, when designing a selection system, it is necessary to choose between sequential or batch classification. Sequential classification means that the final decision on the acceptance and the assignment of an applicant is made immediately after the completion of the last selection test, generally while the applicant is still on the premises of the selection facility. Batch classification refers to the system where all applicants undergo the selection program and only when all data are available from all applicants are the final decisions made. In the case of officer selection, one has to recognize the fact that, in most countries, officer induction is only organized once or twice a year. In such circumstances, it would be rather unwise to use sequential classification because it is known that the overall quality of the accepted applicants is better when all could be compared during the decision making process.

3.4.4. The tri-service issue.

Most countries have different Services for which they recruit officers. In some countries, such as the United States, recruiting for the different Services is organized by the Services in a rather independent way. The candidates apply to become an officer in a particular Service. In other countries, the applicants just apply to become officers and give their preferences regarding the Services they want to join. This is what is called the 'tri-service' approach, referring to the classical three Services; army, navy and air force. Both approaches have advantages and drawbacks. The advantage of what we will call the US system is that the selection system can be better tailored to the needs of the different Services. On the other hand, an applicant who fails when applying for one Service will have to start from scratch if s/he wants to apply for another Service. The tri-service approach on the other hand recognizes the fact that the selection criteria for the officers for the different Services are quite similar and that, among the applicants, many want to become officers but don't care too much in what Service they will serve. By having them taking the same selection procedure, selection data is collected that can be weighted differently for the individual Services and the system can capitalize on the whole applicant population to find the best overall solution for the Forces. In general, one should apply following rule: if there is a significant overlap in the applicant populations for the different Services, it might be more efficient to move to a tri-service approach.

3.4.5. The order of the different parts in the selection process.

As the selection process includes several selection tools, the sequence in which they have to be administered must be considered. This is especially true when some tools lead to rejection of applicants who don't meet certain standards. Two rules of thumb apply. The first says that the most selective selection tools have to be put first. These are the tools that reject the largest proportion of the applicants who are examined with the tool. The second rule says that the cheapest selection tools should be first. The system designer will have to balance these rules to organize the selection program. There might however be some additional considerations that have to be taken into account. Imagine for instance that the selection program includes a full spine radiography and that this is a very selective part of the process. It would be clearly advisable to set the radiography at the end of the process because of the radiation risks.

The selection system manager might also be tempted to have different selection sequences for different applicants. This would allow him to use 'parallel-processing' of applicants. For instance, when applicants arrive in the morning at the selection center, half of the group could be sent to the medical assessment while the other half take computerized tests. After a certain time, they would switch activities. This increases the efficiency of the selection center but is acceptable only if the sequence in which the applicants are examined with the selection tools does not influence the measurements. Imagine for instance that some applicants take physical fitness tests before lunch while others take them just after lunch. It is likely that the group performing after lunch will have lower results. As this is not necessarily due to lower aptitude, this is not acceptable.

3.4.6. Selection in one or more locations?

The easiest and soundest solution for officer selection is the centralized one: all applicants are processed in the same facility. Yet there are reasons why one could consider the decentralized alternative. Among these, the obvious one is that it can be difficult and expensive to bring the applicants to a centralized selection center. Reasons not to decentralize include cost and manning related aspects and methodological concerns. Methodologically, standardization is at stake. How could it be possible to guarantee that the applicants are treated in the same way in different locations? Some aspects are relatively easy to solve. Computer testing for instance can be quite similar in one place or another. It would be harder however to standardize medical assessment, interviews or group observation tasks. In general, the difficulty in standardizing the selection tools is directly related to the proportion of interpretation and subjectivity involved in the tool. Although the instructions will be identical for the different locations, it is likely that the assessment practice will evolve independently in the different settings. It is therefore important both to monitor the score distributions from the different locations and also to implement systems to reduce the possible lack of standardization. These can include:

- Centralized training of the assessors;
- Supervising personnel traveling from one location to the other to insure the consistent use of the selection tools in the different locations;
- Frequent rotation or exchanges among the assessors of the locations.

In making up his/her mind and decide about the centralization issue, the officer selection system manager should balance different things:

- The additional costs due to the organization of decentralized selection (infrastructure, additional personnel, functioning costs);
- The inevitable loss of standardization and the costs involved with trying to minimize the loss;
- The benefits for the applicants and related to that, the effect on their application behavior;
- The savings from reduced reimbursement of travel or lodging costs.

3.4.7. *The image of the Military for applicants that are not selected.*

In the situation where many applicants are not accepted for enlistment, the selection system manager should be aware of the role that the selection system has in conveying a positive image of the Military to the civilians. In countries where there is no compulsory military service, many civilians have only very few direct contacts with the Military. Of course, all applicants have a certain opinion about the Military, usually a positive one – otherwise they wouldn't apply – but frequently only based upon the image projected by the media or the opinions in their immediate surroundings. It is important for the corporate image – and later recruitments – that even the applicants who are not selected return home with the feeling of a positive experience. This is best achieved through the use of modern infrastructure and equipment, efficient processing, professional assessment quality, openness and communication and client-friendliness.

3.4.8. *The role of the applicant in the selection process.*

A good officer selection system should consider the applicants as partners in the process of finding the most appropriate person for the vacancies. This is a different philosophy to the one that once prevailed in which the applicants were more treated like cattle that had to be led through an anonymous and cold selection machine. Considering the applicants as partners will be accomplished by a series of actions and attitudes such as:

- Consider the applicants as adults and treat them accordingly;
- Call upon their sense of responsibility and make them responsible for as much as possible;
- Provide enough information about the organization of the selection process and the decision making;
- Give the applicant feedback on how s/he performs on the different tasks in terms that s/he understands;
- Explain the applicant's options at all stages of the selection process;
- Respect the applicant's choices;
- Respect the confidentiality of the selection data;
- Offer the possibility of an in depth debriefing for applicants who fail;

3.4.9. *Traveling, meals and lodging expenses.*

The officer selection system manager is very well aware of what it takes the Forces to organize the selection. S/he also should be aware of the costs to the applicants. In comprehensive officer selection systems, it is not unusual to require several days for selection. Moreover, it is often necessary to travel long distances to attend the selection center. One should also be aware of the growing tendency that many applicants consider becoming officer as just one of several career options. It is indeed increasingly frequent to see officer applicants applying for other jobs or universities simultaneously. This increases their overall 'selection-load' (as well as their selection training!). In such circumstances, applicant resource limitations can interfere with the officer selection process. If applying for officer selection these factors might be considered as overriding and therefore the potential candidate might not even apply. Whilst this might not be an issue when there are a sufficient number of applicants it is certainly a point when propensity to apply is low. What can the system manager do to reduce the burden imposed on the applicants? Here are a few tips:

- If possible, reimburse travel costs;
- Alternatively, organize as much selection activity as possible close to where the applicants live (decentralization of the activities);
- If the selection procedure lasts for more than one day, plan the activities on successive days and provide free lodging (in military buildings or in nearby hotels);
- Use the applicant's time efficiently. It can be acceptable to have an officer selection program lasting several days but not if during these days, the applicant's main activity is waiting;
- Reject applicants early if it is clear that s/he will not be accepted in the end. Put the most selective selection tools in the beginning;
- If possible, don't oblige the applicant to produce documents for which s/he has to pay or that take time to get.

3.4.10.Allow enough resources for Research and Development

Selection systems require a lot of resources; infrastructure, highly specialized personnel, sophisticated equipment and functioning budgets. In periods of budget restriction and downsizing, managers are frequently under pressure to reduce costs. Managers who lack vision could probably be tempted to cut costs in the research and development (R&D) area which is often seen as of no immediate contribution to the day-to-day life of the selection business. However, this would be an unforgivable error. The reason is simple and well illustrated by selection systems that have lacked sufficient R&D capability in the past. The R&D personnel dealing with selection systems are there to insure the development or acquisition of new selection tools and to maintain the quality of existing tools. Their actions encompass the monitoring of the individual tools (score distribution, internal consistency, reliability, validity, bias, norms, utility, etc), the quality assessment of the overall selection system (set of tools in the system, decision making process, classification, system validity and utility) and the introduction of new tools when appropriate. Officer selection systems that discarded R&D are often using old selection tools for which very little current knowledge is available along with obsolete decision-making processes. For the system manager, that means that s/he allows the use of resources to perform the selection activities without knowing whether they are useful or could sustain scrutiny. That looks very much like poor management practice indeed.

3.5. Issues on how to make the right decisions

Once information is gathered from the applicants, decisions have to be made whether or not the applicant will be accepted for enlistment and, if so, for what specialty. In making these decisions, two types of selection errors can occur. We can accept applicants who will not become successful performers or we can reject applicants who would. Strategies exist to set acceptance standards based upon the quantified effects of both types of errors.

It is still a widespread practice that some decisions are taken before the normal completion of the selection process. These decisions usually reject applicants who fail to meet certain cut-off scores and accordingly prevent them proceeding with the subsequent parts of the selection process. This leads to three comments concerning the use of cut-off scores. The first is related to the justification of such cut-off scores or any decision in rejecting an applicant, that is only based upon a single source of information or measurement result. The question to be addressed is: "*are you **absolutely sure** that this applicant **cannot** turn out to be proficient in **any** of the vacant positions*?" Second, having the standard error of measurement in mind, and knowing that relationships between selection instruments and performance ratings are essentially probabilistic, one realizes that the choice of a cut-off score can be extremely hard and should be done with extreme caution. Third, one must be aware of the combined effects of multiple cut-offs. That effect is cumulative and this affects both the number and the quality of the applicants that are still in the running at the end of the selection process. Multiple cut-off scores guarantee that an applicant meets a series of minimal requirements but nothing more. Too many cut-offs are in favor of applicants with 'flat' competency profiles and are a risk for applicants with a much higher average competence but having a problem in a specific area.

Setting a cut-off score that eliminates a large proportion of the applicants checkmates the usefulness of the other selection-tools and distorts dramatically the intended result. The person in charge of the overall selection process must pay great attention to this. In many cases, officer selection systems feature different elements such as psychometric tests, medical exams, physical tests and academic exams that are organized in a rather independent way and for which cut-off scores are proposed by different groups of specialists. Mainly, there is a tendency to over-emphasize the importance of one's own field and therefore suggesting very severe cut-offs. It is then the responsibility of the person in charge of the overall system to assess the appropriateness of the different cut-off scores. This is not easy because of the disparity of the fields involved and the susceptibility of many specialists. Statistics can help a lot in making sound decisions.

Besides rejection of applicants through the use of cut-off scores, which from a methodological point of view really should be limited to a minimum, we have to make more complex decisions. To make these, it is useful to work with holistic competency-profiles.

In order to make the appropriate decisions, it will be necessary to quantify the desirability or usefulness of accepting an applicant for a vacant position. That quantification will be referred to as the *payoff-value*. The computing of payoff values for each applicant-job combination is not an easy task. The major difficulties arise from the differences in scales used for the measurements during the selection process (nominal, ordinal, interval), the differences in measurement quality of the selection tools (reliability and validity), the difficulty in establishing the relative importance of data originating from disparate fields and the integration of applicant preferences.

Once payoff values are computed on comparable scales for all applicant-job combinations, it becomes possible to make the appropriate final decisions. In simple situations, where all vacant jobs are the same, a one-dimensional ranking of the applicants is sufficient to identify the applicants who will be accepted. From the moment where different kinds of jobs are vacant, the method of simple ranking is no longer the best solution. For instance, this is the case when a single ranking is done and where applicants can choose between the different jobs according to their ranking. This yields clearly sub-optimal results. More sophisticated classification methods are then required. These are available12 and make it possible to maximize the payoffs for the group of selected candidates.

Although models exist for that kind of complex decision-making, the use of selection boards is still widespread in officer selection. Without going into details here13, it should be said that selection boards can be valuable in their role of assessing certain applicant qualities, but their use should be avoided in decision making processes involving much data and many persons within the selection process.

4. Quality assessment of a selection system

The quality of any officer selection system needs to be assessed. There are two good reasons for this. Firstly, one needs to know, rather than believe or hope, that the right applicants are selected and assigned to jobs for which they are best suited. This is of paramount importance to the military commanders since the quality of the officer corps is vital for the conduct of military operations which can have dramatic consequences both for the military and their country as illustrated in Norman Dixon's book *On the Psychology of Military Incompetence.* Failure to conduct a good professional selection for officers is an unforgivable error. The second reason for the continuous evaluation of the quality of a selection system, is the increasing demand to justify selection decisions made concerning individual applicants or specific groups. In the end, such justification cannot be sustained unless there is verifiable evidence of the predictive validity of the selection system.

One critical decision concerning the quality assessment is the choice of external criteria defining who is a 'good officer' and who is performing less well. In many cases, the choice will be a trade-off between relevance, timeliness and measurement quality. Training results for instance, have the advantage of being pretty well standardized and available shortly after the selection. This ensures that feedback loops are kept short but they are usually of very little relevance because they often over-emphasize academic skills. Since the choice of the external criteria will in the end determine what kind of applicants will be accepted, it is normal that the choice of these criteria should be made by the overall personnel policy makers. It is obvious, but not always that evident, that the chosen criteria should be quantified as a sound measurement and that such data needs to be made available to the persons in charge of the selection system quality assessment.

A system should not rely on a single external criterion since none is perfect but rather it ought to consider a series of quality indicators. These should include both quality indicators independent of officer performance assessments and a representative set of indicators of the performance of the officers.

Whatever the result of the quality assessment, one should always consider ways to improve the selection system. This needs to be done by trying alternatives for the different selection tools and for the use of those tools in the decision making process. In doing so, one has always to remember not to use a new tool in the decision making process before its quality has been proven.

5. The fairness of the selection process

A recent concern related to selection in general is that of fairness for the applicants. This is especially relevant for officer selection, since the government organizes selection and the relevance of the officer corps for the general population is often questioned. Special interest is devoted to the adverse impact of elements in the selection process for females and ethnic minorities. In this area, two different situations need to be identified, one in which different groups have the same level of abilities bur different scores due to biased measurement tools and the second in which different groups indeed have different levels of ability.

The first deals with the situation in which different groups are known, or at least supposed to have similar aptitudes or characteristics but different measurement scores, because of inadequate measurement-tool design. In such situations, better measurement tools should be designed. As a short-term solution, one could at least take group differences into account when estimating individual performance.

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[12] For example the Belgian Armed Forces Psychometric Model
[13] For more details, see LESCREVE, F. Data integration and classification for an officer selection system. In NATO - RTO Meeting proceedings 55 'Officer Selection', August 2000.

A totally different situation occurs when different groups are known to have dissimilar aptitudes or characteristics. For instance, if the height of an individual is considered, it will be noted that the male population is, on average, taller. This is not due to inadequate measurement tools. The scientific approach to such a situation is to start from the occupational analysis (assuming this analysis was not biased!) and select the best fitting person independently of gender or minority membership. Another approach that often prevails against the scientific one is based on ethical, philosophical, societal or political grounds. That approach states that females, or persons belonging to certain minorities, must have fair chances of being selected despite the possibility of lower scores. Such policies can lead to a specific quota for females or minority members. Although such an intention would be praiseworthy, one should realize that this is realized at the expense of optimal selection and classification. An attempt to avoid quotas without having adverse impact would be to focus on competency profiles and incorporate in them the aptitudes for which females or minority members are known to perform equally or better (such as physical agility versus strength, sustained attention, etc).

6. Cost & benefit concerns

Some will look at an officer selection system from a purely cost and benefits point of view. This makes some sense. Cost and benefits issues are important. Selection and classification decisions are based upon a limited set of observations and measures. It therefore can be argued that a better assessment can be done during training. Naturally, this is provided that all applicants would be allowed to start the training. In situations where the selection ratio is close to one, this might be considered: there would no selection, and all applicants would start the training and suitability would be assessed during training. This is the situation that occurs in Austria where compulsory military service exists and where officer candidates are assessed while performing their training as draftees. This system is worthy of comment. First, imagine what would happen if there is no medical screening and, for instance, there are medical problems during the physical training such as back-injuries or cardio-vascular accidents. What would be the consequences for the applicant and for the Forces? Can the Forces be sued? If that is the case, this throws a new light to the cost-benefits topic. Second, there are social aspects that need to be considered. While it is acceptable to ask an applicant to spend a few hours to a couple of days for the officer selection process, it would be hard to require them to spend weeks or even months and maybe even quit another job before being sure that they are accepted.

In the more frequently occurring situation in which the number of vacancies is set in advance and the number of applicants is significantly larger, the cost-benefits discussion needs to be addressed. The zero-costs approach would consist of accepting the first candidates who apply until all positions are filled or, alternatively, randomly select the required number from amongst the applicants. Clearly these solutions would yield very poor results. Beyond the zero-costs approach, selection tools will be added to the procedure. The addition of each tool implies costs, additional burden on the applicants and the increased loss of applicants if the tool leads to rejection. On the benefit side, good selection tools reduce the risks of diverse problems after enlistment. How far should one go then with adding selection tools? Let us consider an example in the medical selection area and use two well-known movies to illustrate the point. The first is 'Schindler's List'. There is a scene in which one can see the 'medical selection' of hundreds of persons in a prisoner camp in Poland. They have to undress and are quickly screened by a person in the white outfit of a doctor. The 'doctor' decides, in a matter of seconds, whether the person is fit for labor or not. This selection is probably much better than random selection; it is very cheap but obviously not very accurate. The other extreme is shown in the movie 'The Right Stuff'. A good portion of that movie is devoted to the medical selection of the first astronauts. This selection is very sophisticated, expensive and time consuming and puts a lot of strain on the applicants. The result is that the selected astronauts are 'guaranteed' to be very healthy. When we consider officer selection, we will probably want a medical selection somewhere in between the two extremes. It is important to realize that there is an optimum balance between very unsophisticated, cheap and quick selection procedures and the highly sophisticated, expensive and time-consuming one. Moving from the cheap end to the expensive one is not linear however. For instance, a nurse who asks the applicant to read characters on a wall-chart and performs a simple color perception test can do the assessment of the visual perception. Alternatively, an ophthalmologist can perform the same assessment using a set of sophisticated tools. Here, it is quite doubtful whether the increase of assessment quality would compensate for the tremendous increase in costs when using the specialist in considering the overall purpose of officer selection. Also, the increase of selection accuracy yield by the addition of a selection tool is dependent on the other tools already present in the procedure. In technical terms, we speak of the incremental validity of a selection tool, or of the usefulness of a selection tool. As put by Blum and Naylor, "The utility of a selection device is the degree to which its use improves the quality of the

individuals selected beyond what would have occurred had that device not been used."14. Note that we took an example in the medical selection area, but the same phenomena occur in all fields of selection.

If an acceptable external criterion exists, and the statistical relations between the selection data and that criterion are known, it becomes possible to use statistical techniques to determine what selection tools are worth while adding to a selection procedure. Regression models allow the construction of a selection battery step-wise for instance, only adding a tool when it increases the multiple correlation with the external criterion. It is then up to the selection system manager to evaluate whether the increased predictive validity compensates for the additional costs resulting from the use of the extra selection tool.

7. Conclusions

Given that each officer selection system is deeply embedded in its general legal, societal, political and military context, it is unrealistic to pursue the implementation of a single, universal optimal selection system. Yet, a number of rules and methods are invariably required in order to ensure that a particular officer selection system is sound and appropriate. The respect of these rules and methods can only be guaranteed by professional specialists because of the complexity involved. In one of the first accounts of selection for the military15, it was God himself who dictated the selection process. But since He doesn't appear to be involved in this area any more, a whole set of specialists have to do their best to replace Him! These include the personnel needed to assess the different competencies (nurses, medical doctors, psychologists, sports monitors, and teachers) and the personnel involved with setting up and managing the overall system (I/O psychologists, operations research specialists, legal advisers, statisticians, computer specialists and personnel policy makers). The ultimate decisions concerning any selection system have to be made by the personnel policy makers, not by the personnel in charge of selection or training, since any selection system is only a - very powerful - tool placed at the disposal of the Human Resource Managers.

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[14] Blum, M. L., & Naylor, J. C. (1968). Industrial Psychology, its theoretical and social founda-tions (Rev. ed.) New York: Harper & Row.

[15] The holy bible: Judges 7: 3-7

Chapter 7

THE QUALITIES OF AN OFFICER

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It is reasonable to assume that most of society regards the military officer as a leader. This chapter will provide an overview of the qualities of an officer considering both the pragmatic, hands-on opinion of the selector and trainer and also informed, scientific analysis taken from various studies over many years.

In modern military organizations, the effective leader will also need sound management skills, particularly during the peacetime environment. Accordingly, leadership, in its broader sense, will also be discussed, along with the links and the differences between Leadership and Management.

Whilst the military officer will usually need to possess qualities both in leadership and in management, there will be occasions when such qualities will, to a certain extent, be rather peripheral to pre-requisite professional skills such as, for example, Legal and Medical. Specialist, professional requirements are not 'qualities' *per se* and, accordingly, they will not be discussed within the scope of this chapter. Officer qualities must be differentiated from other factors assessed at selection. Broadly defined, these personal qualities (PQs) refer to traits, states, needs, motives, goals, attitudes, interests, determining tendencies and general dispositions towards personal/social situations. They are different from cognitive, intellectual factors and medical factors which will also be examined in that they usually form an intrinsic part of officer selection.

1.   What is leadership?

Most officers lead a complex, technical life, with many highly specialized duties to perform. These duties are his responsibilities as an individual, and as a highly-trained, responsible member of an exacting profession. In addition, he has to lead his men. An officer does not exist for his individual, personal value, but for his ability to show the way and make his men want to follow. This is indeed the core of the officer's existence and, without it no hope exists of grappling with the tasks of command. It is seen at its simplest in warlike operations, but the power to lead smoothes the way of every task in every branch of a military organization, whether in war or peace. It breathes that vitality into an organization that will take a collection of men, buildings and machines, and waken them to purposeful, effective life. How is it done? First, by force of character. Clearly, people are not all born with the same characteristics, and some from their earliest years have felt the power to show others the way, and to influence their minds. We call them born leaders, and they are just that; born with strong, independent, assertive minds just as some are born with a good natural physique. But this is not to say that the characteristics of effective leadership cannot be acquired, just as a good physique can be cultivated with suitable effort.

In all of the words spoken and written about leadership, one fundamental point continually emerges; namely that, for most, the skills of leadership are not normally acquired instantly. The training of a leader, whether it be formal or through experiences, takes many years. Appropriate experiences are necessary, both to build and develop the leader's own force of character, and also to increase his ability to influence others.

So, what is leadership? In the simplest of terms, leadership can be defined as "getting things done" or, perhaps, the combination of example, persuasion and compulsion that makes the military subordinate do what is wanted of him. Clearly, in a military environment, things have to be done, but leadership is not just getting things done, but getting them done in the way in which the leader wants them done, in all conditions, and with the consent of the team, however grudging that consent may be.

Some, if not many, military leaders do not *lead* effectively. They hold a title and they are figureheads at the head of the pack. Their leadership is a facade and there is little of substance behind the mask of authority defined by the badge of rank. Clothes of authority, however, cannot in themselves generate either ability or effectiveness as a leader. Clearly also, the abilities and effectiveness of any leader are only as strong as are perceived by those who are led.

Most military organizations have a highly structured bureaucracy. Unfortunately, in peacetime, these bureaucracies are often able to develop and promote the 'Empty Suits', an appropriate Americanism which describes individuals who dress and present well, who are able to identify the right, vital progressive routes for themselves, but who have only limited raw and genuine skills of leadership, save for one essential facet, that of not putting their feet wrong. Such individuals are, in essence, light-weight 'polystyrenes'; they merely fill a place. However, they remain clean-coated and trouble free, and thus they progress, whilst those with more genuine substance depart, often out of frustration. Unfortunately, polystyrene cannot "rock a boat", it cannot step out of line, it cannot stimulate change, it does not take risks and, certainly, it cannot inspire. In times of peace, the 'polystyrene' empty suits remain the guardians of the *status quo*, the keepers of the book of rules and the stiflers of energy and initiative. Their reliability is without question, but so is their predictability. Simply, their leadership is mundane.

A *real* leader must be an agent for change, an inspirer and developer who is able to show the way forward, integrate people and ideas and be prepared to instigate rapidly the most effective option. Particularly, in times of tension or war, an effective leader will have to be able to bring both colleagues and subordinates along in a way that is at once identified as pragmatic, meaningful and militarily cost-effective.

Military and naval history is full of effective leaders such as Washington, Wellington, Nelson, Bonaparte, Montgomery and Rommel who rose to the top, not by preferment or substantial support from acolytes, but simply because of their abilities, both strategic and personal, which enabled them to inspire their men and, most importantly, achieve military success.

In past conflicts, battles and wars were usually lengthy. Incompetent or irrelevant leaders could be, and usually were, identified, replaced and sometimes even shot! Inspirational leaders could develop their forte and earn recognition by success. However, most recent international wars have lasted for just a few weeks, and future wars can be expected to follow this trend. NATO planners are well aware that they will have to fight with the men and materiel that they have to hand and in stock. Perhaps even more significantly though, battles will have to be directed and fought by the leaders already appointed and in place. The 'polystyrene', empty-suit commander would be found wanting and no doubt would be identified in the aftermath during the soul-searching of 'Lessons Learned' – but at what cost?

In war, a leader should not have to compromise. In war, it is unlikely that a *real* leader would accept compromise. Yet the 'Empty Suit', whose life and career had developed out of frequent compromise and assent, would probably find the transition to the warrior's outlook in times of conflict an impossible hurdle.

2. Leaders and managers

The differentiation between a good leader and an effective manager are, to many, nebulous. Simply however, managers are usually measured by their performance within set, pre-determined parameters. Leaders should be judged by higher requirements, often not pre-set and, especially in times of conflict, usually surprising. That said, it is difficult to imagine that an effective manager would not have some skills of leadership within his persona. Similarly, it would be surprising to find an effective leader who was bereft of management skills. However, the fundamental, singular difference between Management and Leadership is that Leadership is about effective change-making and the single-minded application and enforcement of that change, however unpalatable the change may be.

Military leaders, overall, must have a breadth of long-term vision, be decisive and independent, act and stand firm, be a *warrior*, speak openly, plainly and frankly, learn quickly from defeats and mistakes, go forward with unswerving fortitude, and know and appreciate the requirements and interests of subordinates. The qualities and skills of a leader are unlikely to be totally intrinsic and they would have to be developed over many years and with much, appropriate experience. Yet, to a great extent, there would have to be an innate and solid foundation, coupled also with flair and charisma. Sometimes the qualities of leadership would be natural, but mostly they would metamorphose by effective, early nurturing and constant, later development.

Conversely, management skills can be taught and they can also be learned. That said, management is not necessarily a routine process. Management problems vary considerably and a pre-set formula for effective management would rarely work. However, management can be effective without flair or charisma; genuine leadership, particularly at higher levels, cannot. *De facto*, leadership has to be flexible and imaginative with positive and often urgent, effective reaction to the unexpected.

In sum, leadership requires extraordinary attributes above and beyond those of management and the simple, efficient organization of the *status quo*. However, that is not to suggest or infer that management is easy and leadership is necessarily difficult. The required capabilities, however, are different and can be summed up by the following list:

THE LEADER	THE MANAGER
Inspires	Controls
Thinks	Does
Motivates	Organizes
Initiates change	Adjusts to change
Challenges existing ways	Accepts current practice
Creates	Administers
Proacts	Reacts
Shapes actions	Responds to circumstance
Dictates	Follows through
Takes decisions	Implements decisions
Sets objectives	Gets results
Sets the pace	Concentrates on procedure
Driving force	Coordinator
Unmethodical	Methodical
Front of camera	Back stage
Inspires loyalty	Motivated by discipline
Apart from others	Involved with others
Self sufficient	Depends on organization

3.   The assessment of leadership qualities for selection

Over the years, every military organization concerned with leadership training and development has developed its own list of 'Leadership Qualities'. The following lists are just 4 examples from many:

US ARMY	ROYAL AIR FORCE COLLEGE	CANADIAN ARMED FORCES	US MARINE CORPS
1. Bearing	1. Confidence	1. Loyalty	1. Integrity
2. Courage (Physical and Moral)	2. Determination	2. Professional Competence	2. Knowledge
3. Decisiveness	3. Initiative	3. Courage	3. Courage
4. Endurance	4. Awareness	4. Honesty	4. Decisiveness
5. Initiative	5. Effective Intelligence	5. Common Sense	5. Dependability
6. Integrity	6. Decisiveness	6. Good Judgement	6. Initiative
7. Judgement	7. Manner	7. Confidence	7. Tact
8. Justice	8. Self-analysis	8. Initiative	8. Justice
9. Loyalty		9. Tact	9. Enthusiasm
10. Tact		10. Self Control	10. Bearing
11. Unselfishness		11. Humour	11. Endurance
		12. Personal Example	12. Unselfishness
		13. Energy	13. Loyalty
		14. Enthusiasm	14. Judgement
		15. Perseverance	
		16. Decisiveness	
		17. Justice	

None of the lists are complete, yet none of the lists are inadequate. Opinions vary as to qualities needed by a military leader and the particular emphasis placed on them. Clearly, the 'great' leader would have most of the qualities in substantial strength, perhaps out of an amalgam from the lists above. However, most leaders will be short of some of them. It can be seen that some qualities are common to nearly all lists, and they are the fundamental requirements for the military leader, to a certain extent regardless of rank. Significantly, none of the lists include flair, although initiative, perhaps in this case meaning the same, is in all of them. Similarly, none of the lists include charisma, sometimes difficult to define, but an easily identifiable quality seen in so many great leaders. Confidence, a vital quality in a leader, is omitted from some of the lists. Not that this is necessarily significant however, because it would be easy to argue that any leader with a substantial number of the qualities within any of the lists would, inherently, possess appropriate self-confidence. Confidence, however, has to be a vital quality and one promoted more by the leader than by anybody else. If he is certain of his own ability to lead, and this facet can certainly can be developed and strengthened by training and confirmed by experience, then the leader will also be able to generate confidence within the team, which is so vital to success.

In recognizing and accepting that no list of leadership qualities is likely to be complete, lists could probably be reduced without losing too much in the way of positive effect. Field Marshal Lord Harding, a British commander in World War 2, listed the qualities he regarded as essential in a leader in the simple, following terms:

- Absolute Fitness
- Complete Integrity
- Enduring Courage
- Daring Initiative
- Undaunted Willpower
- Knowledge
- Judgement
- Team Spirit

In general, leadership qualities can be structured into 3 main areas: 'approach to people', 'approach to task', and 'individual orientation'. The figure below highlights this model of officers leadership structure. Each circle represents an important aspect of military officers' roles and some of the PQs that are relevant to each of those aspects. Of course, many of the PQs can be related to more than one area; this model is just a guide.

Figure 1 Proposed summary of military Officer's PQs
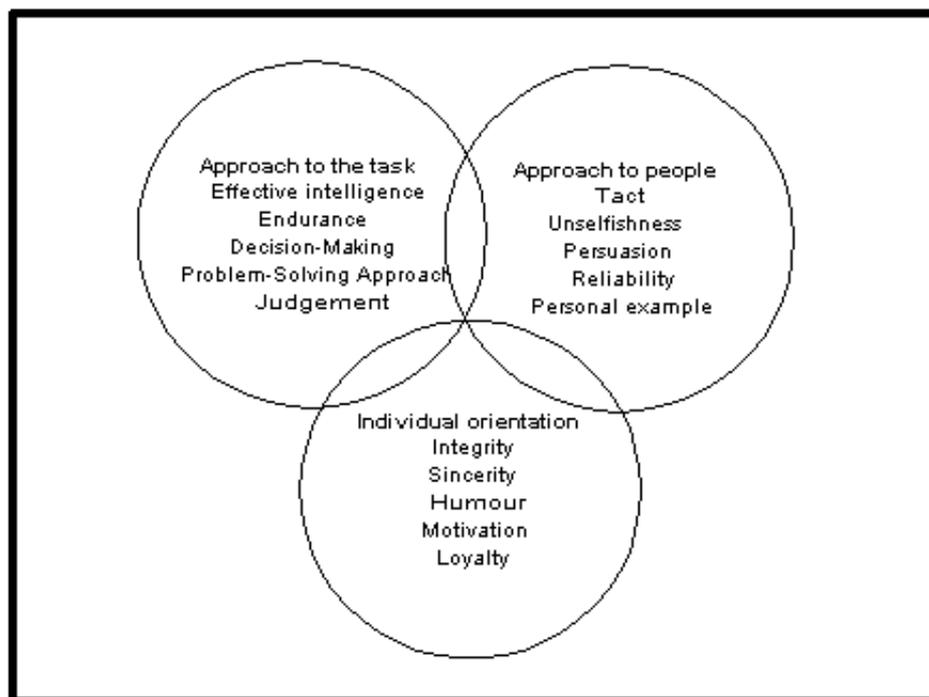
It would be an understandable misconception if all military officers were expected and required to be genuine leaders. Whilst true leadership, for some officers, is a paramount pre-requisite, in other officers, raw leadership skills are much less important. As the roles of the officer vary enormously, so does the preferred list of qualities required by the individual.

However, the closer the officer is to the battle, with the consequent, greater risk to life, then the more dynamic and decisive the leader will need to be. Even in times of war, the rear echelons and the support staff, because of their comparatively, risk-free existence, will not usually need quite the abundance of raw qualities required by the warrior under fire. It follows therefore that, when identifying officer potential during the selection process, due regard should be given to the individual's planned future employment as an officer. The quality requirements for instance for the potential platoon commander, fighter pilot or submariner will probably be different to those pre-requisite qualities for the engineer or logistician.

Whilst the differing roles of an officer will usually require a different emphasis on qualities most, if not all NATO officer selection systems can aim to identify generic potential only. Later, professional training will then identify and develop the specific qualities to type. The word potential is significant. A selection system, by its very nature, has to have a programme which, at best, runs for just a few days. Whilst some true qualities in a candidate may possibly emerge and be identified during the selection process, an effective assessment system has to be geared to look more for potential in a candidate than inherent attributes.

4. Officer qualities for the generic candidate

No selection process can ensure a substantial, guaranteed end-product. The period of examination will invariably be short and it will sometimes provide only a snapshot of the candidate's potential. However, past history, and the candidate's record of development, will also be a very useful initial guide. Aptitude testing can give notice of the candidate's suitability for an aptitude-dependant branch and then further assessment, by interview and additional exercises, will help to ascertain the candidate's overall profile. At interview, close examination should reveal the following qualities and traits:

a. *Appearance and Bearing*. The candidate's appearance, bearing, grooming, distinguishing features and general presentation should be readily apparent within the first impressions formed at interview.

b. *Manner and Impact*. The candidate's conduct throughout the interview, along with his courtesy, tact, confidence, force of personality, presence, poise, polish, humour and alertness will add to the overall impact.

c. *Speech and Powers of Expression*. Dialogue with the candidate will elicit his ability to communicate. The quality of grammar, vocabulary, diction, general fluency, logic, projection and animation will all indicate the overall effectiveness of expression.

d. *Activities and Interests*. The well-rounded candidate should have had a varied, interesting and fulfilling lifestyle. Whilst it is important to bear in mind the individual's background (that is, general opportunities and financial limitations) the range and extent of spare-time activities are important to indicate signs of commitment, depth of involvement, achievement, level of responsibility, spirit of adventure, determination, initiative, enterprise and self-reliance within an overall balance of interests and pursuits.

e. *Academic Level and Potential*. Whilst minimum levels of academic qualifications will be set, the manner and east of obtaining qualifications, together with the level of commitment, diligence and attitude towards study will all give indications of the individual's further academic potential.

f. *Breadth and Depth of Outlook*. The candidate's general awareness of military matters and current affairs should confirm a maturity of outlook and a general ability to reason, giving also some indications of general intellect.

g. *Motivation*. The candidate's determination towards his military goals should be ascertained. Sometimes the motivation will have previous substantiation. It will be important to ascertain that the candidate is clear about, and would relish, the commitment and dedication demanded of the officer corps.

Beyond the interview, individual tasks, or group exercises with other candidates, will give further opportunities to observe additional qualities and indications of potential:

a. *Manner*. Again, the candidate's manner can be assessed within group exercises. Enthusiasm, confidence within the group, openness and a lack of pretence, humour, tact, tolerance and reaction to pressure may be observed during further assessment beyond the interview.

b. *Teamwork*. The extent to which the candidate acts for the common good, the willingness to tackle tasks and the contributions towards the team and the set goals can be observed within the group.

c. *Physical Characteristics*. General fitness is an important officer quality and there should be opportunities to place the candidate in physically-demanding situations n order to note the physical determination, robustness, energy and stamina of the individual.

Leadership Potential. Tasks to elicit leadership potential should test the individual's drive, decisiveness, influence, receptiveness and assertiveness within the team. General presence, a sense of purpose and persistence, coupled with the ability to gain the support and respect of other candidates, should be apparent under further testing.

e. *Effective Intelligence*. General perception, that is an ability to assimilate relevant information and form a logical plan with sensible judgement, and the wherewithal to recognize what is important when faced with a mass of detail can be identified under further scrutiny. The ability to think ahead, and plan for problems before they arise, reacting quickly and accurately when faced with unexpected events should indicate an effective brain. The basic ability to reason, with a capacity to understand, and the mental ability to process the information and ideas, can further indicate useful intellect.

Clearly, not all of the skills, qualities and potential mentioned above are likely to be manifested during any assessment period. However, any assessment process must be sufficiently in-depth to ensure that the candidate has the opportunity to demonstrate a good cross-section of such qualities or, indeed, highlight unrectifiable or untrainable weaknesses which would be an unacceptable risk during officer training and development.

5. Aptitudes

a. General and Specific Aptitudes

There are a wide range of general and specific aptitudes that are required in order to become an effective military officer. The general aptitudes are considered equally applicable to all military specializations (eg pilot, engineering officer, administration officer) and their assessment should form part of the overall officer selection procedure. In addition, there are more specific aptitudes which vary in their degrees of relevance, and thus importance, to different military specializations. In these cases a thorough task (or job) analysis must be conducted in order to identify the relative importance of the specific aptitudes for each specialization.

Interests in the structure of human abilities and aptitudes stretches back a long way, and arguably the most inflental paper on the subject to date was published by Spearman in 1904. In this paper he presented evidence for his so-called "two-factor" theory of intelligence whereby individual differences across a range of tests could be largely explained by a single common factor (*g*) which represents general intelligence. The other component was a test-specific factor (*s*) that was associated with each individual test. This concept is represented in the diagram below.

Figure 2: Spearman's "Two-Factor" Theory
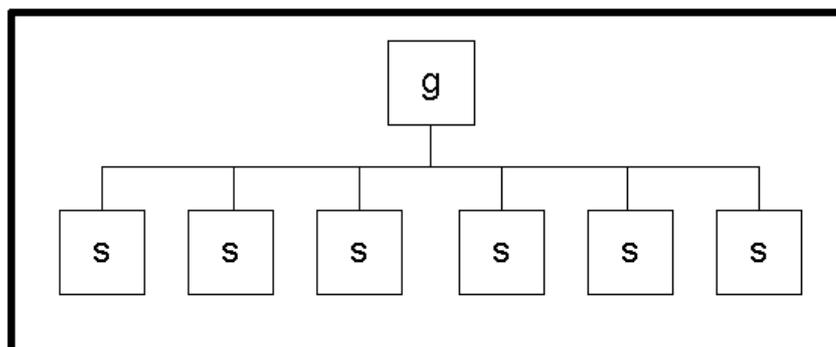
Spearman's model may be contrasted with the work of Thurstone (1938) who described mental abilities in terms of a series of seven second-order "primary factors" rather than a single core factor. These factors were: *I* (induction – reasoning); *M* (memory); *N* (number facility); *P* (perceptual speed); *S* (space – spatial); *V* (verbal relations); *W* (word fluency). Other models of intelligence soon followed, such as Cattell (1943) who presented a theory promoting two types of intelligence; fluid intelligence (*Gf*) and crystallised intelligence (*Gc*). Loosely speaking, *Gf* may be considered analogous to basic reasoning ability or g, whereas *Gc* represents intelligence that is the product of cultural factors such as education and learning. Horn & Cattell (1966) elaborated by adding three ability factors (visualisation, retrieval capacity/general fluency & cognitive speed). Later, Hakstian & Cattell (1974) went on to list nineteen primary ability factors. Other significant models to note briefly include Guildford's (1956) structure-of-intellect and Vernon's (1961) hierarchical model of intelligence.

Almost all of this work involved the use of the statistical technique known as factor analysis and, whilst a number of different intelligence models were generated, they all tended to promote a common core of factors. These were; Verbal, Numerical, Spatial, Memory, Speed, Reasoning, and General Intelligence. Whilst general intelligence is important for all problem solving and underlies many human abilities, the other factors which are not completely encompassed by g are also valuable for predicting job success. These factors can be assessed using specialist aptitude tests.

b. Domains

Carroll (1993) produced a systematic review in which he integrated what appears to be an almost exhaustive set of published factor analytic studies addressing individual differences in mental abilities. He provided a comprehensive description of mental abilities and presented a list of ten major ability domains. A domain is a group of very closely associated factors, each of which may be assessed by a particular assessment tool. However, they are not necessarily completely independent. The domains are listed below:

(1) *Language*. The Language domain related to language development, comprehension, vocabulary, spelling, phonetic encoding, sensitivity to grammar and general verbal communication. The domain comprises many components and is very broad and complex. It is, however, very relevant to all types of military officer selection because of the high degree of verbal communication, both oral and written, that is required. It is important that the officer is able to understand information presented to him/her, and communicate in an effective manner with others.

(2) *Reasoning*. The Reason domain is most closely associated with the concept of general intelligence (g). Carroll identified three independent aspects of reasoning: sequential reasoning; inductive reasoning; quantitative reasoning. Sequential reasoning involves working from stated premises or rules and following one or more logical steps to arrive at a logical conclusion. Induction is the determination and demonstration of one or more implicit rules or patterns that are inherent in some material. Quantitative reasoning is specifically related to reasoning with mathematical concepts. All aspects of this domain are very important for officer selection because the domain is closely associated with general intelligence which is a key factor for predicting job performance in many settings.

(3) *Memory & Learning*. There are a range of different types of memory, each of which is tightly defined. Carroll lists memory span, associative memory, free recall memory, meaningful memory and visual memory. For learning, Carroll cites a general factor but believes that there are also likely to be many specific learning abilities. The ability to store information accurately and learn quickly is of great importance for jobs such as military officers, where there is a need to be able to work with and integrate large amounts of information arriving at a fast rate from many different sources.

(4) *Visual Perception*. The domain of Visual Perception domain incorporates those abilities that are typically labelled "spatial abilities". Carol's argument for aligning spatial abilities with those of visual perception is that spatial processes act upon some mental representation of a physical object analogous to the visual percept. Five independent factors of this domain were identified: visualization; spatial relations; closure speed; flexibility of closure; perceptual speed. The first two relate to spatial abilities whereas the final three refer to perceptual processes. This domain has varying degrees of relevance to different specializations. Visual Perception may not be of great importance to some specializations such as aircrew or air traffic/fighter controllers spatial ability may be a key factor affecting performance.

(5) *Auditory Perception*. Carroll offers a tentative set of twelve independent factors representing auditory perception, ranging from hearing acuity to the ability to localize sound accurately in space. Many of the factors are related to the use and manipulation of tone, pitch, rhythm & other aspects of musicality but one that is worthwhile highlighting is the ability to understand speech that is in some way

distorted or masked. For officer selection, specific medical requirements will be established for each specialization to ensure that all successful applicants meet the minimum auditory requirements. Whilst all officers need to have a satisfactory level of auditory perception, there will be different requirement levels for different specializations.

(6) *Idea Production*. A total of nine factors are raised: ideational fluency; naming facility; associational fluency; expressional fluency; word fluency; sensitivity to problems; originality/creativity; figural fluency; figural flexibility. Clearly, the central theme of these factors is fluency and flexibility, in other words, the ability to think of, and produce, many appropriate ideas, words, pictures, etc. As such, this is a general domain which applies widely to all jobs at officer level.

(7) *Cognitive Speed*. There are two conceptualizations of cognitive speed. The first is a direct measure of how fast a person can complete very simple tasks. The second is theory-based and drawn from the cognitive literature surrounding concepts such as inspection time (eg Vickers, Nettlebeck & Willson, 1972; Vickers & Smith, 1989). Cognitive speed is a domain which impacts on many areas of job performance. The ability to process information quickly is very important to all specializations and some measure of cognitive speed can form a useful part of an officer selection process. However, although there are ways in which cognitive speed may be measured, this is a problematic domain for psychometric reasons which will not be discussed in detail here. It is worth noting that the assessment of cognitive speed may be confounded by whatever material is used in the test (ie the test content) and that the score achieved by a candidate may be partly attributable to his or her ability to solve the type of problem presented. In addition, test results may only show what Carroll describes as a general 'rate of test-taking' ability rather than cognitive speed per se. In other words, some broad factor that is likely to include other candidate attributes such as perseverance and motivation.

(8) *Psychomotor*. Psychomotor is a relatively straightforward domain. Carroll provides a range of factors addressing the following areas: static strength; balance; limb speed; eye-limb co-ordination; physical dexterity; steadiness; aiming. This domain in particular has varying degrees of importance for different officer specializations. Whereas all officers need some degree of psychomotor ability, as do all people if they are to function effectively in a work environment, certain specializations such as aircrew or some engineering branches have their own specific requirements. For example, good eye-limb co-ordination is considered a pre-requisite for success in flying training, and high levels of fine hand skills can contribute to success in certain engineering environments.

(9) *Knowledge & Achievement*. The Knowledge and Achievement domain relates directly to the acquisition of knowledge and/or the achievement of individuals. The focus is on knowledge acquired through the educational system and it may be considered important as it provides an indication of several factors such as application, motivation and breadth of outlook. The domain can be assessed most effectively through an individual's educational and training achievements.

(10) M*iscellaneous*. Carroll notes that not all of the psychometric entities he addresses fall neatly into one of the domains described above, and collates all such outstanding entities under this one domain. Some of the most interesting entries under this domain are: sustained attention; selective/divided attention; time-sharing; field independence-dependence; scanning; susceptibility to cognitive interference; reflective-impulsive decision making; risk-orientation. All of these factors relate to either attention or decision-making and, as such, can have an impact on officer effectiveness.

Whilst Carroll's 10 major ability domains are based on a very systematic review of a large number of published studies, his categorization may not form the most appropriate structure for all settings. By his own admission, the domains are not completely independent of each other and there is some degree of overlap. This means that the structure can be adapted, if necessary, to provide a suitable basis for a selection system. However, the categorization does provide a structure which can be used alongside job analysis results to design an integral part of an officer selection procedure. The importance of the different domains needs to be determined for each specialization, and then suitable assessment methods can be tailored accordingly.

6. Medical requirements

Medical requirements can be broadly divided into the physical and the psychological, with knowledge that both are intrinsically linked in that physical medical problems can also result in psychological effects (eg depression) and vice versa.

a. *Physical Health*. The physical health or standards required of an officer can vary considerably depending on the officer's role and employment. The absolute physical fitness requirements needed in physically demanding roles (such as the infantry soldier or parachutist) would often not be needed and would, in

certain circumstances, be almost peripheral eg, the doctor or the administrator. Physical size can be important. There will be instances when the officer candidate has not, and could not attain certain physical minima, or indeed, maxima. For example, the cockpits of modern fighter aircraft, and possibly even ground fighting vehicles, have design limits regarding the size of the occupants. Visual standards for some military careers are exacting but are often not a deciding factor for others.

b. *Mental Health*. Mental health has to be an important criteria when selecting candidates. Military life, by its very nature, can be stressful, uncertain and disruptive – people with a history of mental illness could thus be very vulnerable to a relapse. Whilst minor, previous depression related to traumatic life events should be assessed on individual merits, Consultant Psychiatric opinion should always be requested as the final arbiter in such cases.

7. Conclusion

The qualities required of the officer are numerous. It takes an amalgam of qualities to make an effective officer and the overall mix of the qualities is very much dependant on the role which the officer is expected to play. Sometimes, these qualities will be inherit but, more often, they will form and develop over years and experience. Selection of officer candidates must look more for potential and trainability rather than raw, developed qualities. Whilst officers have to be medically and physically fit, the numerous medical requirements for differing roles are considerable. In consequence, the good officer in our world's society is a rare breed and that is rightly and *essentially* so.

Successful officers are those who possess all of the aptitudes declared as important for the branch in which they are operating. The importance of the different aptitude domains needs to be determined for each specialization and then suitable assessment methods can be tailored accordingly. Officers must exhibit the PQs that allow them to balance the needs of individual personnel, the needs of his/her personnel as a group and the needs of the task in hand. At the same time they must take into account, the organizational culture and the facilities available within the organization in which they are operating.

Nevertheless, another important factor should no be ignored at the part of selection – *person- environment fit*. Armed forces have a distinctive and strong character and may expect more (or different) things from their personnel. The degree to which individuals identify with this character may influence whether they remain a part of it. Information deficit and unmet expectations are often found to be major reasons for voluntary withdrawal from training. Although it is not part of officer qualities, an assessment of candidates' reasons for joining, understanding and expectations of a military career and lifestyle would prove beneficial.

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Chapter 8

PERSONNEL SELECTION PRIMER

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1. Introduction

All individuals have a large repertoire of behaviors, competencies, interests, and personality traits. Within this repertoire, an individual displays a range of strengths and weaknesses which help define that person as an individual and different from others. When an organization is confronted with the task of selecting new employees, it is charged with evaluating these individual differences among the job applicants in order to make selection decisions. For this evaluation process to be effective, it is paramount that the evaluation tools assess only *job-related* behaviors, competencies, interests, and personality traits. An evaluation of capabilities that bear no relationship to the job or job-relevant training is meaningless. Only an assessment of one's job-related competencies will provide an organization with the power to truly distinguish among the abundance of individual differences and, in turn, select those individuals who ultimately will be successful on the job.

While this chapter identifies job performance as the goal of a selection system, the intent is not to dismiss the important role of training. Particularly for the military profession, it is unlikely that young men and women will come out of a civilian environment with the requisite knowledge, skills, and abilities to serve as a military officer. Some training is needed to prepare individuals for their profession. Indeed, one function of a job analysis is to support decisions concerning, for example, those skills that will be developed during training and those that the applicant will need to possess with little or no additional training. In other words, individuals might need to be selected for adequate levels of hand-eye coordination (if required by a given job) because that ability is difficult to train. Similarly, if a job requires advanced levels of physics, the program of instruction for that job is likely require prior mastery of basic scientific concepts. Therefore, it would be appropriate for the selection test to measure an individual's basic science achievement level: the advanced material would be taught as part of the job training, but the basic knowledge must be possessed by the individual prior to selection. This chapter does not cover the allocation of skills, knowledge, and abilities to training or selection functions; the chapter focuses on those individual differences that would be part of selection procedures.

Effective personnel selection programs involve the implementation of systematic assessment tools to evaluate job-related capabilities, personality traits, and interests. The identification of job requirements provides the basic foundation for a valid selection system. This process, typically referred to as a job analysis, identifies the tasks performed on the job and the knowledge, skills, abilities, and other characteristics required to perform the job tasks successfully. Given the job analysis results, the next step involves identifying the most appropriate instruments so that as many of the job requirements as possible are assessed. Thus, it is likely that a selection process may include a number of assessment tools, each aimed at measuring different aspects of the job. While some procedures are geared toward assessing one's knowledge, others evaluate one's skills or abilities, and there are others that provide information on one's personality, work styles, work values, or interests. The ultimate goal is to identify the job requirements and implement the selection tools that provide an assessment of as many of those requirements as possible.

Typically, a selection process is aimed at identifying individuals who will successfully perform the target job. However, an organization also may be interested in predicting other types of organizational behaviors in addition to job performance. For instance, some personnel selection tools may be evaluated in terms of their ability to predict which applicants are: (a) more likely to remain on the job, (b) more likely to be satisfied on the job, or (c) have managerial potential. Although the ultimate criterion for evaluating a selection program is its ability to predict job performance, the power of assessment tools to predict these additional criteria is an added benefit.

The purpose of this primer is to provide a brief overview of the major issues associated with personnel selection. First, the process of identifying job requirements is presented. The next section provides a brief description of the different types of assessment procedures. This is followed by a discussion of the various issues to consider when making selection decisions. An overview of the procedures used to evaluate assessment methods is presented, followed by a discussion of issues associated with the administration and implementation of a selection program.

2. Identifying Job Requirements

A comprehensive and current job analysis identifies the job requirements and, in turn, provides the foundation for numerous human resource programs, including selection as well as training program design. The most critical pieces of information collected from a job analytic effort include the: (a) tasks required on the job, (b) knowledge, skills, abilities, and other characteristics (KSAOs) required to perform those tasks, and (c) task/KSAO linkages which provide an explicit description of which KSAOs are required to perform each of the job tasks. The sources of information that can be used to identify those job tasks and KSAOs include job materials (e.g., position descriptions, performance appraisals), job observations, interviews with incumbents, workshops with incumbents and/or supervisors, and task and KSAO surveys. In many cases, the surveys are tailored and designed specifically for a particular job within a specific organization. However, there are generic job analysis surveys on the market that may be useful for collecting the requisite information.

Typically, the sequence of events in a job analysis study is as follows:

- Collect background information regarding the job and the organization.
- Interview job incumbents and conduct job observations.
- Conduct workshops with job incumbents to develop a job task list.
- Conduct workshops with job incumbents or supervisors to develop a KSAO list.
- Prepare and administer job task and KSAO surveys.
- Analyze the survey results to determine the important job tasks and KSAOs.
- Conduct a workshop with job incumbents to link the KSAOs to the important job tasks.

A comprehensive job analysis yields a detailed description of the job. Using the job analysis results as the basic framework for a selection process ensures that the program is identifying those individuals who meet the job requirements.

3. Methods of Assessment

Given the results of the job analysis, the next task is to determine the most appropriate assessment methods for inclusion in a selection process. There are numerous tools and procedures that an organization can use to assess the capabilities, personality traits, and interests of people. The most common types fall into the major categories of tests, ratings, inventories, and interviews. A brief description of the types of assessment tools within each of these categories is provided below.

3.1. Tests

A test is an objective method that uses standardized procedures to measure an ability or the potential to learn and perform particular job responsibilities. Many tests are presented in a paper-and-pencil or computer-assisted format, and contain traditional close-ended (e.g., multiple-choice, true-false) or open-ended (e.g., sentence completion, short answer) questions. Other types of tests may require an individual to perform a particular activity (e.g., repair a piece of equipment) or interact with others (e.g., role play) as part of the assessment. Even though there is variety in the types of tests, the common thread is that they involve standardized procedures that include objective methods for scoring an individual's performance. There is an abundance of commercially available tests designed to meet a variety of needs. However, in some cases an organization has a specific need, which requires the development of a "homemade" test, tailored to that need.

One way to view the various types of tests is in the broad categories of traditional cognitive ability tests and performance tests.

3.1.1. Traditional Cognitive Tests

Cognitive tests permit a person to show what s/he knows, perceives, remembers, understands, or what they can work with mentally. Such tests include intelligence tests and achievement tests:

- Intelligence Tests

Measure broad mental abilities such as verbal, mathematical, and reasoning skills which are fundamental to effective performance in jobs where reading, computing, analyzing, or communicating are important. The two major advantages of these types of tests are the ease by which they can be scored and that they can be administered to groups of people.

- Achievement Tests

Measure a person's current knowledge or skills. Achievement tests traditionally are paper-and-pencil or computer-assisted tests, which contain written knowledge- or performance-based questions. Primarily the focus is on assessing how much information a person knows in a particular area (e.g., electronics). Similar to intelligence tests, knowledge tests can also be easily scored and they can be administered to groups of people.

3.1.2. Performance Tests.

Performance tests evaluate one's proficiency in some aspect of job performance. Some performance tests (i.e., work samples and simulations) can provide an assessment of both cognitive and non-cognitive (e.g., interpersonal skills) abilities. Work samples involve presenting an exact replica of some portion of the job to an individual and asking the individual to perform that part of the job. Typing tests and driving tests are examples of work samples. While work samples tend to be more appropriate for blue-collar jobs, simulations are appropriate for professional or "white-collar" jobs. During a job simulation, a portion of the target job is simulated and an individual is evaluated based on his/her performance during the simulation. Although there are a variety of job simulations, some of the most common types include the following:

- Role Play Exercise

In the role play exercise, candidates are asked to pretend they are already an employee in the organization. The exercise is interactive, with the candidate ultimately providing a solution to a problem or suggesting a course of action to take regarding a hypothetical situation. The candidate is evaluated on his/her behaviors, including the solutions or advice s/he provides.

- In-Basket Exercise

This exercise simulates an employee's in-basket in the work place. The candidate is asked to review, prioritize, and respond to hypothetical letters, memos, directives, reports, etc. Trained assessors evaluate the candidate's responses.

- Leaderless Group Discussion

In contrast to the above two exercises, the Leaderless Group Discussion is a group exercise in which there is no designated leader. In this group setting, candidates are asked to respond to a variety of problems and scenarios. In general, candidates are evaluated on how they behave in the group discussions.

In contrast to the work sample tests and job simulations, other performance tests focus strictly on obtaining an evaluation of different non-cognitive abilities. These types of tests include physical abilities, fitness, sensory, and psychomotor tests. Physical abilities tests measure strength, muscular flexibility, stamina, and related abilities. Fitness tests provide an indication of a person's overall level of health and fitness. Example fitness tests include a treadmill test for measuring a person's stamina and medical testing to assess a person's health status. Sensory tests include measures of vision, color, and musical pitch and psychomotor tests include measures of dexterity and coordination.

In general, performance tests are highly job-related; however, they typically have to be administered either one-on-one or in small groups which can be expensive and time-consuming.

Testing Media.

Although many tests are still presented in the traditional paper-and-pencil format, advances in technology offer alternative media for presenting the test material. One common alternative to a paper-and-pencil exam is a computerized version of the test. In this case, the questions are presented and responses made on the computer. One variation on this theme involves computer-adaptive testing where the questions presented to a given individual are based on their performance on earlier questions. For example, if a person answers the first item correctly, s/he receives a different question from the person who answered that same item incorrectly. The ultimate goal is to obtain a more accurate assessment of one's abilities.

Additional alternative media for test presentation include motion picture and videotapes. An example of a test presented in one of these formats is a memory test for law enforcement officers. In this case, a particular scenario is presented and, at the conclusion of the presentation, the test-taker is asked to document his/her observations. Another example is the presentation of a particular scenario, followed by a series of questions. Then, based on the individual's responses to the questions, the scenario continues with additional questions.

Overall, electronic tests provide new ways to perform conventional and unconventional testing. They help ensure standardization by controlling the instructions and adherence to the time limits. In addition, they permit centralized scoring and allow for preparation of computer-generated reports.

3.2. Ratings

Another common method for assessing one's capabilities is to ask others (e.g., supervisors, peers) to rate a person's performance. Regardless of the performance being assessed, ratings require at least three things:

- observations or records to serve as sources of information,

- organizing and remembering that information, and

- following some rule to convert the remembered information into a quantitative evaluation.

Ratings are typically made by superiors, peers, subordinates, and "outsiders" who possess special expertise. As such, because the candidate is not an employee of the organization, ratings are often difficult to collect as part of the selection process. However, ratings can provide an indication of an incumbent's job performance and, therefore, can be used in a study to evaluate how well a selection process predicts job performance. For example, an organization could administer the selection process. Then, for those individuals selected as new employees, job performance ratings would be collected after they have been on the job for a while (e.g., 1 year). Finally, the organization could evaluate the relationship between the selection process and job performance.

It is still beneficial to obtain ratings because they can be used as an indicator of an incumbent's job performance. The information can also be used as criteria to evaluate the assessment instruments.

Three major formats are used to make ratings:

- scales,

- comparisons,

- checklists.

Scales.

Of the various rating methods, scales are the most commonly used method. Rating scales can be used to rate a person's overall performance as well as to rate different or specific aspects of job performance. Most commonly, rating scales combine verbal phrases and numbers to assist in making judgments. The number of scale divisions is usually an odd number with "average" as the center of the scale.

One example of a rating scale commonly used is as presented below:

```
|_____|_____|_____|_____|
5         4        3        2        1
Exceptional Above  Average  Below    Poor
           Average          Average
```
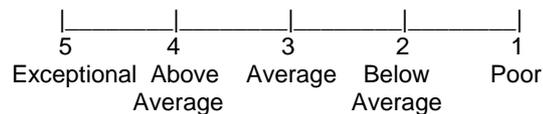
Comparisons.

It is also possible to rate an individual's performance by comparing his/her performance with that of another person. This method of rating can also be done on overall performance or on specific aspects of job performance. This method of rating is most advantageous if a ranking of individuals is desired; however, it is important to note that ranking individuals according to their performance does not provide information about how much the individuals actually differ in their performance. Comparisons can be accomplished by:

- Rank Order

Raters are simply asked to rank order individuals, according to their performance. One way to do this is by listing names on a sheet of paper and having the rater(s) rank the individuals, with 1 = best performer, 2 = next best performer, and so on.

- Forced Distribution

This method is used most often when a relatively large number of people are to be rated and fine distinctions among their performance are not necessary. Raters are asked to place individuals into categories (usually 5, rarely more than 9) and the categories have assigned proportions for which raters can place the individuals. For example, if you have five categories, the proportions for assigning individuals might be category 1 = 10 percent, category 2 = 20 percent, category 3 = 40 percent, category 4 = 20 percent, and category 5 = 10 percent.

- Paired Comparison

In this method, individuals are compared with all other individuals. For each pair of individuals, the rater indicates the better performer on some aspect of job performance so that the top of the rank order is the person chosen most often. The major disadvantage of this method is that it can be very time consuming because of the potential for a very large number of pairs for any given person to rate.

Checklists.

Ratings can also be made on checklists that are based on attitude scaling methods. Those most often used include checklists that have equal-appearing intervals and checklists that use summated ratings:

- Equal-Appearing Intervals

This type of checklist presents items and asks the rater to check the items that describe the person being rated. All items on the checklist will have been previously scaled on the idea that equally often noticed differences are equal.

A final score is computed for the person being rated by adding together the positive and negative scale values for each checked item (the neutral value is subtracted from the scale value of each item).

- Summated Ratings

This type of checklist presents items and asks the rater to indicate a level of agreement with the statement or how frequently s/he displays the behavior mentioned in the statement. Each item has a numerical value associated with it (e.g., desirable behaviors may range from 5 = always to 1 = never). The final score is computed by adding together the numerical values of the chosen responses.

Regardless of the method used to evaluate performance, keep in mind that the rating process can be improved by: (a) choosing the rating format appropriate to your needs, (b) ensuring the rating scales/criteria are related to the job, and (c) training the persons who make the ratings about how to interpret the various dimensions of performance and how to use the scales appropriately.

3.3. Inventories

In contrast to the other types of assessment methods, inventories are self-report measures that are based on opinions, judgments, or attitudes. While a test measures what a person knows or can do, an inventory identifies what a person feels or believes. Inventories are typically used to assess a person's interests, motivation, personality, and values. Because of the potential that socially desirable responses will be made, these types of assessment instruments often include "lie" or "fakeability" scales. The inventories most commonly used in selection programs include: (a) personality, (b) honesty/integrity, and (c) biodata.

Personality Inventories.

When used for employment purposes, personality inventories evaluate characteristics such as motivation, conscientiousness, self-confidence, or how well the person gets along with others. Whereas aptitude tests have right and wrong answers, there is usually not the same distinction for items included on personality inventories. A concern about personality inventories is that they are sometimes perceived to be an invasion of privacy – that the items refer more to aspects about one's personal life rather than job-related performance. This concern may be reduced if the personality inventory is included as one part of a broader assessment program.

Numerous personality tests, designed to meet a variety of needs, are commercially available. Although it is feasible to develop a personality inventory tailored to a specific organization, the extensive development process and the time associated with developing such a measure often make a custom personality inventory prohibitive.

Honesty/Integrity Inventories.

These types of inventories can be considered a specific type of personality test, and generally are recommended only for use in pre-employment screening. Honesty/integrity inventories can be categorized as (a) overt integrity tests that question people about involvement in and attitudes toward theft and delinquency, and (b) personality-based tests that include disguised-purpose questions about insubordination, excessive absenteeism, disciplinary problems, and substance abuse. Typically, an organization that is interested in using a honesty/integrity inventory will administer a commercially available inventory, as opposed to developing its own assessment tool.

Biodata Inventories.

Biographical (or biodata) inventories collect information about an individual's past. Although all questions are standardized on a given biodata inventory, the types of biodata questions can vary quite a bit. For example, some may be job related (e.g., how many widgits did you produce last year?), whereas others may not be job relevant (e.g., are you proficient at crossword puzzles?). In addition, some may be verifiable whereas others may not be. Some may ask for actual behavior while others ask for hypothetical behavior. In fact, in many cases, there is little if any theory or rationale for the questions included in a biodata inventory. Instead, the inclusion of items is based on empirical evidence. That is, data has been collected that demonstrates that a particular response on an item is related to successful job performance. Given this, a biodata instrument must be developed specifically for the target job within the particular organization. Generally, a large number of biodata items are prepared, then a study is conducted to determine which items are related to successful job performance. Those items remain in the inventory, whereas the other items are discarded. Then, additional studies must be conducted on a regular basis to ensure that the biodata items are still predictive of job performance. Given this development process, biodata inventories do not generalize from one job to another or from one organization to another. Although they have been found to be powerful predictors of future job performance, the extensive development process and the effort required to maintain the inventory often discourages organizations from using them.

3.4. Interviews

Of all the assessment methods, the interview is perhaps the most commonly used approach. Although the interview can be a relatively unplanned activity, it is highly recommended that it include standard questions and follow standard procedures. That is, the interview is a more valid predictor of job performance if it consists of standard

questions that are based on an analysis of the job and if it uses a standardized format to evaluate responses. While the questions may seem fairly straightforward, interviewers should be trained in asking follow-up questions to clarify and explore issues brought up in the interview. This will help to ensure standard procedures are followed across interviewees. Interviewers should also be trained on how to use the rating scales to evaluate answers to the questions in a standardized manner.

Whether or not the interview is standardized, the questions included can be structured in a number of ways. One way is for the questions to follow a pattern. This format specifically provides the traits, background, experiences, training, etc., that is desired, but only generally provides the kinds of questions that may be asked. The interview questions can also follow a behavior description format. This type of interview includes only questions that ask about past behavior. Finally, the questions can be of a situational, or hypothetical, nature where the interviewee is asked how to say how s/he would respond to critical situations that others have faced on the job.

4. Designing the Selection Process

Developed and used properly, assessment instruments can be very effective in distinguishing between potentially high- and low-performing individuals. Thus, they can provide extremely useful information for making selection decisions. As with any type of decision, a selection decision can result in planned outcomes – it can also result in certain unplanned outcomes. Therefore, the organization must consider carefully a number of issues when designing the overall selection process. These issues include, but are not necessarily limited to:

- What is the overall purpose of this process? Is it to select an individual for a particular position or to identify a pool of qualified individuals?
- What are the best methods of assessment? Do these methods provide an opportunity to evaluate the relevant KSAOs?
- What are the costs associated with developing and administering these assessment methods? Can the organization afford it?
- How feasible is it for the organization to implement the assessment methods? Will administration be centralized or dispersed? Who will administer, monitor, and score the assessment instruments?
- Are there valid minimum qualifications (e.g., education, experience) that can be used to screen out unqualified applicants?
- If the selection process includes more than one assessment procedure, in what order will the procedures be administered? How will the individual scores be combined?
- How will final selections be made (e.g., top-down, from a pool of qualified candidates)?

There is no one "best" selection process that will work for every organization. Each organization must weigh the benefits and drawbacks associated with the various issues. In the final design of its selection process, it may be necessary for an organization to make calculated tradeoffs between the various issues. As an example, suppose that an organization has determined that four assessment instruments will be highly effective in distinguishing between candidates who possess and those who do not possess the requirements of the target job. If the organization does not include in its overall selection process a step whereby candidates proceed through an initial screen, such as meeting certain minimum qualifications, then the organization must be willing to support a potentially large number of candidates who will complete all four instruments. A tradeoff here may be whether the effectiveness of the assessment instruments outweighs the costs – in terms of time, people, and financial resources – to administer them. However, if the organization decides to include an initial screening step for candidates to meet certain minimum qualifications, then the minimum qualifications must be job-related. A tradeoff here may be whether reducing the number of candidates who complete the four assessment instruments outweighs the difficulty of ensuring the initial screen (e.g., minimum qualifications) is job-related. It will be necessary for the organization to continue this type of analysis of weighing the benefits and drawbacks associated with each issue with those of the other issues.

4.1. Determining Appropriate Assessment Procedures

Ultimately, the final decision regarding the appropriate assessment instrument(s) to include in a selection process will be dependent on the results of the job analysis, as well as the feasibility for developing and administering particular assessment instruments. Rarely will one assessment method provide sufficient information to make an accurate evaluation of an individual's performance. Indeed, most selection decisions are based on assessments from multiple instruments. It may be that a single assessment instrument will provide an accurate evaluation for simple, routine jobs; however, complex jobs typically require a more sophisticated assessment system.

For selection processes that contain more than one assessment instrument, it is important to understand how the information from the various measures can be combined. Test battery is the common phrase that is used to describe a process that contains more than one test (e.g., job knowledge, mathematics, verbal, and reasoning tests). The Air Force Officer Qualification Test (AFOQT) is an example of a test battery. The AFOQT is used by the Air Force to select non-commissioned officers for their commissioned officer training school. . The AFOQT assesses various cognitive abilities (e.g., mathematics and verbal ability).

Another approach to combining scores from different assessment techniques is an assessment center. Although the phrase is somewhat misleading, an assessment center is not a place but rather a process that involves the administration of a variety of assessment instruments. Assessment centers have been shown to be highly accurate in selecting qualified candidates for a variety of jobs. Currently, they are used in industrial, educational, governmental, and other organizational settings. Typically, assessment centers involve a number of simulations. They also can include the administration of personality measures, biodata, and structured interviews, among other types of assessments. The basic concept of an assessment center involves trying to obtain an evaluation of an entire person by having that person participate in a variety of activities. These activities or exercises provide a number of occasions for a candidate to demonstrate his/her capabilities. Given the opportunity to demonstrate one's capabilities across more than one assessment procedure helps ensure a more accurate evaluation of those capabilities. In this approach, multiple trained assessors evaluate each candidate by observing their performance in each activity. The candidate receives an overall assessment center score by pooling assessor ratings across assessors and instruments.

One final method of combining information from a variety of assessment techniques involves individual assessment. Most situations call for assessments to be made for groups of candidates. However, there also may be situations that call for people to be assessed one at a time. In this case, a trained professional administers a variety of tests and inventories to a candidate. Then, based on an assessment of the candidate's responses, the professional interviews the candidate. Finally, based on all the information gathered during the assessment, the professional prepares a report documenting the results of the process.

In general, an individual assessment offers a comprehensive and in-depth evaluation of an applicant's capabilities, interests, and personality traits. The major disadvantages of individual assessments are time and cost; although the overall cost and time to assess groups of individuals may be high, the cost per individual is typically higher when conducting individual assessments. Given this, individual assessments typically are not often used in selection programs. Their use tends to be limited to those positions with a few applicants (e.g., high-level executive positions) where an in-depth evaluation of each candidate is particularly useful.

4.2. *Determining An Appropriate Selection Model*

When the selection process involves only a single instrument, there are two traditional approaches to selecting new employees. One option is for the organization to select the candidates in a top-down fashion, beginning with the candidate who scored highest and continuing until sufficient candidates have been selected for which there are vacant positions. The other way the organization may select candidates is to establish a cut, or "pass," score – candidates who score at or above the cut score are selected, or placed on a best qualified list, while the candidates who score below the cut score are not selected. A third relatively new approach for making selection decisions involves identifying a group of candidates who essentially receive the same score and selecting the candidates based on special requirements of the job.

Determining an appropriate selection model when the assessment process involves more than one instrument requires more thought in how to use the scores from the different instruments to identify the best qualified candidates. When a selection process contains more than one assessment instrument, it is important to determine the sequence in which the instruments will be administered and how the individual scores will be combined. In general, there are three models commonly used when selection processes consist of multiple instruments:

- Multiple Hurdle

This approach involves administering a number of different assessment instruments and screening out candidates from the selection process after the administration of each instrument. For instance, the first step may involve an application form to ensure candidates meet certain minimum qualifications. Candidates meeting the minimum qualifications then complete the next assessment instrument which may be a knowledge-based exam. The individuals who pass this exam, proceed to the third stage which may be an assessment center. Then, individuals who pass the assessment center proceed to the final stage, a structured interview. The multiple hurdle model is particularly beneficial when there is a large applicant pool, since it provides the means to reduce the number of candidates prior to the administration of more costly and time-consuming assessment techniques.

- Multiple Cutoff

This approach involves administering all the assessment instruments during one occasion, but having individual pass scores for each instrument. For instance, the selection process may involve the administration of a math knowledge exam, an electronics knowledge exam, and a reading exam. Each exam is scored independently and the candidate must pass each exam to be selected.

- Compensatory

In contrast to the multiple cutoff model, a compensatory approach combines the scores from individual assessment instruments and then applies a pass score. This allows an individual's strengths to compensate for his/her

weaknesses. Using the example above, an individual's poor performance on the math knowledge can be compensated by good performance on the electronics or reading exam. Thus, even though the individual performs poorly on one exam, s/he is still selected because of his/her overall performance across all exams.

Ultimately, choosing the most appropriate selection model is based on the number of applicants to be assessed and the job analysis data. However, the following are useful as general rules of thumb:

- If the organization expects a large number of applicants, then it is reasonable to follow a multiple-hurdle approach.

- If there are certain KSAOs that are required and they cannot be compensated for with other KSAOs, then the multiple cutoff approach is appropriate.

- If it is acceptable to have strengths compensate for some weaknesses, then a compensatory approach is appropriate.

Independent of the selection model an organization determines to be most appropriate, consideration must be given to the way in which the scores are used to make the selection decision. This means that not only must qualified candidates be selected, but also that a sufficient number of them be selected. As mentioned, one way the organization can select the candidates is in a top-down fashion. Another way the organization can select the candidates is by applying a cut score – after administration of all assessment instruments or after administration of each instrument. Ultimately, the selection process must include instruments that are effective in identifying candidates who possess the qualities required by the job, and a decision process that is fair and provides sufficient number of qualified candidates.

5. Evaluating Assessment Methods

It is important to evaluate each individual assessment method as well as the entire selection process to determine its quality and usefulness. In general, an assessment method or process can be considered "good" if it:

- Assesses what it claims to assess – and does so consistently.
- Assesses the knowledge, skills, abilities, and/or other characteristics important to the job of interest.
- Is related to job performance.

If the above properties are true, the assessment method, or instrument, is said to be *reliable* and *valid*. In general terms, the validity of an assessment instrument will help you determine how appropriate it is for a particular situation; the reliability of that same instrument will provide an indication of how much trust you can put in the score derived from it. An assessment instrument must be reliable in order to be valid; that is, an instrument cannot claim that it measures certain characteristics if that instrument doesn't enable a person to obtain similar scores on repeated administrations. On the other hand, an assessment instrument may be reliable, yet not valid. For example, a person may obtain similar scores when completing the same instrument numerous times, yet the instrument measures a characteristic other than what it claims to measure.

5.1. Reliability

Reliability refers to how consistently an assessment instrument measures a characteristic. Said another way, an assessment instrument is considered reliable if a person repeatedly completes the assessment instrument and s/he obtains a similar score each time.

Whenever an assessment is made of a person's performance, there is the potential for errors to be made in measurement. These errors may cause an assessment to differ because:

- There may be something different in the *environment* that influences the person's performance (e.g., room too cold, poor lighting, extraneous noise).
- There may be something different about the *person* that influences his/her performance (e.g., different levels of anxiety, fatigue, or motivation).
- There may be *more than one version* of the assessment instrument that is used.
- There may be *multiple raters* evaluating the performance.

Each of the above is a potential source for an error to be made by chance (otherwise referred to as random error) that can affect the final evaluation of a person's performance. Presumably, if there were no random errors when making assessments, the person would obtain the same score every time s/he was assessed. The degree to which an assessment score is unaffected by these types of errors is an indication of the reliability of the instrument.

Depending on the type of assessment instrument and how it is administered, there are a number of reliability estimates that may be appropriate to compute:

- Test-retest reliability

At the very least, you will need to compute a reliability estimate based only on the individuals to whom you administered the assessment instrument. This estimate reflects how well the assessment instrument allows for similar scores to be attained by the same person with the passage of time.

- Internal consistency reliability

Computing an internal consistency reliability estimate will provide an indication of the degree to which items on the instrument measure the same thing.

- Alternate or parallel form reliability

If different versions of the assessment instrument were developed and used, you will need to compute an alternate or parallel form reliability estimate. This reliability estimate will provide an indication of the degree to which the various forms are different from one another. A high alternate form reliability estimate means that the forms are very similar while a low estimate means the forms are too different, or measure different things, and should not be interchanged.

The above estimates provide information about an assessment instrument. However, an additional reliability estimate can be computed to provide information about ratings between multiple raters. This estimate, referred to as inter-rater reliability, provides an indication of the degree to which the raters agreed about their ratings of performance.

5.2. Validity

Validity refers to how well an assessment instrument measures the characteristic(s) it is intended to measure. It is a good indication of how appropriate the assessment instrument is for the purpose being used. Validity can also be useful in determining the degree to which the characteristic(s) measured by the instrument is related to the job of interest. Finally, evidence that an assessment instrument is valid provides indication of a linkage between performance on the assessment instrument and performance on the job. That is, if an assessment instrument can be demonstrated to validly predict performance on a job, then one can conclude that persons scoring high on the instrument are more likely to perform well on the job than persons who score low, all else being equal.

Professional testing standards and guidelines provide three major approaches for collecting validity information:

- Content Validity

This approach begins with the development of the assessment instruments and seeks to ensure that each resulting instrument covers all important aspects of the relevant job (as identified from the job analysis) without testing knowledge or skills that are not required by the job.

- Construct Validity

This approach is particularly relevant to assessment instruments that are designed to measure aspects of performance that are fairly abstract, such as neuroticism or extroversion. Essentially, a construct validity approach calls for a relatively large amount of information to be accumulated about whether the assessment instrument indeed measures what it claims to measure.

- Criterion-related Validity

This approach requires a correspondence to be made between scores on the assessment instrument – as well as a correspondence to be made across scores on the entire process – and performance on the job.

6. Administration/Implementation Issues

As with the previously discussed aspects of assessment, there are issues to consider when administering the instruments or when implementing the entire process. The major areas in which the issues exist include security, standardization of procedures, relevant laws and regulations, and training administrators. These areas, along with the various issues relevant to each, is briefly discussed below.

6.1. Security

All methods of assessment are essentially tests and, therefore, procedures should be maintained to ensure their security. One way to ensure the assessment is fair to everyone completing the instrument is to keep all assessment materials secure at all times. The following basic procedures will help to prevent the misuse of an assessment instrument:

- All assessment instruments and associated evaluation materials should be stored in locked rooms or cabinets/files, and only authorized persons should have access to the keys.

- All assessment instruments should include a unique identifier to account for all materials during use and to ensure its return after administration.
- Persons completing the assessment instrument should not be allowed to take any items, including scratch paper, from the testing room.
- Train all administrators in the proper handling of assessment materials.
- Care should be taken when shipping assessment materials. Only a reliable delivery service that has the capability to trace the materials should be used.
- Consideration must also be given to the security of electronic copies of assessment materials. Electronic copies of assessment materials should be designated as password protected and all related computer disks and manuals should be secured.
- Security procedures should be incorporated into the development of the assessment instruments.
- Security can be maintained for assessment instruments used over a long period of time by using more than one version.

6.2. *Standardized Administration Procedures*

Standardized procedures should be developed to accompany the assessment instrument that include:

- Providing the same environment to all persons completing the assessment instrument. A room that is well-lit, well-ventilated, at an appropriate temperature, and free of extraneous/disruptive noise should be used.
- Providing the same time limits to all persons completing the assessment instrument.
- Reading verbatim the instructions for completing the assessment instrument. It is important that the test administrator not offer more information than what is in the instructions as doing so may give someone an unfair advantage or disadvantage.
- Interpreting the aspects of performance in the same manner.
- Using the same materials to evaluate performance.

All staff involved in the administration of the assessment instrument should follow the standardized procedures and be made to understand that deviations have the potential to invalidate results.

6.3. *Relevant Laws and Regulations*

Each country has its own set of laws and regulations that must be followed to ensure employment practices are legal and consistent with professional and ethical standards. For example, developers and users of assessment instruments within the United States must adhere to various laws and regulations to prevent biased employment practices. Prior to developing and using any assessment instrument, it is essential to research all relevant laws and regulations.

6.4. *Train Administrators*

The qualifications and training required of administrators will depend on the nature of the test and complexity of the assessment process. Although it is good practice to train administrators of even routine assessments, even more training will be required for a complex assessment process.

In general, test administrators should be well organized, observant, speak well, and possess good interpersonal skills. Training for test administrators should cover ways to handle special situations with sensitivity, such as how to respond to a request for an accommodation, and how to calm an overly anxious person about to take a test. The training should also indicate what types of assistance are and are not permissible during test administration. For example, the test administrator should know whether s/he can clarify the instructions or help with practice items.

The test administrator should be thoroughly familiar with the testing procedures before administering an assessment instrument. The test administrator should be provided with a test administration manual and encouraged to refer to it when needed for a refresher of instructions, time limits, required assessment materials, order of presentation, and so on.

7. Conclusions

The ultimate goal of a selection process is to identify individuals who possess the various qualities to perform the job successfully. The first step toward accomplishing this goal is to perform a job analysis study to identify the job requirements. Then, based on the job analysis information, an organization should develop and implement valid and reliable assessment instruments.

In addition to predicting job performance, it may be beneficial for an organization to predict other types of organizational behaviors, such as an employee's tendency to leave and job satisfaction. Many organizations also find it useful to predict managerial potential. A challenge associated with this prediction concerns the issue of how to define the managerial responsibilities at some unspecified point in the future. For example, it may be beneficial for an organization that expects high turnover within its managerial ranks over the next 10 years to try to identify

the "shakers and movers" of its future. In this case, the selection process should include assessment procedures that are powerful enough to predict immediate successful performance in the target job as well as future success as a leader within the organization. Another example of this situation is the U.S. military in their attempts to identify potential senior officers. In general, this depends on how the organization defines its leaders of the future and whether the organization has instruments at its disposal that are powerful enough to measure this potential.

Ultimately, responding to the following questions with a resounding "Yes" should provide an organization with a solid foundation when designing its selection process:

- Does the selection process address the needs of the organization? This includes a determination of whether the purpose of the selection process is to predict immediate job needs versus long-term leadership potential.
- Does each assessment instrument – and the overall selection process – provide an evaluation of the job requirements?
- Are the individual assessment instruments – as well as the overall selection process – reliable and valid?
- Is it feasible for the organization to implement the entire selection process?
- Will the selection process be administered in a standard fashion by trained administrators?

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Chapter 9

INTERNATIONAL GUIDELINES FOR TEST-USE

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Introduction to International Guidelines for test-use.

The International Test Commission (ITC) is an international body made up of representatives from national professional psychological associations. In late 1999 ITC published a set of guidelines and recommendations on ethics in test use and administration.

The focus of the guidelines is on good test use and for encouraging best practices in test adaptations and for the fair and ethical use of tests.

The NATO Research and Study Group 31: ON OFFICER SELECTION wishes to contribute to the dissemination of the guidelines for proper test use that are expressed in the guidelines formulated and published by ITC.

RSG-31 recommends the guidelines and they are therefore reproduced in complete version in this report.

The working group thanks the ITC for permission to reproduce these important guidelines.

INTERNATIONAL TEST COMMISSION
COMMISSION INTERNATIONALE DES TESTS

International Guidelines for test-use

Version 2000

ACKNOWLEDGEMENTS

INTRODUCTION AND BACKGROUND

The need for international Guidelines

The focus of the International Test Commission (ITC) project is on guidelines for good test use and for encouraging best practice in assessment. The work so far carried out by the ITC to promote good practice in test adaptations (Hambleton, 1994; Van de Vijver, F. & Hambleton, R., 1996) is an important step towards assuring uniformity in the quality of tests adapted for use across different cultures and languages. At its meeting in Athens in 1995, the ITC Council accepted a proposal to broaden this concern to include guidelines on the fair and ethical use of tests, from which standards for training and specifying the competence of test users could be derived.

There are a number of reasons why guidelines on test use are needed at an international level.

- Countries differ greatly in the degree, if any, of statutory control they can exercise over the use of testing and its consequences for those tested. Some national professional societies have statutory registration of psychologists, others do not; some have mechanisms for the control of standards of test use by non-psychologists, others do not. The existence of a set of internationally-accepted guidelines would provide national psychological associations and other relevant professional bodies and organisations with a degree of support in the endeavours of such organisations to develop standards in countries where such standards are currently either lacking in some respect or non-existent.
- Patterns of access, in terms of the rights to purchase or use test materials, vary greatly from country to country. In some countries, access is restricted to psychologists, in others to users registered with formally approved national test distributors, in yet others, test users may be free to obtain materials without restriction from suppliers in their country or directly from suppliers abroad.
- A number of well-known instruments have appeared on the Internet in violation of copyright, without acknowledgement of the test authors or publishers, and without regard to issues of test security.
- Within the occupational testing arena, the greater international mobility of labour has increased the demand for tests to be used on job applicants from a number of different countries - often with the tests being administered in one country on behalf of a potential employer in another country.
- Development work is being carried out in the USA and in the UK on the use of Internet for distance- or remote-assessment in both occupational and educational settings. This raises a whole host of issues relating to standards of administration and control over the testing process, including test security.

Aim and objectives

The long-term aim of this project includes the production of a set of guidelines that relate to the competencies (knowledge, skills, abilities and other personal characteristics) needed by test users. These competencies are specified in terms of assessable performance criteria. These criteria provide the basis for developing specifications of the evidence of competence that would be expected from someone seeking qualification as a test user. Such competencies need to cover such issues as:

- professional and ethical standards in testing,
- rights of the test taker and other parties involved in the testing process,
- choice and evaluation of alternative tests,
- test administration, scoring and interpretation,
- report writing and feedback.

Insofar as they directly relate to test use, the Guidelines also have implications for:

- standards for test construction,
- standards for user-documentation - e.g., technical and user manuals,
- standards for regulating the supply and availability of tests and information about tests.

The present Guidelines represent the work of specialists in psychological and educational testing (i.e. psychologists, psychometricians, test publishers and test developers) drawn from a number of countries. The intention of this

document is not to 'invent' new guidelines, but to draw together the common threads that run through existing guidelines, codes of practice, standards and other relevant documents, and to create a coherent structure within which they can be understood and used.

Development of the Guidelines

The Guidelines should be considered as benchmarks against which existing local standards can be compared for coverage and international consistency. By using the Guidelines as benchmarks or the basis from which to develop locally applicable documents (e.g. standards, codes of practice, statements on test taker rights), a high level of consistency across national boundaries will be promoted.

Work on the Guidelines began by drawing together materials concerned with test standards, codes of practice, test use, etc., from a number of countries[16]. While drawing on all of these sources, the present Guidelines have been particularly influenced by:

- The Australian Psychological Society (APS) *Supplement to guidelines on the use of Psychological Tests* (Kendall et al., 1997).
- The British Psychological Society (BPS) *Level A and Level B standards for occupational test use* (Bartram, 1995, 1996).
- The American Educational Research Association (AERA) , American Psychological Association (APA), & National Council on Measurement in Education (NCME) (1985) *Standards for educational and psychological testing.*
- American Association for Counseling and Development (AACD) *Responsibilities of Users of Standardized Tests* (Schafer, W.D, 1992).
- The CPA (Canadian Psychological Association, 1987) *Guidelines for Educational and Psychological Testing.*

The APS document has been particularly valuable as it pulls together much of what is contained in the BPS and American publications as well as drawing on South African National Institute for Psychological Research (NIPR) publications and various publishers' guidance for test users. It also embodies much of what has come out of Joint Committee on Testing Practices (JCTP) Test User Qualifications Working Group's (TUQWG) seminal work on a data-based approach to promoting good test use (e.g., Eyde et al, 1988, 1993; Moreland et al., 1995), and the work of the JCTP on the *Code of Fair Testing Practices in Education* (JCTP, 1988; Fremer, Diamond, & Camara, 1989).

The content of the primary sources was analysed and statements categorised under 14 main headings. Where appropriate single statements were written to capture the common meaning of a number of statements from different sources. Statements were also modified in format such that they provided completion of a common stem (e.g.: "Competent test users will endeavour to....", or "Competent test users can....").

This initial structure of 14 main sections and their content was embodied in the first draft Framework Document. This formed the material for an international workshop held in Dublin in July 1997. The purpose of the ITC Workshop was to consider and critically evaluate all aspects of a framework document, with a view to producing a draft set of guidelines that would have international currency and acceptance. During the workshop, the Framework Document was examined in detail, with refinements being proposed in terms of form, structure and content. Following the workshop, the document was extensively revised (Version 2.0) and circulated to all those who attended for comment. A draft consultation document (Version 3.1) was prepared that incorporated all the comments and suggestions submitted regarding Version 2.0.

Copies of the Version 3.1 consultation document and a structured response form were widely circulated to key individuals and organisations for comment. A total of 200 were distributed. A total of 28 detailed responses were received including 'corporate' responses from the APA, the BPS and some other European professional associations. In the summer of 1998 the Guidelines were revised in the light of these comments, and 200 copies (Version 4.1) were sent out for further consultation. A total of 18 formal responses were received to this second round of consultation. In addition, supportive informal comments were provided by many recipients of the consultation documents by email or in meetings.

In producing the current version of the Guidelines (Version 5.0), every effort has been made to take account of all these responses. Without exception, the responses were helpful and constructive.[17]

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[16] A list of all the materials that informed this process is available on request from the authors.

[17] A detailed report on the results of the first consultation was submitted to the ITC Council meeting in August, 1998. A report on the second consultation will be submitted together with Version 5.0 of the Guidelines to the ITC Council when it meets in June 1999.

These Guidelines are to be seen as supportive rather than constraining. We need to ensure that the Guidelines embody universal key principles of good test use, without attempting to impose uniformity on legitimate differences in function and practice between countries or between areas of application.

The proposed structure differentiates three main aspects of competence:
1. Professional and ethical standards of good practice that affect the way in which the process of testing is carried out and the way in which test users interact with others involved in the process.
2. The knowledge, understanding and skills relating to the process of testing: what test users need to be able to do.
3. The knowledge and understanding that are necessary to inform and underpin the process of testing.
These three components differ, yet are inextricably inter-twined in practice.
The Guidelines start from a *key purpose*. This can be characterised as the 'mission statement' for test users. It provides the focus from which the guidelines are developed. Each guidelines defines an aspect of test user competence that contributes to the key purpose.

Together with the key purpose, the *scope statement* describes to whom the Guidelines apply, the forms of assessment to which they relate, and the assessment contexts.

This document contains:
1. Key purpose and scope statements.
2. Specifications of test user competencies in relation to ethical test use.
3. Specifications of test user competencies in relation to good practice in the use of tests.

THE GUIDELINES

Key purpose

A competent test user will use tests appropriately, professionally, and in an ethical manner, paying due regard to the needs and rights of those involved in the testing process, the reasons for testing, and the broader context in which the testing takes place.

This outcome will be achieved by ensuring that the test user has the necessary competencies to carry out the testing process, and the knowledge and understanding of tests and test using that inform and underpin this process.

Scope of the Guidelines

Any attempt to provide a precise definition of a 'test' or of 'testing' as a process, is likely to fail as it will tend to exclude some procedures that should be included and include others that should be excluded. For the purpose of these Guidelines, the terms 'test' and 'testing' should be interpreted broadly. Whether an assessment procedure is labelled a 'test' or not is immaterial. These Guidelines will be relevant for many assessment procedures that are not called 'tests' or that seek to avoid the designation 'test'. Rather than provide a single definition, the following statements attempt to map out the domain covered by the Guidelines.

- Testing includes a wide range of procedures for use in psychological, occupational and educational assessment.
- Testing may include procedures for the measurement of both normal and abnormal or dysfunctional behaviours.
- Testing procedures are normally designed to be administered under carefully controlled or standardised conditions that embody systematic scoring protocols.
- These procedures provide measures of performance and involve the drawing of inferences from samples of behaviour.
- They also include procedures that may result in the qualitative classification or ordering of people (e.g., in terms of type).

Any procedure used for 'testing', in the above sense, should be regarded as a 'test', regardless of its mode of administration; regardless of whether it was developed by a professional test developer; and regardless of whether it involves sets of questions, or requires the performance of tasks or operations (e.g., work samples, psycho-motor tracking tests).

Tests should be supported by evidence of reliability and validity for their intended purpose. Evidence should be provided to support the inferences that may be drawn from the scores on the test. This evidence should be accessible to the test user and available for independent scrutiny and evaluation. Where important evidence is contained in technical reports that are difficult to access, fully referenced synopses should be provided by the test distributor.

The test use Guidelines presented here should be considered as applying to all such procedures, whether or not they are labelled as 'psychological tests' or 'educational tests' and whether or not they are adequately supported by accessible technical evidence.

Many of these Guidelines will apply also to other assessment procedures that lie outside the domain of 'tests'. They may be relevant for any assessment procedure that is used in situations where the assessment of people has a serious and meaningful intent and which, if misused, may result in personal loss or psychological distress (for example, job selection interviews, job performance appraisals, diagnostic assessment of learning support needs).

The Guidelines do not apply to the use of materials that may have a superficial resemblance to tests, but which all participants recognise are intended to be used only for purposes of amusement or entertainment (e.g., life-style inventories in magazines or newspapers).

Who the Guidelines are for

The Guidelines apply to the use of tests in professional practice. As such they are directed primarily towards:
- The purchasers and holders of test materials;
- Those responsible for selecting tests and determining the use to which tests will be put;
- Those who administer, score or interpret tests;

- Those who provide advice to others on the basis of test results (e.g., recruitment consultants, educational and career counsellors, trainers, succession planners);
- Those concerned with the process of reporting test results and providing feedback to people who have been tested.

The Guidelines will be of relevance to others involved in the use of tests as defined above. These include:
- the developers of tests,
- the suppliers of tests,
- those involved in the training of test users,
- those who take tests and their relevant others (e.g., parents, spouses, partners),
- professional bodies and other associations with an interest in the use of psychological and educational testing, and
- policy makers and legislators.

While aimed primarily at professional practice, most aspects of the good practice embodied in the Guidelines will also be of relevance to those who use tests solely for research purposes.

The Guidelines are not intended to cover every type of assessment technique (e.g., unstructured or semi-structured interviews, assessed group activities) or every situation in which assessment occurs (e.g., employment assessment centres). Yet many of the Guidelines are likely to be applicable in assessment situations and for purposes more general than those concerned primarily with psychological and educational testing (for example, the use of assessment centres for employmee placement or selection, semi-structured and structured interviews, or assessment for selection, career guidance and counselling).

Contextual factors

The Guidelines are applicable internationally. They may be used to develop specific local standards through a process of contextualisation. It is recognised that there are many factors which affect how standards may be managed and realised in practice. These contextual factors have to be considered at the local level when interpreting the Guidelines and defining what they would mean in practice within any particular setting.

The factors that need to be considered in turning Guidelines into specific standards include:
- social, political, institutional, linguistic, and cultural differences between assessment settings;
- the laws of the country in which testing is taking place;
- existing national guidelines and performance standards set by professional psychological societies and associations;
- differences relating to individual versus group assessment;
- differences related to the test setting (educational, clinical, work-related and other assessment);
- who the primary recipients of the test results are (e.g., the test-takers, their parents or guardian, the test-developer, an employer or other third party);
- differences relating to the use of test results (e.g., for decision-making, as in selection screening, or for providing information to support guidance or counselling); and
- variations in the degree to which the situation provides opportunity for the accuracy of interpretations to be checked in the light of subsequent information and amended if needed.

Knowledge, Understanding, and Skill

Knowledge, understanding and skill underpin all the test user competencies. The nature of their content and level of detail are likely to vary between countries, areas of application and as a function of the level of competence required to use a test.

The Guidelines do not contain detailed descriptions of these. However, when applying the Guidelines for use in specific situations the relevant knowledge, skills, abilities and other personal characteristics will need to be specified. This specification is part of the process of contextualisation, through which generic guidelines are developed into specific standards. The main areas descriptions of knowledge, understanding and skills need to cover include the following.

Relevant declarative knowledge.
This includes:
- knowledge of basic psychometric principles and procedures, and the technical requirements of tests (e.g., reliability, validity, standardisation);
- knowledge of tests and measurement sufficient to enable the proper understanding of test results;
- knowledge and understanding of relevant theories and models of ability, of personality or other psychological constructs, or of psychopathology, as necessary to properly inform the choice of tests and the interpretation of test results; and
- knowledge of the tests and the test suppliers relevant to one's area of practice.

Instrumental knowledge and skills
These include:
- knowledge and skills relating to specific assessment procedures or instruments, including the use of computer-based assessment procedures;
- specialised knowledge of and practitioner skills associated with using those tests that are within one's repertoire of assessment tools; and
- knowledge and understanding of the construct or constructs underlying test scores, where this is important if valid inferences are to be drawn from the test results.

The Guidelines cover:

General personal task-related skills

This includes:
- the performance of relevant activities such as test administration, reporting, and the provision of feedback to test takers and other clients;
- oral and written communication skills sufficient for the proper preparation of test takers, test administration, the reporting of test results, and for interaction with relevant others (e.g., parents, or organisational policy makers); and
- interpersonal skills sufficient for the proper preparation of test takers, the administration of tests, and the provision of feedback of test results.

Contextual knowledge and skills

This includes:
- knowing when and when not to use tests;
- knowing how to integrate testing with other less formal components of the assessment situation (e.g., biographical data, unstructured interview and references etc.); and
- knowledge of current professional, legal, and ethical issues relating to the use of tests, and of their practical implications for test use.

Task management skills

This includes:
- knowledge of codes of conduct and good practice relating to the use of tests, test data, the provision of feedback, the production and storage of reports, the storage of and responsibility for test materials and test data; and
- knowledge of the social, cultural, and political context in which the test is being used, and the ways in which such factors might affect the results, their interpretation and the use to which they are put.

Contingency management skills

This includes:
- knowing how to deal with problems, difficulties, and breakdowns in routine;
- knowing how to deal with a test taker's questions during test administration etc.; and
- knowing how to deal with situations in which there is the potential for test misuse or for misunderstanding the interpretation of test scores.

1   TAKE RESPONSIBILITY FOR ETHICAL TEST USE

Competent test users should:

1.1   Act in a professional and ethical manner

1.1.1   Promote and maintain professional and ethical standards.
1.1.2   Have a working understanding of current professional and ethical issues and debates relating to the use of tests in their field of application.
1.1.3   Implement an explicit policy on testing and test use.[18]
1.1.4   Ensure that people who work for or with them adhere to appropriate professional and ethical standards of behaviour.
1.1.5   Conduct communications with due concern for the sensitivities of the test taker and other relevant parties.
1.1.6   Represent tests and testing in a positive and balanced manner in communications with and through the media.
1.1.7   Avoid situations in which they may have or be seen to have a vested interest in the outcome of the assessment, or where the assessment might damage the relationship with their client.

1.2   Ensure they have the competence to use tests

1.2.1   Work within the limits of scientific principle and substantiated experience.
1.2.2   Set and maintain high personal standards of competence.
1.2.3   Know the limits of their own competence and operate within those limits.
1.2.4   Keep up with relevant changes and advances relating to the tests they use, and to test development, including changes in legislation and policy, which may impact on tests and test use.

1.3   Take responsibility for their use of tests

1.3.1   Only offer testing services and only use tests for which they are qualified.
1.3.2   Accept responsibility for the choice of tests used, and for the recommendations made.
1.3.3   Provide clear and adequate information to participants in the testing process about the ethical principles and legal regulations governing psychological testing.
1.3.4   Ensure that the nature of the contract between test-taker and tester is clear and understood.[19]
1.3.5   Be alert to any unintended consequences of test use.
1.3.6   Endeavour to avoid doing harm or causing distress to those involved in the testing process.

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[18]   An example policy outline is attached as Appendix A.

[19]   An example 'contract' between test user and test taker is attached as Appendix B.

1.4   Ensure that test materials are kept securely

1.4.1   Ensure secure storage of and control access to test materials
1.4.2   Respect copyright law and agreements that exist with respect to a test including any prohibitions on the copying or transmission of materials in electronic or other forms to other people, whether qualified or otherwise.
1.4.3   Protect the integrity of the test by not coaching individuals on actual test materials or other practice materials that might unfairly influence their test performance.
1.4.4   Ensure that test techniques are not described publicly in such a way that their usefulness is impaired

1.5   Ensure that test results are treated confidentially.

1.5.1   Specify who will have access to results and define levels of confidentiality.
1.5.2   Explain levels of confidentiality to individuals before tests are administered .
1.5.3   Limit access to results to those with a right to know.
1.5.4   Obtain the relevant consents before releasing results to others.
1.5.5   Protect data kept on file so that only those who have a right of access can obtain them.
1.5.6   Establish clear guidelines as to how long test data are to be kept on file.
1.5.7   Remove names and other personal identifiers from databases of results that are archived, for research use, development of norms or other statistical purposes.

2   FOLLOW GOOD PRACTICE IN THE USE OF TESTS

2.1   Evaluate the potential utility of testing in an assessment situation

Competent test users will:
2.1.1   Produce a reasoned justification for the use of tests.
2.1.2   Ensure there has been a thorough analysis of the client's needs, reasons for referral, or of the diagnostic category, condition, or job for which assessment is being used.
2.1.3   Establish that the knowledge, skills, abilities, aptitudes or other characteristics, which the tests are intended to measure, are correlates of relevant behaviours in the context about which inferences are to be drawn.
2.1.4   Seek other relevant collateral sources of information.
2.1.5   Assess the advantages and disadvantages of using tests compared with other sources of information.
2.1.6   Ensure that full use is made of all available collateral sources of information.

2.2   Choose technically sound tests appropriate for the situation

Competent test users will:
2.2.1   Examine current information covering the range of potentially relevant tests (e.g., from specimen sets, independent reviews, expert advice), before selecting a test to use.
2.2.2   Determine that the test's technical and user documentation provides sufficient information to enable evaluation of the following:
        a)   scope or coverage and representativeness of test content, appropriateness of norm groups, difficulty level of content etc.;
        b)   accuracy of measurement and reliability demonstrated with respect to relevant populations;
        c)   validity (demonstrated with respect to relevant populations) and relevance for the required use;
        d)   freedom from systematic bias in relation to the intended test taker groups;
        e)   acceptability to those who will be involved in their use, including perceived fairness and relevance;
        f)   practicality, including time required, costs, and resource needs.
2.2.3   Avoid the use of tests that have inadequate or unclear supporting technical documentation;
2.2.4   Use tests only for those purposes where relevant and appropriate validity evidence is available.
2.2.5   Avoid judging a test solely on the basis of face value, test-user testimonials, or advice from those with a vested commercial interest.
2.2.6   Respond to requests from relevant interested parties (e.g. test takers, parents, managers) by providing sufficient information to allow them to understand why the test was chosen.

2.3   Give due consideration to issues of fairness in testing

When tests are to be used with individuals from different groups (e.g., groups differing in terms of gender, cultural background, education, ethnic origin, or age), competent test users will make all reasonable efforts to ensure that:

2.3.1   The tests are unbiased and appropriate for the various groups that will be tested.

2.3.2   The constructs being assessed are meaningful in each of the groups represented.

2.3.3   Evidence is available on possible group differences in performance on the test.

2.3.4   Evidence relating to differential item functioning (DIF) is available, where relevant.

2.3.5   There is validity evidence to support the intended use of the test in the various groups.

2.3.6   Effects of group differences not relevant to the main purpose (e.g., differences in motivation to answer, or reading ability) are minimised.

2.3.7   In all cases, Guidelines relating to the fair use of tests are interpreted in the context of local policy and legislation.[20]

When testing in more than one language (within or across countries[21]), competent test users will make all reasonable efforts to ensure that:

2.3.8   Each language or dialect version has been developed using a rigorous methodology meeting the requirements of best practice.

2.3.9   The developers have been sensitive to issues of content, culture and language.

2.3.10   The test administrators can communicate clearly in the language in which the test is to be administered.

2.3.11   The test taker's level of proficiency in the language in which the test will be administered is determined systematically and the appropriate language version is administered or bilingual assessment is performed, if appropriate.

When tests are to be used with people with disabilities, competent test users will make all reasonable efforts to ensure that:

2.3.12   Advice is sought from relevant experts on the potential effects of the various disabilities on test performance.

2.3.13   Potential test takers are consulted and their needs and wishes are given proper consideration.

2.3.14   Adequate arrangements are made when test takers include people with hearing, visual or motor impairments, or other disabilities (e.g., learning impairments, dyslexia .).

2.3.15   Use of alternative assessment procedures, rather than modifications to tests, is considered (e.g., other more suitable tests, or alternative structured forms of assessment).

2.3.16   Relevant professional advice is sought if the degree of modification required for use by those with disabilities is beyond the experience of the test user.

2.3.17   Modifications, when necessary, are tailored to the nature of the disability and are designed to minimize impact on score validity.

2.3.18   Information regarding the nature of any modifications made to a test or testing procedure is provided to those who interpret or act upon the test scores whenever the withholding of such information might otherwise result in biased interpretation or an unfair decision.

2.4   Make necessary preparations for the testing session

The competent test user will make all reasonable efforts to:

2.4.1   Provide relevant parties in a timely manner with clear information concerning the purpose of testing, ways in which they might best prepare for the test session, and the procedures to be followedr.

2.4.2   Advise test takers of the linguistic or dialectic groups for which the test is considered appropriate.

2.4.3   Send test takers approved practice, sample, or preparation materials where these are available and where this is consistent with recommended practice for the tests concerned.

2.4.4   Explain clearly to test takers their rights and responsibilities[22].

2.4.5   Gain the explicit consent of test takers or their legal guardians or representatives before any testing is done.

2.4.6   Explain, when testing is optional, the consequences of taking or not taking the test to relevant parties so that they can make an informed choice.

2.4.7   Make the necessary practical arrangements by ensuring that:

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[20] The Guidelines in this section focus on what is 'best practice'. However, in many countries, issues relating to the fair use of tests must also take account of national laws (e.g., the Americans with Disabilities Act, 1990, in the USA, or the Race Relations Act, 1976, in the UK).

[21] These Guidelines relate not only to different national languages and dialects, but also to special forms of communication, such as sign language, used to overcome the effects of forms of disability.

[22] See Appendix B.

a) preparations conform to those stipulated in the publisher's manual;
b) locations and facilities for testing have been arranged well in advance, and the physical environment is accessible, safe, quiet, free from distractions and appropriate for the purpose;
c) sufficient materials are available and have been checked to ensure there are no marks left by previous users on question booklets or answer sheets;
d) staff who will be involved in the administration are competent;
e) appropriate arrangements have been made for the testing of people with disabilities[23].

2.4.8 Anticipate likely problems and counteract them through thorough preparation of materials and instructions.

2.5   Administer the tests properly

The competent test user will:
2.5.1 Establish rapport by welcoming test-takers and briefing them in a positive fashion.
2.5.2 Act to reduce test-taker anxiety and avoid creating or reinforcing unnecessary anxiety.
2.5.3 Ensure potential sources of distraction (e.g., wristwatch alarms, mobile phones, pagers) are removed.
2.5.4 Ensure test-takers have the materials they require for taking the test before it begins.
2.5.5 Administer tests under appropriate supervised conditions.
2.5.6 Wherever possible, administer test instructions in the primary language of the test takers, even where the test content is designed to provide evidence of knowledge or skills in a non-primary language.
2.5.7 Adhere strictly to the directions and instructions as specified in the test manual while making reasonable accommodations for persons with disabilities.
2.5.8 Read instructions clearly and calmly.
2.5.9 Provide adequate time for examples to be completed.
2.5.10 Observe and record deviations from test procedures.
2.5.11 Monitor and record response times accurately where appropriate.
2.5.12 Ensure all materials are accounted for at the end of each testing session.
2.5.13 Administrrer tests by modes that permit adequate and appropriate levels of supervision and authentication of the identity of the test takers.
2.5.14 Ensure those assisting the administration have had proper training.
2.5.15 Ensure test takers are not left unattended or subjected to distracting activities during a supervised test session.
2.5.16 Provide appropriate assistance to test takers who show signs of undue distress or anxiety.

2.6   Score and analyse test results accurately

Competent test users will:
2.6.1 Follow carefully the standardised procedures for scoring.
2.6.2 Carry out appropriate raw score conversions to other relevant types of scale.
2.6.3 Choose scale types relevant to the intended use of the test scores.
2.6.4 Check score scale-conversions and other clerical procedures for accuracy.
2.6.5 Ensure that invalid conclusions are not drawn from comparisons of scores with norms that are not relevant to the people being tested or are outdated.
2.6.6 Compute, where appropriate, composite scores using standard formulae and equations.
2.6.7 Employ procedures to screen test results to recognise improbable or unreasonable scores.
2.6.8 Clearly and accurately label scales in reports, and provide clear identification of norms, scales types, and equations used.

2.7   Interpret results appropriately

Competent test users will:
2.7.1 Have a good professional understanding of the test's theoretical or conceptual basis, technical documentation and guidance on the use and interpretation of the scale scores.
2.7.2 Have a good understanding of the scales used, the characteristics of the norm or comparison groups, and the limitations of the scores.
2.7.3 Take steps to minimise the effects on test interpretation of any biases the test interpreter may have towards members of the test taker's cultural group.
2.7.4 Use appropriate norm or comparison groups where available.

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[23] See Appendix C.

2.7.5   Interpret results in the light of available information about the person being tested (including age, gender, schooling, culture and other factors) with due regard for the technical limitations of the test, the assessment context, and the needs of those with a legitimate interest in the outcome of the process.

2.7.6   Avoid over-generalising the results of one test to traits or human characteristics which are not measured by the test.

2.7.7   Consider each scale's reliability, error of measurement and other qualities which may have artificially lowered or raised results when interpreting scores.

2.7.8   Give due consideration to the available evidence of validity, with respect to the construct being measured for members of the test takers' relevant demographic groups (e.g., cultural, age, social class, and gender groups).

2.7.9   Use passing scores (cut-scores) in test interpretation only when evidence of the validity for the pass scores is available and supports its use.

2.7.10 Be aware of negative social stereotyping that may pertain to members of the test taker's group (e.g., cultural group, age, social class, and gender) and avoid interpreting tests in a manner that perpetuates such stereotyping.

2.7.11 Take into account any individual or group variations from standard procedures in test administration.

2.7.12 Take into account any evidence of prior experience with the test where there are data available relating to the effect of such experience on test performance.

2.8   Communicate the results clearly and accurately to relevant others

Competent test users will:

2.8.1   Identify appropriate parties who may legitimately receive test results.

2.8.2   With the informed consent of the test takers, or their legal representatives, produce written or oral reports for relevant interested parties.

2.8.3   Ensure that the technical and linguistic levels of any reports are appropriate for the level of understanding of the recipients.

2.8.4   Make clear that the test data represent just one source of information and should always be considered in conjunction with other information.

2.8.5   Explain how the importance of the test results should be weighted in relation to other information about the people being assessed.

2.8.6   Use a form and structure for a report that is appropriate to the context of the assessment.

2.8.7   When appropriate, provide decision-makers with information on how results may be used to inform their decisions.

2.8.8   Explain and support the use of test results used to classify people into categories (e.g., for diagnostic purposes or for job selection).

2.8.9   Include within written reports a clear summary, and when relevant, specific recommendations.

2.8.10   Present oral feedback to test takers in a constructive and supportive manner.

2.9   Review the appropriateness of the test and its use

Competent test users will:

2.9.1   Monitor and periodically review changes over time in the populations of individuals being tested and any criterion measures being used.

2.9.2   Monitor tests for evidence of adverse impact.

2.9.3   Be aware of the need to re-evaluate the use of a test if changes are made to its form, content, or mode of administration.

2.9.4   Be aware of the need to re-evaluate the evidence of validity if the purpose for which a test is being used is changed.

2.9.5   Where possible, seek to validate tests for the use to which they are being put, or participate in formal validation studies.

2.9.6   Where possible, assist in updating information regarding the norms, reliability and validity of the test by providing relevant test data to the test developers, publishers or researchers.

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APPENDIX A: GUIDELINES FOR AN OUTLINE POLICY ON TESTING.

The following guidelines relate to the need for organizations to consider their policy on testing in a systematic manner and to ensure that everyone involved is clear as to what the policy is. The need for an explicit policy on testing is not confined to large organisations. Small and medium-sized enterprises that use testing, as well as large ones, should pay regard to testing policy in the same way as they do to health and safety, equal opportunities, disability and other areas relating to good practice in the management, treatment and care of personnel.

While the following considerations or requirements may need to be adapted for use by individual test users operating as sole professional practitioners, it remains important that they have a clear understanding of their own policy and can communicate it to others.

A policy on testing is produced in order to:
- ensure personal and organisational aims are met;
- ensure that potential misuse is avoided;
- demonstrate commitment to good practice;
- ensure test use is appropriate for its purpose;
- ensure tests do not discriminate unfairly;
- ensure evaluations are based on comprehensive, relevant information;
- ensure tests are only used by qualified staff.

A policy on testing will need to cover most if not all the following issues:
- proper test use;
- security of materials and scores;
- who can administer tests, score and interpret tests;
- qualification requirements for those who will use the tests;
- test user training;
- test taker preparation;
- access to materials and security;
- access to test results and test score confidentiality issues;
- feedback of results to test takers;
- responsibility to test takers before, during and after test session;
- responsibilities & accountability of each individual user.

Any policy needs to be regularly reviewed and updated as advances in testing, or changes in practice occur.

Relevant parties need to have access to and be informed about the policy on testing.

Responsibility for any organisation's testing policy should reside with a qualified test user who has the authority to ensure implementation of and adherence to the policy.

APPENDIX B: GUIDELINES FOR DEVELOPING CONTRACTS BETWEEN PARTIES INVOLVED IN THE TESTING PROCESS.

Contracts between the test user and test takers should be consistent with good practice, legislation and the test user's policy on testing. The following is provided as an example of the sort of matters such a contract might cover. The details will vary as a function of the assessment context (e.g., occupational, educational, clinical, forensic) and local or national regulations and laws.

Contracts between test user, test takers and other parties are often implicit and unspoken (at least in part). Making clear the expectations, roles and responsibilities of all parties can help to avoid misunderstanding, harm, and litigation.

For their part, the test user will endeavour to:
b.1   inform test takers of their rights regarding how their test scores will be used and their rights of access to them[24];
b.2   give adequate prior warning of any financial charges that may be entailed by the testing process, who will be responsible for their payment, and when payment will be due;
b.3   treat test takers with courtesy, respect and impartiality regardless of race, gender, age, disability, etc.;
b.4   use tests of proven quality, appropriate for the test takers, and appropriate for the assessment purpose;
b.5   inform test takers prior to testing about the purpose of the assessment, the nature of the test, to whom test results will be reported and the planned use of the results;
b.6   give advance notice of when the test will be administered, and when results will be available, and whether or not test takers or others may obtain copies of the test, their completed answer sheets, or their scores[25];
b.7   have a trained person administer the test and have the results interpreted by a qualified person;
b.8   ensure test takers know if a test is optional and, when it is, the consequences of taking or not taking the test;
b.9   ensure test takers understand the conditions, if any, under which they may re-take tests, have tests re-scored, or have their scores cancelled;
b.10   ensure test takers know that they will have their results explained to them as soon as possible after taking the test in easily understood terms;
b.11   ensure test takers understand that their results are confidential to the extent allowed by law and best practice;
b.12   inform test takers who will have access to their results, and the conditions which scores will be released;
b.13   ensure that test takers are aware of the procedures for making complaints or notifying problems;

The test user will inform test-takers that they are expected to:
b.14   treat others with courtesy and respect during the testing process;
b.15   ask questions prior to testing if uncertain about why the test is to be administered, how it will be administered, what they will be required to do and what will be done with the results;
b.16   inform an appropriate person about any condition that they believe might invalidate the test results or which they would wish to have taken into consideration;
b.17   follow the instructions of the test administrator;
b.18   be aware of the consequences of not taking a test if they choose not to take it, and be prepared to accept those consequences;
b.19   ensure that, if required to pay for any the testing service(s), payment is made by the agreed date.

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[24] Legislation varies between countries on this issue. For example, the current UK Data Protection Act provides rights of access to data stored on computer different from those for data written on paper.
[25] While tests and answer sheets are not normally passed on to others, there is some variation between countries in practice relating to what test takers or others are permitted to have. However, there is much greater variation in the expectations of test takers concerning what information they will be given. It is important that contracts make clear what they will *not* be given as well as what they will.

APPENDIX C: POINTS TO CONSIDER WHEN MAKING ARRANGEMENTS FOR TESTING PEOPLE WITH DISABILITIES OR IMPAIRMENTS

Considerable care and expertise is needed when the mode of administration of a test has to be changed to accommodate the needs of people with disabilities. As always, local and national law and practice[26] need to be considered, and the individual's rights to privacy must be respected. In seeking information regarding types and levels of disability, inquiries should only seek information relating to each person's ability to undertake the activities required to complete the test. Particular care needs to be exercised in relation to employment testing[27].

There is no simple rule of thumb that can be used to ensure that a test is administered fairly for people with all types of disability. It is a matter of professional judgement as to whether it is better to use some alternative form of assessment, or to modify the test or its mode of administration. In practice, it is rarely possible to norm modified tests on sufficient samples of people with equivalent disability in order to ensure comparability of the test with the standardised version. However, where data exist on, for example, the effects of changing time limits, use of Braille or audiotape spoken versions of tests, such data should guide the user in making the necessary accommodations. While full standardization of a modified version may not be possible, pilot testing on small samples of individuals should be carried out whenever practical.

Given the dearth of information about the performance of people with disabilities on tests (whether modified or not), it is often more appropriate for test result to be used in a more qualitative manner. They can be used to give an indication of the characteristic being assessed (ability, motivation, personality, etc.), which can be supplemented and supported by information gathered using other methods.

For individual assessment, the assessor can usually tailor the assessment procedures to the capabilities of the person who is being assessed. However, particular issues arise in group testing (e.g., for selection into employment). Here there may be practical difficulties involved in varying the mode of administration for particular individuals within a group administration setting. Furthermore, all parties may see differences in treatment as being unfair. For example if more time is given for test completion, those with the disability may be conscious that they are being treated 'differently', and those without the disability may feel that the extra time provides an unfair advantage.

Advice on special needs can usually be obtained from relevant disability organisations as well as the individual test takers. It is generally helpful (where the law permits) to ask the individual directly in a non-threatening and supportive way if there are any considerations that need to be taken into account[28]. In many cases such consultation will enable suitable modifications to be made to the test taking environment without requiring changes to the test itself.

The following outline protocol provides a general guide to the process of deciding whether to modify testing and how to carry out the modification. Essentially, disability may contribute no variance to test scores, contribute construct relevant variance or construct irrelevant variance. In the first case, no modifications are necessary. In the final case, modifications should be aimed at removing the irrelevant source of variance (by suitable modification of the test conditions or substitution of a more suitable test). For the second case (construct relevant variance), however, modification to the test will affect the relevance of the test scores.

c1. Is the disability likely to have an effect upon test performance? Many people have disabilities that would not affect test performance. In such cases, it would be inappropriate to make accommodations for them.
c2. If the disability is likely to affect test performance, then is the effect on performance incidental to the construct being measured? For example, a person with an arthritic hand may have trouble with a speeded test which involves writing. If the ability to perform manual tasks rapidly is part of the construct being measured, then the test should not be changed. However, if the purpose is to assess visual checking speed, then an alternative mode of response would be appropriate.
c3. When the particular disability is incidental to the construct being measured but is likely to affect the individual's performance on the test, then modification of the procedure may be considered.

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[26] In the United States, for example, attention must be paid to the provisions of the Americans with Disabilities Act (1990). In the UK, the Disability Discrimination Act (1995), Employment Code of Practice states that "employers are required to revise tests – or the way the results of such tests are assessed – to take account of specific disabled candidates."
[27] For detailed guidance on this in the United States, see Eyde, Nestor, Heaton and Nelson (1994).
[28] In the UK, the Disability Discrimination Act (1995) also places some obligation on the individual to raise awareness of their needs.

c4. Users should always consult the test manual and the publisher for guidance on modification and for information regarded alternative formats and procedures.

c5. Users should also consult relevant disability organisations for advice and guidance on the possible implications of a specific disability, relevant literature or documentation, and the sort of adaptations or accommodations that may prove helpful.

c6. Any modifications made to the test or test administration procedures should be carefully documented along with the rationale behind the modification.

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REPORT DOCUMENTATION PAGE

1. Recipient's Reference	2. Originator's References	3. Further Reference	4. Security Classification of Document
	RTO-TR-034 AC/323(HFM-023)TP/26	ISBN 92-837-1067-3	UNCLASSIFIED/ UNLIMITED

5. Originator	Research and Technology Organization North Atlantic Treaty Organization BP 25, 7 rue Ancelle, F-92201 Neuilly-sur-Seine Cedex, France

6. Title	Officer Selection

7. Presented at/sponsored by	the Human Factors and Medicine Panel (HFM) Research and Study Group 31.

8. Author(s)/Editor(s)	9. Date
Multiple	May 2001

10. Author's/Editor's Address	11. Pages
Multiple	154

12. Distribution Statement	There are no restrictions on the distribution of this document. Information about the availability of this and other RTO unclassified publications is given on the back cover.

13. Keywords/Descriptors

Officer personnel	Benefit cost analysis
Personnel selection	Leadership
Human factors engineering	Military personnel
Questionnaires	Decision making
Personnel management	Aptitude tests
Recruiting	

14. Abstract

From the end of 1997 till mid 2000, members of the Research and Study Group 31 (RSG 31) from Belgium, Canada, Denmark, France, Germany, The Netherlands, the United Kingdom and the United States, focused on the topic of Officer Selection. In order to share information and foster a scientific and professional approach to Officer Selection, two major products were delivered.

The first was a workshop on Officer Selection held in November 1999 from which the proceedings were published (Report RTO-MP-55 AC/323(HFM) TP/27).

The final report on 'Officer Selection' is the second achievement of the RSG. After the introduction, an overview is given of the current officer selection practice. A detailed review of the systems used in the countries participating to the research and study group is given and a summary is provided. Then the main results of a survey on officer selection are presented. This survey covers the current practice in nineteen NATO and non-NATO countries. The actual questionnaire is also included. Following the description of the current practice, the search for an ideal system is commented, a conceptual approach is developed, the qualities of an officer are discussed, a personnel selection primer is given and guidelines for test-use are highlighted.

The RSG is convinced that a re-examination of any national system in the light of the practice in other countries together with the scientific and professional guidelines developed in this report and reported at the RSG workshop, can significantly improve the outcome of the current officer selection practice.

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