RTO TECHNICAL REPORT **TR-HFM-107**

Recruiting and Retention of Military Personnel

(Recrutement et rétention du personnel militaire)

Final Report of Research Task Group HFM-107.

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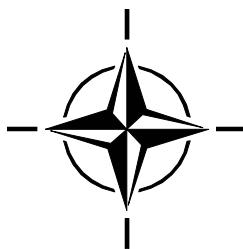
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The Research and Technology Organisation (RTO) of NATO

RTO is the single focus in NATO for Defence Research and Technology activities. Its mission is to conduct and promote co-operative 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 co-ordination 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 co-ordinates RTO's co-operation 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 co-operation.

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   System Analysis and Studies 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 co-operation 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.

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Recruiting and Retention of
Military Personnel
(RTO-TR-HFM-107)

Executive Summary

The aim of the Armed Forces of the NATO nations is to be fully operational while undergoing a constant process of change. To achieve this goal, it is important to be able to recruit qualified personnel and retain those who have accumulated critical military experience. Thus, the objective of this study is to foster a true understanding of the mechanisms that influence recruitment and retention outcomes.

The outcome of this study is composed of three deliverables – a final report, a R&R-workshop, which was held in order to disseminate the results of the study and a R&R Literature Database of the research used by the Task Group.

The final report consists of three parts:

1) Information on national R&R strategies;

2) Ten topic areas within R&R literature; and

3) Generic R&R military models.

National R&R strategies of the member countries: Those reflect the reference frame of the R&R issues which are relevant for the Task Group. National R&R measures are discussed and the national solutions for R&R related problems are presented.

Topic Areas: Literature reviews have been prepared on ten particularly R&R relevant areas selected by the RTG members (e.g., psychological contract, individual differences and later turnover, etc.). The areas' specific affect on R&R and its link to the generic R&R military models is explained. Each area chapter ends with practical recommendations how to minimize or overcome area-specific R&R problems.

Generic R&R Military Models: Those are derived from the literature, from the national R&R strategies and the topic areas, one for recruitment and one for retention. They explain the R&R processes within a military setting and conclude with practical recommendations.

Recrutement et rétention du personnel militaire
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Synthèse

Le but des forces armées des nations de l'OTAN est de rester entièrement opérationnelles tout en étant soumises à des changements constants. Pour y parvenir, il est important qu'elles recrutent du personnel qualifié et gardent dans leurs rangs ceux qui ont accumulé une importante expérience militaire. Ainsi, l'objectif de cette étude est de permettre de disposer d'une vraie compréhension des mécanismes influant sur les résultats du recrutement et de la rétention du personnel.

Le résultat de cette étude a abouti à trois produits : un rapport final, un atelier R&R (recrutement et rétention), qui s'est tenu pour diffuser les résultats et, une Base de Données sur la littérature R&R de recherche utilisée par le groupe de travail.

Le rapport final se compose de trois parties :

1) Informations sur les stratégies nationales R&R ;

2) Dix domaines de la littérature R&R ; et

3) Des modèles militaires R&R génériques.

Stratégies nationales R&R des nations membres : celles-ci reflètent le cadre de référence des problèmes de R&R pertinents pour le groupe de travail. Les mesures nationales R&R sont traitées, et leurs solutions sont présentées.

Domaines d'intérêt : des résumés littéraires ont été préparés sur dix domaines relevant particulièrement de la R&R ; ceux-ci ont été sélectionnés par les membres du groupe de travail (ex. : contrat psychologique, différences individuelles et taux de rotation, etc.). Les domaines spécifiques affectant la R&R et leurs liens avec les modèles militaires R&R génériques sont expliqués. Chaque chapitre se termine par des recommandations pratiques sur « Comment minimiser ou résoudre les problèmes spécifiques du R&R ».

Modèles militaires R&R génériques : ces modèles sont tirés de la littérature, des stratégies R&R nationales et des domaines d'intérêt ; l'un pour le recrutement, l'autre pour la rétention. Ils expliquent les processus R&R dans un contexte militaire et concluent par des recommandations pratiques.

Chapter 1 – RECRUITMENT AND RETENTION OF MILITARY PERSONNEL

1.1 GENERAL INTRODUCTION

In many countries, achieving recruitment goals has become increasingly challenging. At the same time, military forces are facing an important loss of often highly qualified personnel who choose to leave. The difficulty in recruiting sufficient numbers is aggravated by the fact that many military personnel leave voluntarily. It is not unusual for 30% or more of enlisted recruits not to complete their first term. In addition, many military personnel choose to return to civilian life later in their careers, attracted by more appealing opportunities. This happens frequently in specific trades that are hard and expensive to recruit and train.

A NATO Research Task Group (RTG) was established to examine these dilemmas in more detail. Specifically, its purpose was to foster a true understanding of the mechanisms that influence recruitment and retention (R&R) outcomes. This was accomplished by completing a program of work that produced:

1) Detailed reviews of and recommendations from ten important factors that influence recruitment and retention, which are:

   • Psychological contract;

   • Short-term consequences of (mis)information during recruitment and selection;

   • Management of recruitment, selection, and classification;

   • Values research;

   • Individual differences and later turnover;

   • Transition;

   • PERSTEMPO/OPSTEMPO and quality of life;

   • Pay and benefits;

   • Gender and minority issues; and

   • Advertising, marketing in recruiting.

2) Generic models of recruitment and retention in a military setting that list the most important influences on each of the processes and how those influences affect each process.

3) A summary of the participating countries' strategies to improve recruitment practices and enhance retention of military personnel.

4) A bibliography of the research used to produce the chapters for each of the factors described above.

5) A workshop held in December 2004 to disseminate the results of the work from the RTG.

1.1.1 Topic Chapters

The topics were chosen by an Exploratory Team and represented those subject areas with the greatest influence on recruiting and retention. The chapters contain a one page executive summary, a main body, links to the recruiting and retention models where relevant, and practical recommendations/implications

to improve recruiting and retention in that subject area. While the issues of R&R are complicated and multi-faceted, the topics focus on key influences of individual decisions and policies that affect individual choice.

The information gathered for each of the topic chapters came from research literature in that subject area. In addition, the research examined came almost entirely from journals or organizations that published material in English. Therefore, they were not complete reviews of the subject area, but are focussed on how individual topics were related to recruiting and retention. For instance, quality of life and levels of PERSTEMPO and OPSTEMPO have had a number of very specific consequences on service personnel. The goal of the literature review for this RTG was not to describe all those consequences, but to examine research that explained how these consequences affected or would affect recruitment and/or retention. Where there was little or no research that pertained to recruiting and retention in a military setting, literature was used from academic and business settings to theorize how it would apply in a military setting.

1.1.2   Recruiting and Turnover Models

Looking at the various models available in the literature, separate models have been developed for recruiting and retention. For each of them, the literature was combined to explain how each process operated in a military setting. From this description, recommendations are presented to optimize these processes. One executive summary was prepared for this chapter. A main body follows which describes both models, and the chapter concludes with a list of practical recommendations to improve recruiting and retention from each of the subject areas. For the purposes of this report, the term "turnover" will be used to describe both turnover and retention factors.

1.1.3   Recruitment and Retention Strategies

For the duration of the Task Group's existence, the members gathered the recruitment and retention strategies being used in their countries. This information has been organized into one chapter and includes all strategies listed by country. The recommendations were gathered from each of the participating countries as a "lessons learned" exercise of what was and what was not effective in recruiting and retaining military personnel.

1.1.4   Recruitment and Retention Research Literature Database

A database on the research in recruiting and retention has also been prepared and lists the research that forms the basis of all the work that the Group conducted. It provides a reference for others to use to identify the key authors and research for each of the topic areas and includes references through 2005.

1.1.5   Extended Meeting Material

A special meeting was organized as part of the 2004 International Military Testing Association (IMTA) Conference focusing on the work the Task Group had completed on recruiting and retention up to that point. The presentations delivered at that conference are also included in this report as a final deliverable. Their inclusion ensures that all the work of the Task Group can be found in one report.

Chapter 2 – RECRUITING AND RETENTION OF MILITARY PERSONNEL: AN INTERNATIONAL PERSPECTIVE

2.1 BACKGROUND

In many countries, achieving recruitment goals has become increasingly challenging. At the same time, the Military is facing an important loss of often highly qualified personnel who choose to leave upon completion of their initial obligatory service. The recruiting and retention (R&R) problem faced by many of the North Atlantic Treaty Organisation (NATO) countries can be attributed to a variety of factors including:

- Low unemployment rates.

- Incongruence between prevailing social values and the Military organizational culture.

- Military operational and personnel tempo.

- Relatively higher private sector wages.

- Geographical location of military jobs.

- Promotions systems based on seniority vice merit.

- Mismatch between individual interests and job assignments.

- The management of the major processes of recruitment, selection and classification, turnover and retention.

- Shrinking of 18 – 24 year old target demographic.

The difficulty in recruiting sufficient numbers is aggravated by the fact that many military personnel attrite prior to the completion of their initial contracts. While attrition rates are country and time dependent, it is not unusual that 30% or more of the enlisted recruits do not complete their first term. In addition, many military personnel choose to return to civilian life later in their careers, attracted by more appealing private sector opportunities. This happens frequently in specific trades such as pilots and in the technical specialities; fields that are expensive to recruit and train.

Traditional recruiting, selection, classification and retention practices are no longer adequate to attract and retain the necessary military personnel to ensure the stability of readiness requirements. Countries such as Spain, who have relatively recently transitioned from a conscript to an all-volunteer force, are seeking alternatives to the traditional approaches of recruiting and retention of key personnel. Similarly conscript countries such as Turkey face the same problems as those faced by their all-volunteer counterparts.

Common reasons individuals have reported for either not considering a military career or deciding not to re-enlist include:

- External competition for labor supply pool;

- Military not 'top of mind' career;

- Recruit quality;

- Quality of life;

- Compensation; and

- Family considerations.

Solutions to the problems cited above are common across countries with one or more of the following programs having been implemented across the NATO countries:

- Increases in pay and benefits;

- Family care and quality of life programs;

- Improved selection and classification metrics to ensure better person-organization and person-job match;

- Guaranteed training programs;

- Targeted advertising;

- Lowering entry standards;

- Educational incentives;

- Retention bonus programs; and

- Varying contract length.

These practices while meeting short-term objectives can have negative long-term and costly consequences. Unquestionably recruiting and retention are very complex issues and there is no single solution. A key objective of the HFM-107/RTG-034 is to identify common recruiting and retention problems, barriers, research requirements and proposed solutions. In order to effectively do so, a general understanding of the individual country recruiting and retention practices is necessary. The proceeding documents provide a brief overview of the military recruiting and retention requirements and practices for each of the countries represented on the HFM-107/RTG-034 Task Group and specific initiatives that countries have implemented from the general list of solutions described above.

Chapter 2A – RECRUITING AND RETENTION OF MILITARY PERSONNEL: BELGIUM

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2A.1 AN INTRODUCTION TO RECRUITMENT AND RETENTION FOR THE BELGIAN MILITARY

The end of the Cold War clearly was the beginning or a new era for the Belgian Defence. When the iron curtain was torn down, the Belgian Forces were composed of roughly 100,000 men among which, many draftees. The Army was by far the largest service and most of the combat units were stationed in Germany. Its main mission was to defend a part of the inner German border against a possible aggression from the East. Besides the army, the forces encompassed the Air Force, a small Navy and a Medical corps. In addition, there was a Reserve mainly composed of ex-draftees who had to stay in the reserve for a number of years.

Since the beginning of the nineties, the progressive disappearance of the threat from the East, together with the popular claim for 'peace dividends', caused a series of political decisions downsizing the Forces.

The first important step was the decision to suspend conscription. The reasons were manifold: there was no longer a need for large numbers, the acceptance of a conscript army was fading, especially since less than one out of two boys had to serve and not the girls and finally, there was the problem that deployed units in peace-keeping missions couldn't include draftees unless they volunteered. This plan called after the Minister of Defence Leo Delcroix was approved in 1992 and included the downsizing of the Forces to 47,000 personnel. The conversion from a conscript army to a professional one didn't yield such a big recruitment problem since in the conscript army we already had about 18,000 professional soldiers and needed 20,000 in the new structure. At the NCO and officer level, there were too many professionals, but nobody was forced to leave. In order to reach the anticipated lower numbers, recruitment was slowed down but not stopped and the older military with less than five years to serve could leave in financially attractive conditions. In order to maintain an acceptable age structure of the Forces, it was made possible to enlist for a 'short term' of 2 to 5 years.

In May 2000, the Belgian government approved a new "Strategic plan for the modernization of the Belgian Forces (2000 – 2015)." This time, 39,500 personnel was set as a target to be reached in 2015.

In July 2003, a new government was constituted after elections. The new government decided to reduce the Forces further to 35,000 personnel.

This continuous downsizing has a number of consequences for recruiting and retention. First, the recruitment goals are quite low since the number of people leaving the organization can be larger than the number joining. Fortunately, recruiting was never stopped. Second, it is not considered appropriate to tell the population that

the Military is downsizing and at the same time launch advertising campaigns. This means that the effort to advertise for the Military is kept minimal. Third, the overall perception of the Armed Forces by the population is one of a continuously shrinking organization. This is not very appealing to many youngsters.

To appreciate the Belgian situation, it is useful to have some additional background information. One piece of information pertains to the lack of professional mobility on the labor market. Belgians are not very fond of changing work and lifetime employment is considered very valuable. Applied to the Military, this means that short-term contracts remain very unsuccessful and that the idea of forcing older professional soldiers to leave the Military is considered to be heretical. Since most of the military can stay until retirement age, this eases the recruitment problem. Another important thing to know is that the Belgian constitution states that recruitment for the Military has to be organized by law. This means that every aspect of the selection procedures needs to be written down in legal texts. It goes without saying that this is a major drawback when one attempts to implement a flexible recruitment system, able to adjust to a dynamic labor market conditioned by the changing economic conjuncture.

2A.2   RECRUITING PROBLEMS AND MAIN REMEDIAL MEASURES

2A.2.1   Problems

The primary objective of recruitment is the identification and attraction of potential employees. These outcomes are by no means easy to define or assess. Organizations are interested in attracting certain **numbers** of potential employees who have certain **attributes**. In other words, attraction has both quantitative and qualitative dimensions. Regarding quantity, recruitment is most efficient when the number of applicants attracted is neither too small nor too large. Small applicant pools give the employer few options regarding which applicants to hire. Very large applicant pools, however, place heavy burdens on the organization's administrative systems and are generally undesirable. Regarding quality, organizations may differ in terms of what characteristics, or what level of characteristics, they are seeking; thus, "successful" recruitment is best defined in accordance with whatever qualities the organization had in mind.

2A.2.1.1   Quantitative Problems

The number of applicants for the Belgian Military is very much depending on the current economical conjuncture. When the economy is booming, applicants are scarce and there are plenty of them when the economy faces recession. This rule sometimes applies differentially in the North (Flemish community) and the South (Francophone community) of the country. Although we are able to fill most vacancies at this moment, some specific occupations are still critically understaffed. In particular, there is an urgent need for NCO technicians, for NCOs with a college degree, for short-term contract personnel and for Infantrymen.

2A.2.1.2   Qualitative Problems

The Belgian recruitment policy has been one of "filling all vacancies". When there are shortages in the labor market, the reflex action of many decision makers is to lower the selection standards so that generally more applicants will be eligible for employment. A likely drawback of this measure is that the overall quality of the accepted applicants will drop. Whether this happens or not, depends entirely on the characteristics of the applicant pool and on the kind of decision-making process that is used to assign applicants to jobs. Until January 2004, the Belgian Defence used an immediate decision-making model for its enlisted personnel, called "immediate classification". This method assigns an applicant as soon as all his relevant attributes are

assessed. In order to decide about his assignment, his "profile" is compared to a set of trade specific criteria. If the person meets the set criteria for his preferred job, he gets it. This system, also known as a "first comes, first served" system is widespread for enlisted personnel. The main reason for this is that it usually is considered to be important to tell the applicant immediately what job he will get. As from 2004, the applicants are assigned by means of "batch classification". Contrary to immediate decision-making models, batch classification compares the eligible applicants before making decisions. From an organizational perspective, batch classification yields far better results than immediate classification.

Another problem is that a large proportion of the applicant population is willing to consider a military career, but is not at all appealed to the prospect of being part of a fighting unit for several years. In Belgium, within the framework of "lifetime employment", it is common for new recruits to start their career in a combat unit. Most of them remain "fighters" until this becomes a too heavy burden from a physical or psychological point of view. As from that moment, they are "converted" to a more supportive or administrative unit. The drawback of this personnel policy is that potential applicants with non-fighting interests and qualities probably turn their back on the Military.

2A.2.2   Measures

2A.2.2.1   Recruitment and Selection

2A.2.2.1.1   *Reduction of the Selection Burden*

A first important measure is the reduction of the selection burden: In many countries the period of time between the first contact of an applicant with the organization and the actual enlistment in a unit is extremely long, sometimes up to a year. If these processes take so long, it is a clear that in a tight labor market many applicants will have found a job elsewhere before the military organization has reached a decision on whether or not to hire. In 2001, the Belgian Defence Staff has taken a set of initiatives to speed up the application, selection, and allocation processes for enlisted personnel. Firstly, the initial screening test has been decentralized to the local career offices. This measure not only speeds up the selection, passing the test also causes the applicant to become committed to the organization. That is, after the first hurdle is taken, the likelihood that applicants continue to pursue employment increases. Within a week after their application, applicants are invited to take their tests (medical, physical, and psychological) at the central selection center in Brussels. Nowadays the selection procedure for enlisted personnel takes only one day instead of the previous two and a half days. Furthermore, the delay between application and entrance is shortened to one month, thereby reducing the voluntary withdrawal rate after a successful selection process. Finally, as from 2002 it became possible to enlist new recruits for most entries throughout the entire year. For some jobs, however, professional training takes place only once or twice a year. Previously, for these jobs there were limited enlistment dates, and few potential applicants were willing to wait until that time. Instead they continued searching for a job elsewhere. Nowadays, a type of general practical training is organized in order to bridge the waiting period between enlistment and professional training. Potential applicants get the possibility to sign up at any time.

2A.2.2.1.2   *Lowering the Cut-Off Score*

Secondly, it was decided to lower the cut-off scores of several tests. As mentioned earlier, this is an efficient operation in order to fill open vacancies. However, in combination with an immediate classification method it is pretty sure that this measure is carried out at the expense of applicant quality.

2A.2.2.1.3   Selection and Training of Selectors

Thirdly, the selection and training of interviewers was improved. In the past, an unstructured interview with the head of the selection department was sufficient to demonstrate one's motivation and capabilities to become an interviewer. Nowadays, a structured interview takes place before a selection board consisting of both experts and executives. In addition, after being selected, candidates go through a lengthy training program, containing theoretical courses (e.g., statistics, organizational psychology), practical courses (e.g., interview techniques, assessment center method), and a period of practical training. Also worthwhile mentioning is that we have raised the number of psychologists involved in the selection process in order to guarantee applicants a more professional treatment.

2A.2.2.1.4   Research and Technology

Since 2001, we also have put a lot of efforts in building out a research and technology program on recruitment, selection, and retention. In conjunction with several Belgian universities we are focusing on both psychometric and social dimensions of the recruitment and selection (e.g., test validity and reliability, reasons for voluntary withdrawal from the selection process).

2A.2.2.1.5   Replacement of Test Batteries

Fifthly, we took steps to replace the existing cognitive test battery. These tests are used to assess applicants' verbal, numerical, and spatial ability, and general intelligence at the career office (see above). A new test battery has been acquired and is planned to be put in operational use in Jan 2007. In addition, a new test battery for pilot applicants was bought and is used since Feb 2006.

2A.2.2.1.6   New Legislation on Military Recruitment and Selection

In 2004, a new legislation on military recruitment and selection became operative. One of the objectives of this legislation was to enlarge the applicant population. It was decided that as from 2004 individuals can apply until the age of 34 instead of the previous fixed age limit of 31. This was the second upward shift in a few years time. Furthermore, it was decided that the selection procedure should be more customer-oriented. According to the new legislation, all applicants always deserve a second chance and always have the right to lodge an appeal in case they fail. It was also advised to reimburse applicants' travel expenses, but unfortunately this suggestion was rejected. The new legislation also dictates that military service is not longer a privilege of Belgian citizenship, but that as from 2004 EU-citizens are admitted to the Belgian Defence too.

2A.2.2.1.7   Targeting Minority Groups

In the same vein, the Belgian Defence recently started to target "minority" groups. "Non-traditional" applicants, such as female and migrant applicants, were heavily neglected until a couple of years ago. Nowadays, all recruitment sources (e.g., brochures, internet, video, radio ads, television ads) explicitly focus on these unexploited applicant populations. According to the former legislation on selection, the same selection standards apply to male and female applicants. As a result, a high number of female applicants did not succeed in the physical fitness tests that were in use until 2001. These tests consisted of a pulling task, a shuttle run, a balancing exercise, and an ergometric cycling test. In particular, the pulling task (the applicant had to pull an isostatic device as hard as possible) turned out to be too hard for most female applicants. In order to cut back the number of female applicants failing the physical fitness hurdle it was decided to maintain only the ergometric bicycling test. In addition, since 2004 different sets of physical fitness standards are used for males and females.

2A.2.2.2 Organizational Changes

2A.2.2.2.1 Creation of an "Accession Policy" Section

One of the first actions our Minister of Defence carried out in order to improve recruitment and selection was moving the department of recruitment to a more strategic level. More specifically, in 2002 an "accession policy" section was created as part of the Defence Staff under the direction of a Full Colonel. Before that time, recruitment and selection were considered as matters of minor importance and the Commanding Officer of the selection center operated relatively autonomously without much external control or help. The lack of interest on behalf of the Staff negatively affected the quality of the selection process. Since the appointment of a Full Colonel various initiatives were taken to improve the situation (see above).

2A.2.2.2.2 Expansion of the Preparatory Division of the Royal Military Academy (PDRMA)

The PDRMA is a military institute that prepares youngsters for their entrance exam at the Royal Military Academy (RMA), the academy for future officers. The institute offers additional courses in mathematics and first and second language in order to cram the pupils for the initial exam at the RMA that is decisive for who may enter.

2A.2.2.3 Pay and Benefits

A whole set of measures are carried out with regard to pay and benefits. To begin with, since 2001 the wages of all military personnel are gradually increasing (see below). In addition, each personnel category is entitled to various kinds of bonuses (e.g., "educational bonus", "mastery" bonus). For some categories specific measures were taken. For instance, in order to make the Armed Forces more attractive to potential applicants with a college degree or with a civilian university degree, it was decided that during training the former would receive a salary that would be equal to that of a Sergeant, and that the latter would receive a salary that would be equal to that of a Second Lieutenant. Finally, the statute of Air Traffic Controller is upgraded from the category of NCOs to the category of officers (see below).

2A.2.3 Effects

It is very difficult to attach a number to the effects of the measures taken. The main reason for this is that until now no steps were taken to examine the effect sizes. We do observe that the Belgian Armed Forces are becoming more popular lately. It is enticing to say that the "image" of the Military has improved, as a spokesman of the public relations recently did on television. It is also likely, however, that the economic situation stimulates more youngsters to search for a stable, secure job.

2A.3 RETENTION PROBLEMS AND THEIR MAIN MEASURES

2A.3.1 Problems

2A.3.1.1 Turnover during Initial Training

In the Belgian Armed Forces approximately 30% of the recruits voluntarily withdraw from initial training. The majority of these stops take place within the first month, sometimes even after a few days. It seems that this figure is not very different from the voluntary turnover rate of most West European Armed Forces. It is obvious that early turnover is very costly to an organization. Firstly, there is no return on investment.

In addition, it is likely that turnover will have indirect and unintended effects on organizational outcomes. Disappointed withdrawals will disseminate their stories, and in doing so probably repel others from applying.

One often-heard explanation for this observation is that withdrawals have **inflated expectations** of military life. These unrealistic expectations would be attributable to the traditional "selling approach" of many recruiters. The "selling approach" involves two actions:

1) Only positive organizational characteristics are communicated to prospective applicants rather than those things insiders find dissatisfying about the organization; and

2) Those features that are advertised may be distorted to make them seem even more positive.

This traditional approach is designed to attract as many applicants as possible, but is in conflict with the organization's ability to retain newcomers. This is because the disappointment of initial expectations will lead to a decrease in job satisfaction and as a result to an increase of voluntary turnover.

The role of inflated expectations is generally accepted. Admittedly, theoretically this is an interesting construct to explain a substantial proportion of the observed variance in turnover intentions and behavior. Withdrawals, however, when asked why they left, refer to more **concrete experiences**: Homesickness, problems with the instructor, problems at home, the prospect of a mission abroad, a disappointing salary, did not get the job he/she preferred, found a better job elsewhere, etc. Usually, more than one reason has led to the decision to leave.

As mentioned earlier, **lowering the selection standards** increases the likelihood of accepting "less qualified" personnel. Put differently, it is likely that the average Person-Organization fit of these newcomers will decrease. As a result, this group will be more dissatisfied, will be less committed to the organization, and will have higher turnover intentions.

2A.3.1.2   Retention Problems during the Career

Two major reasons lead people to leave the Military prematurely: The attractiveness of alternatives outside the Military and the dissatisfaction about the circumstances inside the Military. Of course, most decisions to leave are based on a combination of both reasons.

Among people leaving mainly because of the attractiveness of alternative employment opportunities we find pilots, ICT-specialists, aircraft technicians and air traffic controllers. These highly qualified persons can easily find a new job in civilian life when the economy is good. For pilots and aircraft technicians, we experienced a temporary standstill of their departure due to the worldwide recession of air travel after 9/11. The departure of these highly trained persons is a major problem for they are very expensive to recruit and train.

We also have military personnel leaving because of unsatisfactory working circumstances or perspectives. An important group consists of persons who were deployed several times. During the last decade, Belgian contributed quite extensively to many operations abroad. Because of the age structure of the Forces, many persons are considered too old and unfit to be deployed. As a consequence, the pool to draw from is rather small and the younger persons fit to be sent abroad are deployed several times. In a number of cases, their family no longer accepts this and forces the soldier to leave the Military.

2A.3.2 Measures

2A.3.2.1 Retention Bonuses for Computer Specialists

Computer specialists were paid according to their military rank only. As they can get much better offers in civilian life, large numbers (especially the good ones) decided to leave. It was therefore decided twice to grant them a significant retention bonus. It was the first time this was applied in the Belgian Forces and the way it was done was not perfect. First, it appeared not to be as simple as it looks to identify the computer specialists. Some of them, for instance, are very good, but had no formal training and hence no prove of being computer specialist in their file. Others were trained, but did no longer work as computer specialist (until they heard of the bonuses, of course…). In addition, the persons who received the bonuses did not have to commit themselves to stay with the Military and no effect measurements were done.

2A.3.2.2 Upgrading Air Traffic Controllers to the Category of Officers

Most of our air traffic controllers (ATC) were recruited and trained as NCO. They were paid according to their rank only. Attrition was high because of the length and difficulty level of their training, but mostly because of the existing opportunity to work as ATC for the civilian authority. To illustrate the discrepancy between the military and civilian wages, we mention the case of an NCO ATC with 13 years of experience who left the Military and started to do the same job for Eurocontrol. There, he earned more than the Chief, Head of Defence of the Belgian Forces! In an effort to reduce the problem, it was decided to upgrade the function of ATC to the category of officer. In practice, this means that the existing ATC will get the opportunity to become auxiliary officer (with a limited career) and the new ATC recruits will also become auxiliary officers.

2A.3.2.3 Pay Raise

A major effort to improve both recruitment and retention consisted of providing a significant pay raise for all military personnel. The following table illustrates the minimal and maximal pay raise between 2001 and 2005 for the different personnel categories. It needs to be said however that this pay raise rather reflects the overall evolution of the wages in Belgium. It cannot be considered an action to highlight the Military on the labor market.

Table 2A-1: Pay-Raise Belgian Military 2001 – 2005

Personnel Category	Minimal Pay Raise	Maximal Pay Raise
Soldiers	4.3%	17.9%
NCOs	3.7%	33.5%
Officers	10.7%	20.5%

2A.3.2.4 Possibility to Return after Leaving the Military

One of the possibilities a member of the Military has after leaving the organization is simply to come back (within one year). This is useful as it allows us to re-engage a person who did decide to leave, but found out that the grass not always is greener on the other side of the hill. As a drawback of course, this opportunity also lowers the threshold to leave.

2A.3.2.5   Providing Daycare for Small Children

It has been understood that finding adequate daycare facilities for young mothers in the Military was a problem. It was therefore decided to open daycare centers in the larger garrisons. Daycare centers are only open from 7 AM till 6 PM. As a result, mothers who have night shifts or are called up for exercises still have to look for other solutions.

2A.3.2.6   Providing Psychological Support and Family Care

Since it gradually became clear that deploying persons could be stressful both for them and for their family, a comprehensive system of psychological support for the member of the Military as well as for his/her family was set up. This was primarily done as responsible employer behavior, but undoubtedly has beneficial effect upon the retention of the deployed personnel.

2A.3.2.7   Extension of Short-Term Contracts

As mentioned before, when conscription was suspended it was decided to introduce short-term contracts to maintain an acceptable age structure within the Forces. These contracts are available for the three personnel categories: volunteers (soldiers), NCOs, and officers. At the outset, applicants had to sign a two years contract. They could extend their contract three times for one year if they hadn't reached the age of 25. In order to make these contracts a bit more attractive and to allow more people to apply, it was decided to allow the applicants to apply until the age of 30 with the possibility to extend their contract for a total of seven years if they hadn't reached the age of 34.

2A.3.2.8   Youth Camps and Pre-Enlistment Camps

One of the major reasons for early turnover resides in the lack of realistic expectations. Two actions were decided: the organization of youth camps and of pre-enlistment camps. Youth camps are meant for youngster around 15 – 16 years old. During these camps, they live in military units and follow a program intended to learn them more about Defence (showing equipment, doing sports, getting first aid training…). All activities are lead by volunteering military personnel. The pre-enlistment camps were held the week before enlistment and were a very realistic preview of what they would experience once they signed their contract.

2A.3.2.9   Attaching More Importance to the Applicants' Preferences when Assigning them to Vacancies

During the classification process of the applicants, one has to balance the relative weight of the applicants' aptitudes for the different trades and their preference for these trades. During the last few years the importance of the preferences has been increased. This results in having more applicants to be assigned to the trade they prefer. It is assumed that this will lower early turnover.

2A.3.2.10   Using Older Instructors

One of the reported causes of early turnover is related to the hard approach of the enlistees by drill sergeants. Usually, these drill sergeants are quite young and prone to display macho behavior. Therefore, an experiment was conducted in which older instructors trained soldiers only. The instructors could easily have been the fathers of the recruits. Their attitude seemed to have been quite different. As a result much less turnover occurred during that experiment.

2A.3.2.11   Bonuses for Deployment

This measure does not need much clarification. Obviously, the willingness of being deployed would drop enormously if there were no bonuses.

2A.3.3   Effects

Again, it is very difficult to speak out about the effect sizes. No steps have been taken to examine systematically the results of the measures. And as with recruitment, we believe that the economic climate plays an important role: In times of recession, jobholders are less likely to job-hop unless they are certain of a new position.

2A.4   RECENT DEVELOPMENTS IN RECRUITING AND RETENTION

In this paragraph we outline recent developments in recruitment and retention without going into much detail. We'll first discuss a new initiative aimed at better recruiting medical doctors and then discuss the project called: 'Mixed Career Concept'.

Recruiting medical doctors (MD) isn't currently easy. The reason is simple: when we recruit a MD, he or she is essentially paid according to his or her military rank which is second lieutenant at the beginning of their career. The financial gap between what they earn in the Military and what they could earn in civilian life is too large, so applicants are very scarce. A new recruiting possibility was created to solve the problem. It is called the *lateral recruitment of MD's* (also applicable to dentists, veterinarians, and pharmacists). To be hired in that system, the applicant can be up to 49 years old and must prove a professional experience of at least five years. The selected persons get the rank of captain immediately and are promoted to the rank of major as soon as they complete their training that, according to the professional experience the MD have, can be reduced to only six weeks.

The Mixed Career Concept (MCC) is a project that is intended to profoundly modify the human resources management in the Belgian Defence. Two of its goals are keeping the age structure of the Military healthy and increase the proportion of military that are deployable. In order to do so, the principle of lifetime employment as military is given up for most military. According to the MCC, applicants will be recruited and become military. After a period of ten to twelve years of service, these military will reach a so called 'orientation point'. There, three options are considered: staying in the Military until the age of retirement, becoming a civil servant in the Department of Defence or returning to the labor market. Both the preferences of the individual and the needs of the Military will be taken into account to decide which option applies to the individual. This very ambitious project is planned to be effective before 2010.

Chapter 2B – RECRUITING AND RETENTION OF MILITARY PERSONNEL: CANADA

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2B.1   BACKGROUND

The current attention being focused on recruiting and retention within the Canadian Forces (CF) dates back to the early 1990s. The CF began facing the challenge of attracting a sufficient quantity of applicants to meet enrolment targets and retaining personnel. There are a number of factors internal and external to the CF that contributed to the recruiting and retention situation. Internally, the Canadian government embarked on severe budget reductions to all departments including the military. In order to meet those reduction targets, military personnel were given financial incentives to leave. Concurrently, a sustained increase in the pace of UN and NATO operations for the CF was also occurring. Moreover, partly to increase efficiencies within this smaller force, a number of occupations were amalgamated. These internal changes impacted negatively on retention. High attrition rates that greatly exceeded production rates, led to a critical shortage in many CF occupations. This additional internal factor significantly impacted on recruiting in the CF.

External factors also contributed to the recruiting and retention problems of the CF. A strong economy, significant competition with external agencies to recruit personnel, the deterioration of the CF's image as a major employer, and changing demographics with "baby boomers" reaching retirement resulted in the CF being unable to reach its enlistment targets. It was expected that, if solutions were not implemented, this recruiting situation was going to continue and further deteriorate with the CF facing a steady decline in its trained effective strength in the years to come (Hearn, 2000). On the retention side, the rapidly shifting demographic composition of Canadian society and the associated shifts in social values, especially amongst Canada's youth influenced retention in terms of understanding the issues important to junior serving military personnel. These internal and external factors contributed to the development of current recruiting and retention strategies.

2B.2   AIM

The purpose of this paper is to describe the recruiting and retention strategies used within the Canadian Forces. The majority of these recruiting strategies stemmed from the CF Recruiting Project that was initiated in 2000 in response to the concerns described above (Syed, 2001). The retention strategies that will be discussed are classified as those that directly influence members to remain in the CF and organizational strategies used to identify where attrition is occurring.

2B.3   RECRUITING

The CF Recruiting Project was initiated in response to the recruiting challenges facing the CF. Recruiting strategies that were encompassed in the project were aimed at restoring the CF to forces levels. Additional recruiting strategies introduced since then have also been aimed at increasing CF levels.

2B.3.1   CF Recruiting Project

The CF Recruiting Project served as a widespread review of human resources recruiting and selection processes and focused on the following principle areas: attraction and incentives to join, efficiency of recruiting processes and, capacity to train an expanded intake of recruits (Syed, 2000). The project was designed to re-establish the CF to forces levels by synthesizing and introducing a variety of recruiting strategies and initiatives. It was based on a total force approach and employed innovative solutions (Department of National Defence, 2003).

The CF Recruiting Project was designed to follow a three-year plan. The project's solutions were based on an incremental approach that maintained a fast pace to solve recruiting problems as quickly as possible. Its aim was to establish intakes with steady and graduated growth with the goal of restoring Regular Force levels before 2009/10 and Reserve Force levels before 2005/06. The project focused on re-establishing the CF to forces levels while considering demographic trends with anticipated increases in attrition. It aimed to re-establish applicant ratios of at least 2:1. The project also aimed to ensure that intake exceeded attrition. The CF Recruiting Project was also in line with policies that governed the CF including the Employment Equity Act (EEA) that addresses the issue of diversity in the CF. Recruiting strategies introduced since the CF Recruiting project have further developed to enhance recruiting for the CF.

2B.3.2   Diversity

Recognizing the active inclusion of the diverse representation of Canadian society is an important component of the CF's recruiting initiatives. In November of 2002, an Order in Council was passed bringing the CF under the Employment Equity Act (*The Act*). *The Act* recognizes four designated groups including women, Aboriginal peoples, visible minorities, and persons with disabilities. The EEA requires that employers ensure that designated groups are considered in recruiting efforts[1]. Under the EEA, the CF is required to ensure that the internal representation of their employee population is comparable to the portion of the Canadian workforce population that is qualified for those occupations (Holden, 2003). Therefore, diversity and designated groups are considered in recruiting efforts, policies and procedures throughout the CF in all occupations including those with a shortage of personnel.

2B.3.3   Identifying Stressed Occupations

As part of the CF Recruiting Project, occupations that were understaffed were identified and the extent to which they were lacking personnel was indicated. A coding system was used to clearly identify occupations facing critical shortages. The focus of recruiting efforts and strategies was placed on critically understaffed occupations. The CF Recruiting Project ensured adequate use of a full range of intake and transfer programs within the CF and, also, introduced a number of innovative recruiting strategies to address the CF's recruiting

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[1] The CF does not currently recruit persons with disabilities. The CF does, however, track self-identification data and accommodate CF members, where possible, if injured while serving.

problems. New recruiting initiatives can be grouped into the following categories: attraction, communications, and process and policy review (Department of National Defence, 2003).

2B.3.4   Use of Full Range of Intake and Transfer Programs

In response to the recruiting problems, the CF has sought to ensure the use of the full range of entry programs including component transfers and internal occupational transfers. There has also been an increase in the use of programs that acknowledge civilian skill sets and civilian training equivalencies to reduce the training requirements of individuals entering the CF. Intake and transfer of personnel in the CF takes into account the needs of the organization and considers the CF's capabilities and available resources as well as individual requests. Efficiency in processing occupational transfers by eliminating redundant processing of personnel as well as by ensuring that particular occupations do not become understaffed by staff requesting transfers from these occupations is considered. Encouraging transfer to understaffed occupations is another strategy to fill occupations in need of personnel. Training equivalencies are considered upon intake and for occupational transfers, especially for critically understaffed occupations (Department of National Defence, 2003).

2B.3.4.1   Recruiting Strategies Using a Full Range of Intake and Transfer Programs

The CF's recruiting strategies include acknowledging educational equivalencies upon intake as well as in occupational transfers in an attempt to efficiently staff various CF occupations (Department of National Defence, 1999). The potential for equivalencies for different CF occupations was determined. In addition, Colleges and Universities that offer accredited programs considered suitable for appropriate high skilled CF occupations were identified along with potentials for skilled civilians bypassing CF courses and/or training. Recruiters were provided with the appropriate information to make offers based on equivalencies directly to the candidate (Department of National Defence, 2003).

There has also been a focus in the CF on acquiring officer candidates with requisite degrees. In light of this focus, recruiting strategies have included in-service Military Medical, Dental, Legal, Chaplain, and Pharmacy Training Plans (Department of National Defence, 1988). Other plans considering equivalencies include the: Special Requirements Commissioning Plan, Special Commissioning Plan, Commissioning from the Ranks Plan, Civilian University Component of ROTP, and University Training Plan for NCMs.

2B.3.4.1.1   Special Requirements Commissioning Plan

The Special Requirements Commissioning Plan offers Chief Warrant Officers a commission in an occupation for which they have significant background, skill sets, and experience. An example would be offering a Supply Technician a commission into a Logistics occupation (Department of National Defence, 1987).

2B.3.4.1.2   Special Commissioning Plan

NCMs who have completed University degrees are selected and assigned to officer occupations for which their degrees are suitable with the Special Commissioning Plan. Candidates must successfully complete a selection board prior to filling the position (Department of National Defence, 1996a).

2B.3.4.1.3   Commissioning from the Ranks Plan

The Commissioning from the Ranks Plan involves selecting senior NCMs via a competitive selection board and offering them commissions for occupations in which they have significant backgrounds, skill sets,

and experience. Candidates must also successfully complete a selection board (Department of National Defence, 1994).

2B.3.4.1.4 Civilian University Component of ROTP

The CF sponsors University programs for selected CF occupations. Successful candidates must then complete basic officer training and attend University (Department of National Defence, 1995).

2B.3.4.1.5 University Training Plan for NCMs

The University Training Plan selects NCMs to attend University on full CF subsidization. Then they are commissioned in an occupation relevant to their degree (Department of National Defence, 1996b).

2B.3.5 Attraction

Attraction initiatives for recruiting include tools to recruit applicants other than advertising. These attraction initiatives are prioritized to occupations that are facing severe shortages. There has also been a shift in recruiting for the CF from enrolling mostly unskilled applicants to attracting skilled and experienced applicants who can bypass as much training as possible. Examples of fields requiring detailed skill sets are electronics and information technology. Attracting and enrolling skilled applicants is a priority for the CF. Of lower priority is attracting and enrolling semi-skilled applicants (those with some relevant civilian, or prior military, experience) followed by unskilled applicants. There are various tools employed by the CF to attract and enroll skilled applicants including conveying information at relevant forums, offering recruiting allowances and, subsidizing education (Department of National Defence, 2003).

2B.3.5.1 Recruiting Strategies for Attraction

2B.3.5.1.1 Conveying Information at Relevant Forums

Visits to academic institutions, briefings to relevant groups and attendance at job fairs are all examples of forums to convey information to attract applicants to the CF.

2B.3.5.1.2 Recruiting Allowances

There are three recruiting allowances available to CF applicants consisting of different monetary amounts. For example, $10,000 and $20,000 are awarded for specific NCM occupations depending on an applicant's technical and academic background and an allowance of $40,000 is available to suitable Regular Force Direct Entry Officers in Engineering. These dollar amounts were arrived at by determining the average debt load of a college or university graduate in Canada. The justification for allowances is based on cost avoidance; the CF does not need to expend money and training resources for the initial occupational/educational MOC training (Department of National Defence, 2003).

2B.3.5.1.3 NCM Subsidized Education Program (NCMSEP)

Another incentive to attract applicants is the NCM Subsidized Education Program (NCMSEP). This program is designed to fill stressed NCM occupations. It offers an opportunity to qualified applicants to have their college education completely subsidized. The intent of this program is to maintain a steady flow of qualified recruits into occupations that have difficulty recruiting personnel similar to officer University training in many countries (Department of National Defence, 1989).

2B.3.6   Communications

The CF developed a complete communication plan including advertising as well as external communication and internal communication to serving members. The communications plan was aimed to restore the image of the CF and define it as the employer of choice. In order to pass this message, information was communicated on the opportunity to gain different work experience in the CF as well as opportunities for both professional and personal development and short-term and long-term careers. Competitive salaries, benefits and quality of life were also highlighted (Department of National Defence, 2003).

2B.3.6.1   Recruiting Strategies for Communications

2B.3.6.1.1   Advertising

Advertising was aimed at promoting the CF as an employer of choice. In addition to this, those CF occupations facing shortfalls were given a focus in advertising. Advertising was also targeted to, for example, trade magazines. Incentives such as recruiting allowances were also highlighted in advertising. Advertising aimed at Reserve personnel was localized to geographic areas to attract applicants to units in those areas. Advertising for the CF is presented nationally on television, at cinemas, on billboard signs, and in print.

2B.3.6.1.2   External Communication

External communication was achieved through media exposure through the following mediums: television, radio, Internet, newspaper, and journal and magazine articles. The CF website serves as a key source of information external to the CF. Interviews and press releases also aided in passing a message to the outside public that the CF is an employer of choice that is currently hiring.

2B.3.6.1.3   Internal Communication

Research has indicated that most applicants consider a career in the CF because they receive information from others through word of mouth. By being well informed, existing CF members can pass on information to the public aiding the CF's recruiting efforts. Therefore, the importance of keeping CF members adequately informed about recruiting initiatives was acknowledged. Internal communications were offered through articles in various CF publications and briefings for staff.

2B.3.6.1.4   OP CONNECTION

In response to many Canadians being unaware of the unique opportunities, benefits, challenges and rewards of CF careers, it was decided that the CF must adopt a more robust and cohesive recruiting strategy, using all appropriate CF assets in a coordinated campaign to connect with Canadians. This has been conceptualized as a military operation called OP CONNECTION. OP CONNECTION's theme *"Recruiting is everybody's business,"* was used by the Chief of Defence Staff to help revitalize the military recruiting culture. This meant that the complete Chain of Command including all sailors, soldiers, airmen and airwomen are to be engaged in an aggressive and comprehensive recruitment strategy by which they connect with greater numbers of Canadians in a meaningful way. At the national level, the main effort will focus on connecting with Canadians at seven major popular events that occur in regions across Canada (Department of National Defence, 2006).

2B.3.7   Process and Policy Review

Processes and policies for recruiting in the CF were reviewed and assessed for their efficiency and value added to the recruiting process. An attempt was made to make the recruiting process as efficient as possible by ensuring that processing time was minimized and any bottlenecks in the process were eliminated (Department of National Defence, 2003). Efforts were made to increase efficiency that included electronic transmission of information during the recruiting process (Syed, 2003). Selection criteria were also revised and measures were converted to an electronic format (Syed, 2003).

2B.3.7.1   Recruiting Strategies for Process and Policy Review

2B.3.7.1.1   Electronic Transmission of Fingerprints

There is an initiative to institute the electronic transmission of fingerprints during the recruiting process to save a significant portion of time in the recruiting process.

2B.3.7.1.2   Virtual Medical Files

There is an initiative to replace paper and pencil medical files with virtual files to decrease the time it takes to transmit this information during the recruiting process.

2B.3.7.1.3   Further Policy and Procedure Review

Other CF policies and procedures are also being reviewed and will be modified to increase efficiency in recruiting processes (Department of National Defence, 2003).

2B.3.7.1.4   Selection and Classification

Selection and classification criteria were also re-evaluated to determine whether selection criteria can be adjusted to increase the quantity of recruits without jeopardizing the quality of recruits. The Canadian Forces Aptitude Test (CFAT) is a cognitive ability test used to screen both officer and NCM applicants and to classify NCMs into military occupations. Based on research, cut off scores on the CFAT were adjusted slightly for some occupations where there could be an increase in the applicant pool and a low risk that the quality of recruits was being jeopardized (Syed, 2001).

2B.3.7.1.5   Conversion of Paper and Pencil Measures to Electronic

There is an effort in the CF to increase the efficiency of the recruiting process by converting measures such as an aptitude test and applicant surveys from paper and pencil to electronic (Syed, 2003). This would reduce processing time and increases the efficiency by which applicants can receive and complete the measures. Electronic information would also support the positive image of the CF as an organization employing the latest technology.

2B.3.7.1.6   E-Recruiting

E-Recruiting for the CF was introduced in October 2005. It consists of an on-line application service aimed at increasing efficiency and increasing the ability to contact potential recruits.

2B.3.8   Summary

Recruiting efforts in the CF focused on particular occupations facing critical shortages in personnel. These efforts have ranged from ensuring use of the full range of CF intake and transfer programs to new, innovative strategies to attract personnel. There have also been efforts to effectively communicate information about the CF and the opportunities it offers and to review policy and process to make it more efficient wherever possible. The CF Recruiting project put focus on strategies in those occupations that had shortages in personnel and on skilled applicants. These priorities were flexible depending on the needs of the organization as they change in the future. Results of efforts from the CF Recruiting Project have been positive in increasing applicant ratios for many occupations as well as increasing intake of new recruits. Long term effects of further recruiting initiatives will become apparent in the years to come and will be assessed in the future.

2B.4   RETENTION

The retention strategies that will be discussed are classified as those that directly influence members to remain in the CF and organizational strategies used to identify where attrition is occurring. Many of these initiatives are highlighted in a formal policy on retention titled the CF Retention Strategy ADM (HR-MIL) Group Action Plan (2001). In order to focus on the initiatives, a full explanation of the action plan will not be discussed. Instead, initiatives from the action plan that fall under the two categories will be discussed as they arise.

2B.4.1   Individual Influences

The most significant influence concerning current retention strategies used to encourage members to remain in the CF was the creation of the Standing Committee on National Defence and Veteran's Affairs (SCONDVA) in 1997. The committee was made up of 11 members of Parliament from all three parties with official standing in the House of Commons. It was tasked to review the social and economic challenges faced by CF members and their families and come up with a set of recommendations designed to ease the unique burdens facing CF members and their families.

Their work was not mandated to examine retention specifically. Instead, it was focussed on improving the quality of life of personnel and their families. Their inclusion into this discussion came about from recent exploratory research that revealed many of the issues raised during their meetings about QOL were very similar to those being mentioned by military personnel as reasons for leaving (Dunn and Morrow, 2002). This is not surprising. It is not illogical to conclude that those people who have a good quality of life are probably less likely to leave the military than those whose quality of life is poorer. Moreover, these recommendations are directly related to the Task Group theme of the link between quality of life and retention.

Eighty-nine recommendations were developed by the committee and can be categorized as:

   a)   Pay and Allowances – compensation for work (20 recommendations);

   b)   The Housing Portfolio – accommodations (21 recommendations);

   c)   The Injured, Retired, and Veterans – care of injured personnel (16 recommendations);

   d)   The Military Family (16 recommendations);

   e)   Transitions including recognition, work expectations and conditions of service (14 recommendations); and

   f)   The future (2 recommendations).

Before discussing the results in detail, it is important to reiterate that the CF focus on measuring quality of life has been to assess the extent to which the various recommendations have improved peoples' quality of life. As such, there has been no direct link between the introduction of quality of life (QOL) initiatives to address these problems and any increased or decreased likelihood to remain in the military.

The information used to assess the extent to which various initiatives had improved peoples' quality of life was gathered through administration of a quality of life survey that was given to over 12,000 CF members in February, 2001. Almost 4,000 responses were received, representing a return rate of approximately 35%. The results were representative of the CF population for gender, rank, and base, however, Air Force personnel were over-represented, and Army personnel were under-represented. Consequently, the overall means throughout the report were weighted by CF element to make the results more externally generalizable.

The results outlined the relative success of these initiatives in affecting the QOL of CF members. For the purposes of this group, insight into these areas was obtained through two questions that were asked for each initiative. The first question asked the respondent how important this initiative was to enhancing the QOL of CF members. This question provided some insight into the relative importance of each of the initiatives and, more importantly, allowed the Project Management Office (PMO) QOL access to more concrete information that will help determine the initiatives that should receive top priority in the future. Additionally, it may provide an idea of which cluster of initiatives (i.e., QOL pillars) is most critical to enhancing the QOL of CF members and their families. The final question was the most direct indicator of the effectiveness of the initiative as it asked the member to rate his/her satisfaction with the initiative. Together, these questions along with one other about awareness of the initiatives provided a comprehensive review of the initiatives that had been implemented by the PMO QOL at the time of the survey and provides direction for the way forward.

There were a number of initiatives to improve the pay and benefits of Regular and Reserve Force personnel. The most significant set of actions were a series of pay raises that took place between 1998 and 2001, the most significant of which took place in 1998. While no formal assessment was conducted on this issue, related research provides conflicting information. During focus groups on why people leave the military people were asked what issues would lead them to leave the military. Pay was discussed as an issue in the sense that when people felt overwhelmed with work and extra responsibilities, they believed that their pay was not sufficient. Overall, they did not report problems with pay. On the other hand, one of the questions on the Quality of Life Survey asked members and spouses to name the three most important areas that the Canadian Forces should change, modify or adjust in order to improve theirs and their families' quality of life. The most important area mentioned by both groups was a pay increase.

Generally, the respondents viewed all of the initiatives developed and implemented by the Project Management Office (PMO) QOL as at least somewhat important. However, the most important initiatives[2] according to this sample of respondents were the:

a) **Post Living Differential Program** – stabilizes the cost of living of CF members and families with respect to regional differences to ensure that they enjoy a relative and predictable standard of living no matter where they serve); and

b) **Compassionate Travel Assistance** – to provide transportation at public expense for regular force members and their spouses due to the serious illness or death of an immediate family member of the CF member or spouse.

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[2] Responses on the **importance** scale were scored as follows: 1 = Not at all important; 2 = Unimportant; 3 = Somewhat unimportant; 4 = Neutral; 5 = Somewhat important; 6 = Important; 7 = Very important.

The lowest rated initiative in terms of importance was the second language-training program for spouses. Other examples of some of the initiatives that were assessed include:

a) Provision of emergency childcare services when short notice deployments are announced;

b) Provision of the Family Care Assistance Program. This gives financial assistance to help offset family care costs that the member pays that are in excess of those normally paid;

c) Use of the housing relocation service;

d) Introduction of the Military Quarters Repair Program (housing);

e) Creation of operational trauma and stress support centers;

f) Providing employment assistance to spouses when families move to help them find jobs and maintain qualifications;

g) Improving access of CF programs and services in peoples' language of choice; and

h) Numerous initiatives aimed at improving pay and benefits (e.g., acting pay, pension reform, special service allowances, overtime).

In terms of satisfaction[3] with the various programs, unfortunately, although almost 4,000 surveys were returned, on average, a very small number of respondents rated their satisfaction with the programs. This should not be seen as surprising as these programs were very recently implemented and members may not have been aware of the services nor had an opportunity to use them. Nonetheless, respondents did not view any of the programs as more than somewhat satisfactory, raising a cause for concern.

A number of initiatives from the CF Retention Strategy Action Plan relate to influencing individuals to remain in the CF. Firstly, the organization that conducts most of the training within the CF was directed to review the entry-level training philosophy and practices in their schools to ensure that the emphasis was on individual development, rather than selection, and that military socialization built commitment rather than tested it.

Secondly, there was direction to complete research on the re-organization of military occupations to:

- Be operationally effective in meeting its defence mission, now and well into the future;

- Manage the world of military work more cost-effectively; and

- Make the CF an "employer of choice" by offering a rewarding career with options.

Based on the results of this research, there was further direction to develop ways to eliminate rank stagnation (personnel stuck in the same rank for long periods of time due to systemic recruiting or retention policies that had been implemented years earlier) present in some occupations.

Thirdly, there was direction for high priority to be given to addressing the quality of life issues addressed from the SCONDVA hearings that were previously discussed. Fourthly, there was direction that current and recently expanded educational upgrading programs and opportunities were to be advertised more publicly. Fifthly, there was direction to develop appropriate means for communicating the "goodness" of the CF pay and benefit package to members.

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[3] Responses on the **satisfaction** scale were scored as follows: 1 = Completely dissatisfied; 2 = Dissatisfied; 3 = Somewhat Dissatisfied; 4 = Neutral; 5 = Somewhat satisfied; 6 = Satisfied; 7 = Completely satisfied.

Finally, there was direction concerning the application of policy in the individual case. If the CF genuinely hope to become an employer of choice, there was a need to establish and maintain a culture in personnel administration that makes all members feel that they have received the kind of treatment that an employer of choice would provide – prompt, fair, and considerate of their interests. Admittedly, there are many circumstances in which decisions and actions are constrained by rules and regulations, but there are also lots of situations, which afford considerable opportunity to be creative in the solutions to individual problems. Therefore, when an administrative decision that affects an individual member is being considered, a final check on the rightness of the decision should be given in the form of the following question: "What would an employer of choice do?"

With the exception of the SCONDVA hearings discussed earlier, there has been no evaluation of these initiatives from Retention Strategy Action Plan.

2B.4.2   Organizational Initiatives

Organizational initiatives should not be confused with the organizational policies that were just discussed. Those policies were designed to improve peoples' quality of life and to encourage them to remain in the military. The organizational initiatives discussed in this section refer to existing and new monitoring activities to assess the level of and reasons for attrition. Specifically, there is an initiative that examines reasons for leaving across all occupations in the military and that looks at specific occupations. In addition, specific policies have been revised to directly and indirectly encourage people to remain in the military longer.

These initiatives originate from the CF Retention Strategy ADM (HR-MIL) Group Action Plan (2001). One of its key elements is direction that a tri-level division of responsibility for monitoring attrition and developing corrective retention measures within the CF be implemented. Under this approach, an organization will be responsible for managing CF-wide attrition, another will be responsible for managing occupation-specific attrition, and Unit Commanders will be responsible for managing unit-level attrition. Inherent in this division of responsibility is the idea that retention is a leadership responsibility and that every commander, supervisor, and staff member must do his/her part.

Looking at national -level attrition, the CF has been administering a questionnaire to retiring personnel to determine why they were leaving. An analysis completed in 2001 (Lucas) revealed that the top three reasons people chose for leaving the military were:

1) "I am taking advantage of my pension and potential civilian salary" (8.3% or 783 responses);

2) "I am going back to school" (6.4% or 599 responses); and

3) "I want to increase my family stability by establishing roots in the community" (6.3% or 596 responses).

Of interest, 82% of those who chose the item about going back to school were less than 35 years old and 65% had less than 9 years of service. 78% of those who chose the option of taking advantage of their pension had more than 20 years service.

The questionnaire used to gather this information was developed in 1992 and has recently been revised to better reflect the changes in the Canadian Forces described in the introduction. Along with this survey, an exit interview is being developed to allow Commanding Officers to assess reasons for leaving of subordinates that might be unique their units. No data has been gathered using these instruments.

To examine attrition in specific occupations, an initiative called the Retention Intervention Process (RIP) and was developed. It was established as a monitoring system to analyze trends in total and voluntary attrition in the Regular Force. Specifically, it is meant to examine the occupations that were experiencing significant attrition. Its benefit is that it can analyze attrition patterns and identify problems as they occur in very specific occupations. Occupations are analyzed in terms of the demographic breakdown of where the attrition is occurring as well as examining any trends for why people in those occupations may be leaving.

This initiative filled an outstanding gap with retention in the Canadian military context. Attrition, relatively speaking, is low. Total attrition is around 6% while voluntary attrition is about 4%. Attrition patterns are linked to occupation and tenure. Some non-commissioned member (NCM) occupations suffer nearly all voluntary attrition during the early career years. While attrition levels are similar for Officers and NCMs, leaving patterns vary. Universal retention strategies are not the panacea for these retention issues. Healthcare, firefighter and administrative occupations have been analyzed as well as an analysis of total Canadian Forces attrition (Carrick and Currie, 2002; Currie, 2002; Carrick, 2003; Currie, 2003a; Currie, 2003b; Currie, 2003c). The focus of the RIP is on voluntary leavers where retention initiatives can have an effect.

The results from the analysis the 2002/2003 data describe what information can be obtained using the RIP. Early career release continued an upward trend with 40% of all NCM voluntary attrition occurring by year 3 and 30% of all Officer voluntary attrition by year 8. While this is significant, it needs to be put into the context that the first NCM engagement lasts three years and the first Officer engagement lasts nine years. They are free to choose to leave or to sign up for another engagement. Thus, strictly speaking, this is not unforecast attrition. However, more importantly, both groups experienced an increase in both voluntary and total attrition in year 0. Twenty percent of the NCM *total attrition* occurred by day 365. In other words, over 600 NCMs were released before their 1st anniversary of service. The Officer Corps also suffer 20% *total attrition* by day 365, accounting for another 146 members. On the other hand while 590 NCMs voluntarily left in year 0, only 91 voluntarily left at or after the 35 year point. For Officers 146 left in year 0 and 72 left at or after year 35. Another set of organizational initiatives that have taken place are polices that have been revised to encourage people to stay in the military longer. An organizational method to retain people longer was to change the terms of service under which military personnel are employed. Table 2B-1 describes how service contracts were structured in the military before the rules were changed. Table 2B-2 describes the new policy about how long and in what form personnel serve in the military.

Table 2B-1: Service Contract Structure

Term of Service	Pre-April 2005
Non-Commissioned Members	
1) 1st Basic Engagement	3 years service
2) 2nd Basic Engagement	3 more years service
3) Intermediate Engagement	20 years service
4) Indefinite Period of Service	Up to age 55
5) Continuing Engagement	Five year term
Officers	
1) Short Service Engagement	9 years service
2) Intermediate Engagement	20 years service
3) Indefinite Period of Service	Up to age 55
4) Continuing Engagement	Five year term

Table 2B-2: Length and Type of Service

Term of Service	Post-April 2005
Non-Commissioned Members and Officers	
1) Variable Initial Engagement	3 – 9 years service
2) Intermediate Engagement	25 years service
3) Indefinite Period of Service	Up to age 55
4) Continuing Engagement	Variable length up to 5 years

It can be seen that the length of service of contracts have increased in almost all cases. CF members were most interested in the extension of the Intermediate Engagement from 20 years' service to 25 years' service. If people were offered contracts beyond their initial engagements, the new policy encouraged them to stay for five years longer than the previous Intermediate Engagement. The encouragement took the form of a concurrent revision of the pension plan to make it more attractive to stay those extra five years than it was previously.

An administrative change to service regulations designed to address a human rights issue has given the added benefit of increasing the amount of time people can serve in the military. For those members enrolled on or after 1 Jul 04, their Compulsory Retirement Age (CRA) has increased from age 55 to 60. It means that they can serve until age 60 instead of at 55. For those members serving as of 1 Jul 04, their normal (CRA) was 55. They can now select to retire at age 60. While this change took place to address another issue unrelated to retention, an indirect consequence of the policy will be to allow more people to serve longer in the military.

2B.4.3   Summary

Retention strategies have taken the indirect form of individual initiatives that were designed to positively influence members' quality of life. They have also taken the form of monitoring activities to enable the military to identify where attrition problems are occurring and to attempt to correct them. Finally, organizational policies were developed to encourage military personnel to remain in the military longer. In the first two cases, mechanisms are in place to assess strategies and describe the population of those leaving. With additional information collected the effectiveness of and need for current and new strategies can be determined.

2B.5   CONCLUSION

Recruiting and retention problems have been assessed in the CF and strategies have been put into place to respond to these problems. There has been an effort to identify those occupations within the CF that are facing a shortage of personnel and recruiting and retention efforts have been targeted to those occupations. There has also been a shift from recruiting unskilled applicants to recruiting skilled applicants who may have civilian qualification equivalencies and can fill the occupations as quickly as possible. Retention efforts also focus on occupations with high attrition rates. The recruitable population is expanded and includes ex CF members, older applicants who may want to better their pension, individuals with civilian qualification equivalencies, and existing CF members transferring to occupations with shortages in staff. Both recruiting and retention strategies attempt to address the concerns of members who leave the CF. For example, the issue of pay is addressed in a recruiting strategy offering recruiting allowances. The same issue is addressed in a retention effort passing information to members that CF pay is comparable to civilian pay for equivalent work. The recruiting and retention strategies of the CF are fairly recent. Though they've shown immediate positive impacts, the long term effects of the strategies will be determined in the future.

2B.6   FUTURE STRATEGIC FOCUS ON RECRUITING AND RETENTION

Future formulation or amendments of recruiting and retention initiatives will follow the guidelines presented below. In other words, when additional retention or recruiting or retention strategies are being developed, they will follow one or a number of the elements below. They are contained in the Military HR Strategy 2020 Plan (2002). HR 2020 derives its own HR strategic objectives, from which all future HR policies, programs and projects will develop. This strategy has been developed to apply to both Regular and Reserve components.

2B.6.1   Recruitment

The Recruitment Strategy is a major initiative to correct critical shortages in the near and midterm. The critical elements of the strategy are:

1) Improved advertising and attraction by "branding" the CF as an "employer of choice" and targeted attraction to critically short occupations.

2) Increased internal communications to serving members.

3) Establishment of effective relationships and partnerships with educational institutions and guidance counselors.

4) Use of recruiting incentives on a selective basis to improve attraction into critically short occupations.

5) Use of the full range of entry programs, including the use of component transfer, occupational transfer and an increased use of programs that recognize civilian skills and training to reduce training requirements.

6) Improved efficiency of recruiting procedures and improved basic training that reduces training losses.

7) Focus on a diverse applicant pool.

Department of National Defence. (2002). Military HR Strategy 2020 – Facing the People Challenges of the Future. Ottawa, ON: Department of National Defence.

2B.6.2   Retention

Many of the components of the retention strategy are included in the other themes of well-being, professional development, leadership, and communication. Key to the strategy are initiatives that strengthen the social contract. Besides living up to our obligations to provide fair pay and tangible benefits, security, equitable treatment and support, retention is to be seen as a leadership responsibility consistent with building a retention culture. The CF is developing recruitment and retention strategies that will position a military career as a profession of choice. The Retention Strategy Tracking Plan will support the successful sustainment of our retention strategies and contribute to the overall communication and accountability efforts. In an effort to continue the retention strategy the CF will:

1) Develop flexible terms of service and employ contemporary work practices to meet a broader range of organizational and personal needs and to attract and retain "skilled" workers based upon Canadian demographic trends.

2) Create career fields that enhance career flexibility through transition assistance and choice, and enable the rotation of personnel, providing respite from operational tempo and access to developmental opportunities.

3) Improve participation in employment and career decisions while improving the match between personal aspirations and employment. This could involve advertising available positions and inviting internal application based upon a merit system.

4) Maintain policies to ensure a harassment free environment and continued emphasis on diversity of all forms.

5) Develop fair and effective performance evaluation procedures that motivate, provide performance feedback and developmental opportunities, that apply at the individual and team level.

6) Maintain effective mechanisms of voice and conflict resolution processes that resolve issues at the lowest level and offer efficient recourse to those who believe they have been treated unfairly.

7) Provide members with adequate spiritual, medical, dental, social and other support in times of both war and peace.

8) Develop policies that support military families as an essential contribution to operational effectiveness and the maintenance of morale. Special effort will be taken to ensure the support and care of military families during operational deployments and the re-integration of personnel after deployments.

9) Recognize the value of exceptional performance through a system of commendations, honours and awards, the significance of which must be clearly recognized and viewed with credibility.

Chapter 2C – RECRUITING AND RETENTION OF MILITARY PERSONNEL: GERMANY

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2C.1   INTRODUCTION

Within the recent past, major changes took place, which significantly affected the German Federal Armed Forces (GFAF). Examples are the end of the Cold War, the reunification of the two German parts, the integration within the European Union (EU), peacekeeping operations and the fight against international terrorism. Embedded in the UN, NATO and the European defence policy, new strategies for reshaping are necessary in order to meet these demands. With respect to this, the GFAF has already reacted to these new tasks by adjusting training, service structure, equipment and by downsizing.

With respect to the new strategy, the peacetime strength of the GFAF military personnel will be downsized significantly in combination with a change of the service structure. The previous Services Army, Air Force, Navy and Health Support will be jointly incorporated into three Forces: Rapid Reaction, Stabilization and Support. The Rapid Reaction Force is based on highly trained troops for rescue and evacuation operations with war fighting capability. The Stabilization Force carries out peace keeping operations and the Support Elements take the other Forces into the areas of operation and support and train them. In order to fulfill their tasks, these soldiers must be able to carry out connected operations by means of high-tech equipment.

The German MOD is the providing authority with respect to military personnel. It has the general responsibility for providing temporary-career and regular officers, NCOs and enlisted personnel. It also issues joint regulations on personnel-related policy matters and exercises functional supervision of all the personnel management agencies in the armed forces.

- The supreme legal foundation of the GFAF is based on the constitution. One of the points it specifies is that every decision concerning assignment and promotion must be made on the principle of equal opportunity, and solely on the basis of aptitude, qualification and merit.

- The GFAF requires a specified number of soldiers with the required aptitude and training, at the required time and in the specified assignments.

- The so-called "Personnel Structure Model" (PSM) fixes the peacetime strength of soldiers and puts them into different categories in accordance with the political specifications regarding size, defence structure and the financial limits.

- The legal status of soldiers is as follows:
  - Conscripts (serve under the Compulsory Military Service Act 9);
  - Temporary-career service personnel (enlist voluntarily);
  - Regular soldiers (start as temporary-career service personnel, can be enlisted as regulars later on); and
  - Reservists.

2C.2   RECRUITING

2C.2.1   Introduction

In order to fulfill the filling of demand, selection and classification of applicants/conscripts per annum is carried out for the different groups of soldiers: A Test Center for Applicants for Commissioned Service, NCO-Recruitment Centers and District Recruiting Centers (conscripts).

The selection & classification (S&C) procedures and the criteria differ for these three groups. In general they have to undergo medical checks, aptitude test batteries and assessment centers (the latter not for conscripts).

2C.2.2   Recruiting Issues/Problems

Over the last years the recruiting situation of the GFAF has depended on the status and the function of the soldiers. The averaged filling of demand percentages for the last years have been quite good besides few exceptions (NCOs, special functions). Conscription on the one hand contributes to this positive result (at least 33% of the NCOs/Officers formerly have been conscripts). On the other hand, since 2001, the armed forces were almost completely opened for women (NCO and Officer, not conscripts), which additionally relieved the recruiting issue.

2C.2.2.1   Recruiting of NCOs

2C.2.2.1.1   Description and Root of Problem

As mentioned above, the annual filling of demand for the NCOs is quite good, but not optimal. The comparatively better situation for the officers could be due to the status of the NCOs and their opportunities.

2C.2.2.1.1.1   Current Efforts/Policies to Overcome the Problem

In 2002, the MOD started an attraction offensive and within this a program for NCOs called "new career paths". Applicants now are given the opportunity to enlist for one out of the three possible career paths (private first class, sergeant and now also staff sergeant) right after of the selection procedure in one of the recruitment centers. The career path exclusively depends on the selection and classification results. Further more the pay and the opportunities for vocational advancement during the term of enlistment have been improved and the enlistment period for privates first class has been extended.

2C.2.2.1.1.1.1   Effectiveness of Effort/Policy

In 2002 the number of applications was best since 1986. It increased at ca. 40% from 2001 to 2002 (not due to female applicants). Besides a drop in 2004, this positive effect most likely stems from the measure "new career paths" and still is ongoing. The problem with respect to privates first class is relieved.

2C.2.2.1.2   Proposed Alternative Solutions

The selection & classification (S&C) procedure was renewed. Validation studies will show, which instruments do well and whether additional instruments are necessary. Also an expert system will be implemented in order to optimize the S&C procedure. Concerning classification a program like "Smart Classification" from

LtCol Psych F. Lescreve (Belgian Defense Directorate of Human Resources – Accession Policy) shall be introduced in order to classify groups of applicants by means of mathematical optimization.

2C.2.2.2 Recruiting Concerning the Flight Service (NCO and Officers)

2C.2.2.2.1 Description and Root of Problem

As mentioned above, the annual filling of demand for the flight service could be better. This function is highly attractive with a high number of applicants, but since the medical and psychological demands are high, not only the number of applicants, but much more their quality is crucial.

2C.2.2.2.1.1 Current Efforts/Policies to Overcome the Problem

The marketing was extended and the S&C procedure for the flight service was improved.

2C.2.2.2.1.1.1 Effectiveness of Effort/Policy

The filling of demand for the flight service is relieved.

2C.2.2.2.2 Proposed Alternative Solutions

The S&C procedure for the flight service will be further optimized.

2C.2.3 Summary Concerning Recruiting

Altogether the recruiting situation in the GFAF is quite manageable, except for few special functions. There sub-optimal recruiting situation for NCOs looks much better now due to the concept of "new career paths". This almost acceptable situation is also partly due to conscription as at least one third of the NCOs/Officers formerly have been conscripts. The increasing percentage of female NCO/Officers additionally will relieve the retention issue.

2C.3 RETENTION

2C.3.1 Introduction

The above mentioned filling of demand numbers vary from year to year in order to maintain the number of adequate military personnel. The GFAF provides attractive vocational trainings for NCOs and attractive course of studies/training for officers. In order to maintain the turn of this investment, different measures have been carried out to keep turnover rates low. For this purpose contracts include fines for quitting prior to the term of enlistment. Also questionnaires have been used to gather information what soldiers (on duty or retired) think about and expect from the GFAF concerning: attitude, climate, contentedness, command, social environment, motivation, etc.

2C.3.2 Retention Issues/Problems

Retention problems occur with respect to officers taking their course of studies (in general at one of the two GFAF universities). Depending on the force, the course of studies takes place during or after the officer training course.

2C.3.2.1 Officers with Course of Studies, which are of Interest for the Private Economy

Some courses of study are of special interest for private economy (e.g., computer science, (electrical) engineering). There is a risk that these students contract out, when private companies are interested in them.

2C.3.2.1.1 Current Efforts/Policies to Mitigate the Problem

Not clear.

2C.3.2.1.1.1 Effectiveness of Effort/Policy

Not clear.

2C.3.2.1.2 Proposed Alternative Solutions

Enhancing commitment with GFAF.

2C.3.2.2 Officers who Fail their Course of Study

The courses of studies are based on trimesters instead of semesters and are insofar quite demanding. Although the learning situation for the students is quite comfortable, a significant percentage of them fail.

2C.3.2.2.1 Current Efforts/Policies to Mitigate the Problem

S&C will be optimized in order to predict those students with higher probability of failure. Based on this, courses of study will be denied or extra training will be offered at an early stage.

2C.3.2.2.1.1 Effectiveness of Effort/Policy

Not clear.

2C.3.2.2.2 Proposed Alternative Solutions

With respect to validation studies, criteria for the courses of studies shall be more precisely defined and corresponding predictor variables be operationalized. Emphasis should also be put on personality factors like motivation.

2C.3.3 Summary Concerning Retention

Altogether the retention situation in the GFAF is quite manageable with minor exceptions.

2C.4 CONCLUSION

The problems of the GFAF concerning recruiting and retention are quite manageable. The above mentioned countermeasures offer a chance to optimize this in the future. In order to maintain this momentum, it is necessary to be prepared for effects like prospering economy, upcoming "XXL"-generation and extension of peace keeping operations. In anticipation of this, ongoing research is necessary to overcome current obstacles and to mitigate future ones.

Chapter 2D – RECRUITING AND RETENTION OF MILITARY PERSONNEL: THE NETHERLANDS

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Note for the Reader:

The first part stems from 2003, in 2006 this chapter is extended with an update. This gives the reader an extra opportunity understanding the dynamic nature of recruitment and retention issues and its dependency on other factors like for instance labor market conditions.

2D.1   AN INTRODUCTION TO RECRUITMENT AND SELECTION

In the early 1990s, due to the fall of the Berlin Wall and the end of the Cold War, it was apparent that it had become socially and politically unacceptable in The Netherlands to deploy conscripts in peacekeeping operations. Combat-ready units in the Dutch armed forces consisted partly of conscripts, partly of professional soldiers. Only professional soldiers and volunteering conscripts could take part in a (non-article-V) mission outside NATO territory, which caused some difficulties. At the same time the awareness of social inequality grew: only 1 out of every 5 young men was drafted, and female citizens were excluded from the conscript system. Qualitative improvements (to be obtained by reorganization), concentration of tasks and co-operation between army units required a smaller and more flexible all-volunteer force. This force was established in 1996.

To sustain this all-volunteer military force of approximately 52,000, the Dutch Defence Organization each year needs to take on approximately 9,000 military personnel with fixed term contracts or indefinite contracts. To reach this goal, about 1.6% of the young people that finish school each year have to show interest in a job with the armed forces, since it is known that about 1 in 4 of these will eventually apply and be appointed. This requires a substantial structural recruitment effort that each Service conducts individually. The main tools used are television commercials, advertisements in papers and magazines, an Internet site, direct mailing, "open days" and school visits. The Army also has a network of Recruiting Offices. For interested persons that are too young to join as a soldier, special civilian preparatory school trajectories are offered in which civilian education is combined with a small amount of elementary military training. In general, after interested youngsters have contacted one of the Services, they receive detailed information on the job possibilities the Defence Organization is offering and on the recruitment and selection procedures. To this extent there are many brochures available and also some videos that try to present a realistic job preview. A point of contact is available for answering any questions they might have.

Once someone applies for a job in the armed forces the selection process starts. Firstly, it is checked that the candidate comes up to some basic requirements, like being a Dutch citizen, being between the age of 17 and 35 for fixed term contracts, having the required school diploma's, etc. If the candidate meets these requirements, he receives an invitation to undergo a psychological assessment, medical examination and a physical fitness test at the Defence Institute for Examination and Selection in Amsterdam.

The content and the requirements of the selection process depend on the sort of candidate (civilian or already military), the category (soldiers/corporals, NCOs, Officers), the service, and the desired branch or job. In general, from a psychological point of view, it is checked that military personnel:

- Are emotionally stable and well balanced;

- Are able to cope with long term stress and emotional strain;

- Are able to work in a team;

- Are self-disciplined and responsible;

- Can adapt to different circumstances and situations;

- Have sufficient communicative and social skills;

- Are willing to carry arms and be deployed around the world;

- Are realistically motivated; and

- Have enough mental capacity to pass military training.

The tools used to assess this are the intelligence test GATB (only in case a candidate does not have the necessary school diplomas), the Dutch Personality Questionnaire (only used contra-indicative) and an extensive interview (2 hours including administrative wrap-up).

After the candidate successfully completes this part of the selection process (this takes in average 4 weeks), the final stage consists of a security check. After this, candidates can be offered a contract in one of the services. All in all, the average recruiting and selection cost for each appointed candidate is approximately 6,000 Euro.

2D.2   RECRUITING PROBLEMS AND THEIR MAIN MEASURES

2D.2.1   Problem

The first years after establishing an all-volunteer force in 1996, it didn't seem a big problem to appoint the necessary amounts of military personnel each year. At that time there were many former conscripts who were interested in staying on as a soldier with a fixed term contract, but after 1998, this favorable situation changed. The economy was developing very well and in general it was hard for the Defence Organization to compete on the labor market. And at that time the organization didn't have a lot of recruiting experience either. After all, it had been easy to meet manning needs by drafting people. The only service that didn't have any recruiting problems was the Military Police.

An additional challenge was presented when the Dutch Parliament strongly suggested that youngsters under the age of 18 should not serve in the Armed Forces. Because of the age at which young people finish their lower civil education, a substantial amount of soldiers was 17 when appointed. And it was still necessary for the Defence Organization to find ways to bind these people before they choose another profession.

So, the Armed Forces had to figure out ways to improve the intake of military personnel. A lot of research was conducted to establish the image of the Armed Forces, the relative position on the labor market, the areas of interest of young people, the reasons why people who showed initial interest in a military contract didn't apply, etc. Based on this research, but sometimes also based on interesting assumptions, measures were taken.

Though it's not always clear what specific measure had which specific result, it is clear that there has been a positive overall effect. In 2000 there were 16,587 people that applied for a job with the armed forces; in 2001 the number was 19,055; and in 2002 there were 24,916 applicants. The following will now go into the most important measures taken.

2D.2.2   Measure 1

The research clearly showed that the pay and benefits package was relatively unattractive. With just a little exaggeration it can be stated that it was more attractive to work in one of the better supermarkets than working in the army as a soldier. To solve this it was decided to improve the pay and benefits package substantially by increasing wages of all military personnel since 1999 by 14.8% (in 4 steps) and in addition introducing an extra military rank for soldiers (Army and Air Force) that raises wages up to 15%. Cadets of the Military Academies now receive normal wages instead of the "pocket money" they used to get. For military personnel with indefinite contracts it became possible to opt for a 36-, 38-, or 40-hour working week (with favorable financial consequences). Many other measures were also taken, like a bonus system, free driving lessons for soldiers in the Dutch army brigade in Germany, etc. All in all, in the period 1999 – 2003 pay and benefits measures were taken that represented a value of 20.6% of the total personnel cost.

It has not been possible to really assess the effect of these pay and benefits measures. The Defence Organization has been increasingly successful in recruiting, but since many measures were taken, it is not clear what the separate effect of the pay and benefits measures were. It is clear however that the bonus and driving lessons system for soldiers in the Dutch army brigade in Germany has solved the recruitment problems there. Also, research in 2002 showed that 75% of the Dutch people agreed that "the army is offering very good pay and benefits."

2D.2.3   Measure 2

Since the aim is that eventually 60% of the military population should have fixed-term contracts, the Defence Organization felt responsible for the employability of people. It was also considered an important recruitment tool, to make clear to youngsters that the chances on the civilian labor market were very good after having served a term in the armed services. Therefore, many possibilities were created for soldiers to take civilian courses and prepare for civilian diploma's, at no cost for them whatsoever. Also, a big effort has been made to certify all kinds of military courses in order for civilian employers to acknowledge the acquired skills and knowledge.

The Defence organization has been able to get the message across to the civilian community that it offers many attractive possibilities to develop oneself. Recent research (2002) has shown that 82% of the Dutch people agree that "the army offers excellent possibilities to develop yourself."

2D.2.4   Measure 3

A further addition to the recruiting tool set was the introduction of Familiarization Weeks for the Army. After a pilot project in 1998, eight of these weeks were organized in 1999 in which 362 young people participated. Over several days and nights, participants were introduced to the military profession by bivouacking, information presentations, and a variety of military activities. The objective was to positively influence interest in a military career, the intention to apply, and ultimately application behavior.

Evaluation of the program has shown that the number of applicants from the participating group was significantly higher than from the control group (the general population). In addition, applicants who had

participated in a familiarization week program were more successful in the selection process than other applicants. The familiarization week has proven to be an effective tool for motivating doubters to apply for a job with the RNLA. Despite this success, further implementation has been suspended because of the extensive (additional) burden it places on the training centers.

2D.2.5   Measure 4

Research showed that 12% of the 16-year olds with lower education are very much interested in a career with the RNLA. This figure drops to 6% by the time they the age of 21. So, from a recruiting point of view it's important to try and bind them very early, before they lose interest or choose another career path. However, 16 is too young to apply and there also was the strong wish from Parliament not to appoint anyone under the age of 18 whereas about 27% of the soldiers are 17 at the time they are appointed. To solve this, the RNLA offers a so-called Orientation Year. This is a civilian Upper Secondary Vocational Education at regional training centers across the country. The year consists of regular civilian courses, with 20% of the curriculum consisting of extra sports, military bivouacs, and information about the RNLA. It is still possible to be appointed at the age of 17.5, but only as an "aspirant-soldier", who does not have a regular function, cannot carry weapons, and is not available for deployment until he or she turns 18. This was an acceptable compromise for Parliament.

The Orientation Year has been a success. About 90% of the youngsters that start the year also finish it and about 65% are appointed to the Defence Organization. Also, at 30%, the Orientation program manages to recruit more women than by any other means. Furthermore, early turnover during initial military training among this group is much lower than among those without an Orientation Year background. Because of this success, the aim is to eventually recruit 75% of the necessary number of soldiers for the RNLA by means of the Orientation Year.

2D.2.6   Measure 5

In addition to its own Recruiting Offices, the RNLA has opened annexes in eight civil Job Centers. The idea behind this is to go to the customer rather than waiting for him or her. In addition to the annexes, RNLA openings are posted in more than 100 civil Job Centers.

The results are encouraging. Evaluation has shown that Recruiting Offices with an annex at a civil Job Center have significantly more recruiting success than Offices that do not.

2D.2.7   Measure 6

Until the year 2000, rejected applicants could only reapply after one year; very few did. Since 2000, applicants who fail the physical tests are given a second chance to prove themselves in terms of physical strength and stamina. After rejection they receive a personalized training recommendation from the Defence Organization. They can take this recommendation to a fitness center in their neighborhood and they can train for three months at the expense of the Defence Organization before taking the tests again.

During the pilot program in 2000, a group of 320 people who had failed their fitness test were sent home with the personalized training recommendation. After three months, 70% returned to re-take the test, and 70% of those were now successful. That represents a success rate of 50% of the original group that had been rejected before. The cost for three months training at a fitness center averages EUR 140.

2D.2.8   Some Smaller Measures Taken

A fixed term contract was raised from 30 to 35. This had mainly a positive effect on the number of personnel that re-enlists. Also, policy was developed to enable the re-entry of former military personnel that had worked on the civilian labor market for some time and women that had left the armed forces for family reasons.

2D.3   RETENTION PROBLEMS AND THEIR MAIN MEASURES

2D.3.1   Problem

It is obvious that recruiting people is essential for an organization, but holding on to them until the end of their contract is at least as important. And since 1998 this has been a major problem for the armed forces, especially the early turnover during initial military training. This kind of turnover was 31% for the RNLA in 1999. Most of the Dutch research and measures taken in the last few years has been focussed on reducing this early turnover.

Each soldier starts his career with the Dutch armed forces with a general military training period. After the transformation to an all-volunteer organization, this was a period of three months for most of the soldiers. For the fixed-term contractors of the army, which is twice the size of Air Force and Navy, this military training is conducted in four special training battalions. After this basic military training period, soldiers receive additional, more branch- or job-specific training.

Research in the RNLA showed that fixed-term contractors leave military training early at their own request for a combination of reasons. The most frequently mentioned reasons in 1999 were "military life doesn't suit me" (46% of the soldiers that dropped-out mentioned this), "homesickness" (28%), "circumstances at home" (24%) and "disappointing salary" (24%). A few clear differences could be established between men and women. Women more often cited "medical reasons" (27% versus 14%) and "physical load" (29% versus 12%). Analysis showed that the early dropouts could be divided into five clusters of reasons or "profiles", which made it possible to try and put specific measures in place for certain groups of people.

The main measures taken will be described hereafter. It can be stated that although early turnover is still rather high, the measures taken were rather successful. For the RNLA, the early turnover during initial military training has reduced from 31% in 1999, to 28% in 2000, to 24% in 2001, to 23% in 2002. Although it is expected that the turnover rate will eventually drop below 20%, it is believed that it is normal to have a certain amount of early turnover among young people. This has not so much to do with the training itself, but with the fact that young people don't really know what to do with their lives yet. So they try out several areas of work, until they find something that suits them.

2D.3.2   Measure 1

Research clearly showed that soldiers were rather dissatisfied with their pay and benefits package, especially after a substantial salary cut in 1998. As described earlier, this package was indeed rather unattractive compared to the civilian labor market. It should also be mentioned that in 1998 the salaries of soldiers were cut by about EUR 136 per month. Since 1999 extensive measures were taken that comprised of 20.6% of the total personnel cost.

As a result of these measures, the proportion of training dropouts in the RNLA who indicated that few to none of their employment conditions expectations were met has declined from half to one-third. The salary is now

considered to be acceptable to most, but this depends on age. Seventeen and eighteen-year-olds have a more positive opinion of their salary than their 19, 20 and 21 year old colleagues. Soldiers over 21 are as positive as their youngest colleagues. Also, the rate of soldiers that thought they could earn more outside the Defence Organization slightly dropped from 74% to 68%.

2D.3.3   Measure 2

Although the general assessment of the basic military training in the RNLA was satisfactory, research showed that there were a number of aspects that may have increased the dropout rate. For instance, more than a quarter of those leaving military training indicated that they considered the pace of the training too high, as opposed to only 5% of those who continued their training. With respect to the physical load, those who dropped out indicated more frequently that the aspects in question were "too difficult" of "too fast". The greatest difference concerned "field service/exercises", which 24% of the dropouts considered too difficult as opposed to only 3% of those who continued their training.

Analyses of the training showed that the schedule was indeed very busy, maybe too busy for some. After assessing the options, the army Commander in Chief decided to extend the basic military training period from three to four months and use some of the extra time to relieve the schedule, especially in the evenings. Also, a special Introduction Period was designed for the first two weeks, thus allowing trainees to more gradually become accustomed to the transition from civilian life to the RNLA culture and try to meet the trainees' expectations as much as possible. Remedial platoons were introduced in the training battalions to enable trainees to recover from injuries and to physically develop to the required level. Furthermore, the quantitative and qualitative staffing of instructor's positions became a priority.

Because of the extension of the basic military training period, the study load, evening workload and physical stress during field service are now all rated as considerably less by both dropouts and those who continue training. Also, the tempo of the training is now more often considered to be appropriate by both groups. A quarter of the dropouts however still has difficulties with the evening workload and one in three considers the extension of the training to have resulted in it becoming too long. The fact that they now have to deal with the workload for an extra month is an issue that must be given attention. Furthermore, a very surprising result of the evaluation of this measure is that the extension has had no positive affect whatsoever on the rating of the training as a whole.

2D.3.4   Measure 3

One of the reasons for early dropout was considered to be that expectations of soldiers in training were not sufficiently met. To solve this, firstly the training itself was altered, especially the Introduction Period in the first two weeks. Attention was paid to more practical aspects like sleeping in tents and the use of climbing walls – but secondly, the information flow to the candidates was improved, and more importantly, in 2001 a realistic information video on the basic military training in the RNLA was developed in order to try and influence the expectations themselves.

Research showed that the introduction of the video had no effect on experiences versus expectations. This was partly due to the fact that the candidates received the video after they applied for a job. The initial expectations that they have before they apply (which are their reasons for applying in the first place) are therefore not changed by the video. The majority of the trainees were however of the opinion that the video gave an accurate impression of the reality of military training. This means that the video can have a positive effect on the "vaccination value", as it immunizes the candidates to a certain extent against the coming difficult periods of the training.

2D.4   RECENT DEVELOPMENTS IN RECRUITMENT AND RETENTION

As described in this chapter, there have been many recruitment and retention problems since 1998 and many measures were taken. However, since the beginning of 2002 the labor market situation in The Netherlands has changed significantly. It is clear that economic changes caused an increase of the unemployment figure. In 2001 unemployment was 3.3%, in 2002 it was 4% and the first half of 2003 shows a figure of 5%. Also, in the coming eight years, the number of people in the age of 15 – 19 will show an increase of 12% and the number of youngsters that finish school annually will gradually increase by 17%. This means that the recruitment situation is improving, although it will remain hard to attract technical personnel.

Also, the Dutch Defence Organization faces serious financial problems that call for very serious measures. In fact, now that the summer of 2003 is approaching, there is no recruitment problem anymore since the Organization cannot afford to appoint new soldiers and the question of retaining personnel has changed in the question of how to down-size the Defence Organization as quickly as possible. Although at this time it is not quite clear what the Dutch armed forces will look like in the year 2006, at least 10% of the population will have to go. It is very cynical that after all the efforts in the past years and the successes achieved, this will partly be in vain for the coming three to four years.

However, times will change. At some time the situation on the labor market will deteriorate again and the financial problems the Defence Organization is having right now will be solved. And at that time the organization needs to be ready to attract and hold on to large numbers of military personnel again. Therefore, the research into recruitment and retention will have to be continued, despite the current developments.

2D.5   UPDATE R&R STRATEGIES MAY 2006

2D.5.1   General Overview from 2003 through 2005

The year 2003 was an exceptional year. While previously, as a result of the tight labor market, the focus was on the intake of personnel, in 2003 the emphasis came to lie on the throughput and outflow of personnel. On the one hand, this was a result of the target reductions in the Strategic Accord of 2002. On the other hand, in the beginning of 2003, the budgeted strength came close to being exceeded as a result of an unexpectedly strong growth in the intake and a decrease in the outflow. This excess had to be eliminated in 2003.

The inflow limitation measures taken in 2003 had the effect that the positions for personnel on fixed-term contracts were not being staffed fast enough. In the course of 2004, the intake of, particularly, new personnel on fixed-term contracts needed to receive a new impulse. For this purpose, at the end of 2004, a Staffing Task Force was established, which was tasked with critically monitoring the process of recruitment, selection, appointment and initial training, and with giving recommendations on possible improvements.

The measures that were taken in 2003 and part of 2004 to limit the intake and stimulate the outflow had the desired effect. The end of 2004 saw a reversal of policy, and the activities were once again aimed at the recruitment and retention of fixed-term contractors, so as to have a fully staffed operational organization by 2007. In 2005, the bodies responsible for recruitment and selection, as well as the staffing task force, made a great effort to realize the required numbers.

2D.5.2 Recruitment and Appointment

Up until 2002, the Defence organization had to make a great effort to be able to recruit a sufficient number of military personnel. In 2002, there was a sudden reversal in the labor market. At the same time, Defence was confronted with a cutback operation, linked to which was the objective of personnel reduction.

Table 2D-1: Development of Unemployment in Percentages

	2001	2002	2003	2004
Unemployment Rate	3.3	3.9	5.5	6.4

The measures taken prior to 2003 resulted in a highly increased intake and a reduced outflow. This led to the risk of exceeding the budgeted strength in 2003. In reaction to this, the recruitment order in 2003 was reduced repeatedly over 2003 and limitations were set as to the extension of fixed-term contracts. Incidentally, the objectives with regard to the intake of women and ethnic minorities were maintained.

In 2003, the recruitment of employees was easier than in the years before. This was partly due to the successful efforts of Defence in the field of recruitment and selection, and partly to a loosening of the labor market. Because demand had decreased, however, the number of new appointments was considerably smaller than in the previous year.

In 2004, the unemployment rate was 6.4% of the labor population. The consequence for the Defence organization of this economically gloomy situation, however, is that, for the time being, the potential of candidates is adequate. For the near future, however, a shortage of manpower for specialist and technical functions is expected.

2D.5.2.1 Appointments

In the second half of 2004, the recruitment of fixed-term contractors was given a new impulse in order to eliminate the identified shortfall in the complement of fixed-term contractors. The goal here was the full staffing of the operational units by the end of 2006. This effort resulted in a considerable adjustment of the recruitment orders for 2005 (approximately 7000 new appointments) and 2006 (approximately 7,400 new appointments).

Table 2D-2: Development of Applications and Appointments

	2002	2003	2004	2005
Applications	25,000	14,000	17,000	23,000
Appointments	14,000	8,000	3,600	7,800

2D.5.2.2 Measures

The (potential) number of people interested in a job as a fixed-term contractor is determined by the number of job seekers (unemployed or not) and the attractiveness of a job in the Defence organization. A prerequisite for optimal recruitment of personnel on fixed-term contracts is an adequate supply from the labor market in

combination with name-recognition and a good image as an employer. An active approach of the labor market by Defence, by way of optimizing its visibility, will become ever more important in the years to come. Making people better acquainted with the Defence organization (for example through open days and school visits to barracks) will increase awareness concerning Defence and improve its image as an employer.

The image of Defence that is propagated outside of the organization (broad corporate image) should clearly and explicitly convey the message that Defence needs young military personnel, despite the ongoing personnel reductions in certain parts of the organization.

Extra media attention through news reports on peace operations is expected to make a positive contribution to the image of Defence prevailing with potential fixed-term contractors and "influentials."

Media attention through projects such as 'The challenge', where young people take on challenges within a semi-military context and using military materiel.

Intensive recruitment campaigns through television, newspapers, magazines, and in particular, the Internet. Those campaigns are not aimed exclusively at the target group, but also at the "influentials."

RNLA units are directly involved with recruitment. Commanders in the RNLA are made in part responsible for the result of the efforts to staff their units (i.e., recruitment and extension of contracts). This means that the units will organize more open days and information days and will increasingly support the recruitment effort with personnel and materiel.

Interested people who have dropped out at some stage in the process of application, examination, and selection, but who may still be eligible for a function in the Defence organization will be approached in an active manner.

It is currently being investigated, without bringing the quality into question, whether it is in all cases necessary to maintain the stringent physical demands for the combat posts, and whether it is possible to differentiate on the basis of the particular position. Again without bringing into question the quality requirements for each position. This could result in a higher number of suitable candidates.

An application procedure via the Internet is under development. This will improve the accessibility and speed of the application process.

2D.5.3   Selection and Selection Process Times

The Institute for Examination and Selection carries out both psychological and physical tests of applicants. This institute was reorganized in 2005 and is now split up in two support centers belonging to the Defence Personnel Services. Efforts are aimed at keeping selection process times, i.e., the period from the day when the candidate comes to take a psychological test until the moment when the candidate and his/her examination results are presented for the appointment interview, as short as possible.

In 2003, the selection process times were as follows:

- Less than 14 days: 72%
- Between 14 and 28 days: 17%
- Longer than 28 days: 11%

In 2004, the same percentages applied, but to different respective selection process times: less than 10 days, between 10 and 20 days, and longer than 20 days.

Incidentally, in 99% of the cases, the results of a medical examination could be presented to Defence Personnel Services within 10 days. The fact that these percentages are nonetheless higher is mainly the result of the candidate's wishes or those of the Service in question.

2D.5.3.1   Measures

In 2005, after consultation with the mandating authority and in order to be able to select a significantly higher proportion of the new intake and to streamline highs and lows in the supply of candidates, a number of extra functions have been temporarily made available and external partners have been contracted in support of the psychological selection as well as the medical examinations. These partners, who make use of the infrastructure and support organization of Defence Personnel Services, provide extra assistance in times of increased supply. This trial covers a total period of three years. The first experiences with this approach have been positive.

At the request of the Army Command, a new product has been introduced: the one-day or 24-hour examination. This type of examination is only possible for candidates who opt for a function with the rank of private or corporal. Presently, approximately 40 to 50 one-day examinations are made available per day. The Army Command makes use of this product in particular. Although this product costs slightly more in terms of capacity, the client is very content with it and wants to continue to use it in 2006.

At the client's request, on-site examinations have been carried out as well, at two different locations in the country. These two pilots with 283 candidates have eventually led to 100 appointments.

2D.5.4   Initial Drop-Out

If the aim is to retain as high a portion of newly appointed military personnel as possible, it is important to know how many service personnel leave Defence prematurely in their first year. Whether this happens during the training or at another stage is of lesser importance. The term "drop-out during training" suggests that the initial training is (partly) the cause of the drop-out. Exit surveys have shown, however, that the main reason for leaving is the discrepancy between the expectations of the military profession and the confrontation with its reality. This is the reason that the term "drop-out during training" was replaced by "initial drop-out" in this context. The drop-out rate is measured at three points in time: 2, 6 and 12 months after appointment. The level of the target percentage to be used will be established later, and will also be influenced by benchmark information from other countries.

Table 2D-3: Attrition Percentages

Attrition	0 – 2 months			2 – 6 months			6 – 12 months			In Service after Year		
Year	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
Navy	6	6	8	7	9	11	1	6	6	86	79	75
Army	13	13	9	11	14	8	3	5	5	73	68	78
Air Force	10	10	7	3	3	3	3	3	5	84	84	85
MP	6	7	2	2	5	3	2	8	4	90	81	91
Total	10	10	8	8	11	8	2	5	5	80	74	79

2D.5.4.1   Drop-Out 2003

Higher drop-out because particularly the combat positions needed to be staffed, and these positions have a higher drop-out rate.

2D.5.4.2   Measures

Training courses are evaluated in terms of their content and, where possible, adapted in order to reduce the drop-out rate.

More attention to improving the handling and coaching of trainees.

Consideration is given to the possibility of rewarding units and/or instructors if they succeed in reducing the drop-out rate in cases where such a reduction is necessary.

Specific training programs for women (see Gender section).

2D.5.5   Length of Service

The Defence organization aims at eventually reaching an average length of service for fixed-term contractors of 7 years by 2009. The realization of this objective has been delayed as a result of the various measures taken to avoid exceeding the personnel strength.

The average length of service of military personnel on fixed-term contracts is listed in the table below. The figures apply to fixed-term contractors who served for longer than one year, because personnel who left the service within a year are already included in the initial drop-out rate.

Table 2D-4: Average Length of Service of Fixed Term Contractors

	2002	2003	2004	2005
Navy	4.1	4.3	4.4	5.4
Army	4.3	4.2	4.3	5.1
Air Force	5.4	5.8	5.9	6.0
MP	4.7	4.5	5.3	5.2

2D.5.5.1 Measures

More than previously, commanders stimulate and facilitate contract extensions for fixed-term contractors, not only inside their own units, but also in the Defence organization as a whole.

Increased throughput of privates and corporals on fixed-term contracts to the Royal Military NCOs' School. Information specifically aimed at this is provided and regional career centers offer special training courses.

Fixed-term contractors who are redundant in their Service are approached pro-actively with a view to a transfer to another Service. The same applies to recruits who have been approved for a position with the Royal Netherlands Marechaussee, but who cannot yet be placed with that Service in the same year.

Stimulating military personnel who want to extend their appointments to choose a combat position, by way of targeted (increased) bonuses.

The Navy will offer initial appointments from four to six years and tries to encourage fixed-term contractors to accept extensions of 3 to 4 years.

2D.5.6   Gender

The recruitment and retention efforts that are undertaken must also focus explicitly on increasing the number of women. Such a policy could lay the foundation for a structurally higher intake of women in the future. One of the goals here is to capitalize structurally on a larger portion of the job market potential.

Table 2D-5: Female Intake in Percentages

Intake Female %	2004	2005
Navy	14	23
Army	10	10
Air Force	10	9
MP	21	35
Total	11.5	13

2D.5.6.1   Measures

Also in 2004, the Plan of Action for Gender Issues was presented to Parliament. This plan of action is the result of the focus areas for gender policy highlighted in the 2004 Personnel Letter:

- An intake of 30% women;
- Positioning role models in visible posts; and
- Greater involvement of commanders and other key figures in creating a climate in which both men and women can develop and feel comfortable.

2D.5.6.2   Pre-Reporting Meeting for Female Trainees

The intention was expressed to organize a pre-reporting meeting for trainees of the female gender approximately 2 months before the start of the training. The program will contain the following components.

- Meeting future fellow female trainees;
- Introduction to orientation on future work environment;
- Briefing and exchange of ideas about the position of women in the armed forces; and
- Attention for the physical training program.

In order to reduce drop-out during training for physical reasons, the training facilities for women are extended. Between the selection and the start of the training, all women will receive an extra training program in order to build up extra strength and stamina.

2D.5.7   Outflow

Activities concerning the outflow of personnel are aimed at different aspects. On the one hand, the activities are aimed at stimulating outflow from overstaffed personnel categories. Besides, the goal is to help this outflow find new suitable employment, within the government or somewhere else – but importantly, the Defence organization also aspires to improving the social position of its employees during their service, thus facilitating their return to the civilian job market.

2D.5.7.1   Measures

2D.5.7.1.1   *Outflow via the Chances Project Team*

The Kansrijk (Chances) project organization, part of the Directorate of Personnel, directs all activities surrounding the outflow of personnel as a result of redundancy. In this process, the ministry works together with three professional outplacement services organizations. This approach ensures the existence of a national network and creates external outplacement opportunities for redundant defence personnel.

2D.5.7.1.2   *Regular Outflow*

Since 2000, the Defence organization has applied an external employment security policy (i.e., employability policy), in which the main focus is on training and coaching in order to facilitate its employees' access to the civil labor market. This policy enables fixed-term contractors to improve their social position during their time with Defence before returning to civilian society. For the intensive implementation of this policy, a total of approximately EUR 250 million has been reserved for the period from 2000 to 2009. In connection with this, military courses are rewarded with certificates wherever possible and the principle of Recognition for Acquired Competencies (EVC) is applied to certain categories of military personnel.

In order to limit the inflow of Defence personnel into the unemployment benefits regime, Defence has had an agreement on volume policy with Loyalis Mens en Werk and its legal predecessors since 1 January 1999. One of the goals of this policy is to bring about the termination of as many awarded unemployment benefits as possible and to prevent as many unemployment benefits as possible from being awarded.

- 2001 (2,586) 15%
- 2002 (1,881) 22%
- 2003 (2,259) 32%
- 2004 (3,357) 25%

The number of released military personnel has increased considerably compared to 2003; the proportion of this number that enters into the unemployment benefits regime is relatively lower though.

2D.5.8   Expectation for the Near Future

Taking into account the ongoing and imminent measures, it is estimated that the operational component of the armed forces will be fully staffed by 2007.

Chapter 2E – RECRUITING AND RETENTION
OF MILITARY PERSONNEL: SPAIN

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2E.1   INTRODUCTION

Act 17/1999 develops the Spanish Armed Forces Personnel Legal System, encompassing all regulations of military personnel, integrating them into the same concept of professional military personnel and assimilating the existing regulations all the way through.

Bearing this idea of integration in mind, the concept of the military profession covers career military personnel, including cadres under a permanent basis, reserve officers (on a temporary basis), and troop (also on temporary terms), although soldiers and sailors may become permanent whenever there are vacancies (very limited so far), become eligible, and pass a selection process.

Duties and responsibilities are assigned under this Act as a function of the rank and training of service members which in turn entails professional opportunities and wage increase.

Another relevant issue addressed by this Act is the regulation of women serving in the armed forces. Previous laws paved the way for the access of women in the military, but Act 17/1999 helps equal opportunities principle come into force, getting rid of any existing discrimination.

A novelty worth noting in this law is the regulation of the participation of additional manpower in times of crisis or whenever national security is at risk. This ensures the participation of citizens in national defence whenever necessary. Accordingly, the role and serving time of temporary reservists (active duty members who drop out) are defined. Same for voluntary reservists, and also for compulsory reservists – appointed as such by the Government under Congress clearance whenever is required by national defence.

Finally, this Act has been modified by Act 32/2002 to allow non-nationals to serve in the armed forces as soldiers or sailors.

2E.1.1   Eligibility for Military Training

Access to military academies takes place through the appropriate official announcement followed by the corresponding selection procedures in which principles of equal opportunities, merit, ability and advertising have to be observed.

Eligibility will include being a Spanish national, not being stripped of civil rights, proving good civic behavior, not having criminal records, not being under investigation to be disqualified for public service,

not being conscientious objector and not having applied for conscientious objection. Applicants must be 18 years old and not exceed maximum age limits, which vary according the service, branch, etc. Applicants must also have got the academic qualification needed or be in the way to get it. Finally, there is a limit in the number of applications.

Non-nationals are only allowed to apply for certain temporary jobs for professional soldiers and sailors.

The selection procedure for candidates to soldiers and sailors takes place all the year long and it is split into a number of selection cycles – currently eleven. By cycle is meant the period of time when selection tests are applied and candidates are assigned a job. Then they join the training centers. An average cycle lasts around 40 days. There is some overlap between consecutive cycles, which let applicants take the exams almost any day of the year.

2E.1.2   Career Military Personnel

Career personnel belong to the various corps according to their roles. Within each corps, there are three categories of officers: higher commissioned, commissioned and non-commissioned officers. Beside Army, Navy and Air Force Corps there are four tri-service corps: Judicial, Controller, Health Service and Music Corps.

2E.1.3   Reserve Officers

As anywhere else, reserve officers serve under a temporary basis a limited number of terms. Reserve officers supplement officer staff, being ascribed to the different services and corps according to their manpower needs, vacancies not filled by career officers. Reserve officer service time consists of a first term of (a) three years for the General Corps, Marine Corps and Specialist Corps; (b) three to eight years for Air Force reserve officers with a civilian pilot license and eight years for those who get their pilot license in the Air Force; and (c) three to eight years for reserve officers of Supply Corps, Tri-Service Corps and Specialist Corps. All reserve officers may extend their service terms up to 12 years (maximum service time) or until they become 38 years old.

Reserve officers may become career officers if they pass selection and training phases. Eligible candidates must be academically qualified, not over 37 years old and have served at least four years.

2E.1.4   Professional Soldiers and Sailors, Career Model

Professional soldiers and sailors will be assigned to the branches or specialties needed by the Department in the three services, proposed by the Chiefs of Staff. Soldiers range among four ranks: private/seaman, corporal, first corporal and major corporal. Eligibility for the soldier training centers includes not being over 28 years old, except voluntary and temporary reservists who can be under 33 years old. There are two main initial service terms: 2 or 3 years, except for a number of specialities where it can be 1 or 1.5 years. Service terms may be renewed for periods of 2 or 3 years until completing 12 years or becoming 35 years old.

2E.1.4.1   NCOs

Soldiers having served at least three years can apply for NCO positions. Candidates who are selected will join the corresponding training center. All NCO entries will be filled by eligible soldiers or sailors who apply and pass selection. Candidates must be secondary education graduated and not being over 33 years old.

2E.1.4.2   Permanent Troop

Soldiers and sailors may apply for permanent soldier positions. They may become eligible once they have served 8 years and have at least the general education certificate. Candidates may apply up to three times.

2E.1.4.3   New Career Model

The non-permanent nature of the service, among other premises, has resulted in a very high turnover rate in the case of soldiers and sailors. Numbers are not met a long time since. Hence, a new act has come into effect, Act 8/2006 aimed at consolidating full professionalization. The law extends soldier service time and enhance their labor opportunities at the exit. This will presumably make serving in the Armed Forces more appealing to young people.

This model gives soldiers and sailors the possibility to enhance their careers, starting with an initial term renewable up to 6 years and then being given the choice of a long service term until they are 45 years old. They will also be able to apply for permanent soldier positions all the way through. At 45 and having completed at least18 years of service they become reservists and leave with the right to a pension.

In certain cases, this Act also acknowledges the soldier who leaves before that age or service time the right to a bonus – its amount depending on his/her service time.

Soldiers who stay only 6 years (a first term) will be acknowledged their stay as a merit if they apply for public employment. They will get also the right to vocational training and labor opportunities.

2E.1.5   Non-Nationals

According to Royal Decree 1244/2002, young people from Latin America and Equatorial Guinea have the right to apply for soldier jobs, until a quota of 2 percent of the total force is attained. Later, under the Royal Decree 2266/2004, the Ministry of Defence widened this quota to 7%.

In order to be eligible for professional soldiers and sailors jobs, candidates must then be national of Latin American or Equatorial Guinean nations, be resident in Spain, be 18 years old, prove good civic behavior, not having criminal records whether in Spain or in their countries, not being deprived of civil rights nor being under investigation to be disqualified for public service, and being psycho-physically fit.

Non-national candidates can only being allocated those specialties and assignments determined by the Ministry of Defence, according to the MOD national and international needs. Particularly, non-nationals may apply for occupations in Light Infantry, Engineers, Field Artillery, Marines and Air Force – Security and Defence occupations.

Under Provision 217/2004, military occupations for non-national candidates are extended to cover all Army, four sailor occupations in the Navy and three additional Air Force occupations.

Finally, a provision has been implemented to enable non-nationals serving in the Armed Forces to get the Spanish nationality. This in turn will entitle them with all the rights of national soldiers and sailors – e.g., the advantages granted by Act 8/2006.

2E.1.6   Reservists

The term applies to nationals willing to serve in the armed forces on a temporary basis and apply, being selected for an occupation. There are three ranks for reservists: second lieutenant, sergeant and soldier. Reservists who have served in the armed forces in advance will keep their rank.

Once selected, candidates will undergo a basic military training – they will be provided with a study material, followed by 15 days of training in a boot camp. Then, they will get a specialized training in the unit assigned unless they are given a vacancy of his/her civilian specialty. After completing their training, candidates will be appointed as voluntary reservists. They may sign an initial contract of 2 or 3 years until they complete 15 years and are below 58 or 61 years old – respectively troops and officers.

At the time of signing their contract reservists may choose the length of their yearly activation as reservists, not shorter than a month, and declare their willingness to participate in international deployments.

2E.2   RIGHTS OF PROFESSIONAL MILITARY PERSONNEL

2E.2.1   Introduction

It seems necessary to state in this section the rights of military personnel, not to take them as recruiting actions. Those rights are the following:

2E.2.2   Pay

Armed forces wage system and service compensation follow the lines of civil servant regulations. Additional benefits include the allowance for uniform and for participating in peace keeping/enforcing deployments, humanitarian missions, navigation abroad, family benefits – i.e., education grants, subsidized hotels and holiday apartments, summer camps, medical services, etc.

2E.2.3   Leaves

Act 17/1999 regulates leaves for military personnel. In order to cover new military situations and adaptations, a new draft has been issued which includes the following leaves:

2E.2.4   Extended Leave of Absence

2E.2.4.1   Maternity Extended Leave

Up to 3 years.

2E.2.4.2   Extended Leave for Family Care

Up to one year.

2E.2.5   Social Protection

Service members have a social protection, including medical care, under special social security regulations – ISFAS.

2E.2.6   Regime of Pensions

Personnel under a permanent service relationship are entitled to a pension. People under temporary relationship (professional soldiers/sailors or reserve officers) are entitled to pension only when they become handicapped or disabled permanently or in case of death (their families will get a pension).

2E.2.7   Military Medical Care

Independently from the health care provided by ISFAS, service members have the right to health care in case of on-duty accident and labor disease.

2E.2.8   Unemployment Benefits

Serving on a temporary basis, reserve officers and professional soldiers have the right to an unemployment protection under the laws in force.

2E.2.9   Family Care

During pregnancy, servicewomen may be allocated, under medical orders, an assignment in accordance with her condition and circumstances. After giving birth, they are entitled to a maternity leave under the laws in force.

2E.2.10   Support for Labor Reinstatement

On demand, PS&S will be granted education diplomas or given access to vocational training. This may increase their opportunities to find a new job when they leave the armed forces.

2E.2.11   Academic Qualifications and Validations

PS&S will also be provided with diplomas or certificates of specific training or experience they have gained during their service time – these diplomas are acknowledged by the Education authorities.

2E.2.12   Complaints

Complaints may be made concerning personnel regulations and living conditions in ships, bases or barracks. These complaints must be put forward through the appropriate channels.

2E.2.13   End and Discharge of Contract

Normally the discharge of contract takes place at the end of a term. A discharge may also happen under the following circumstances: 1) when the PS&S request it owing to extraordinary circumstances; or 2) after having completed his/her first term and three years of service as a minimum – the discharge must be requested at least one month in advance.

2E.2.14   Ombudsman

Under Act 3/1981, PS&S may directly ask for Ombudsman protection.

2E.2.15   Merit for Serving and Reservation of Vacancy

Having served as PS&S will become a merit when applying for civil servant jobs and the Civil Guard within the field of activity related to their military job.

2E.3   RECRUITING PROBLEMS

2E.3.1   General Problems

As most Western countries, Spain is experiencing many problems at the time of recruiting candidates to fill Armed Forces jobs.

2E.3.1.1   Public Image of the Armed Forces

•   The results of surveys by the Institute of Sociological Research in 2005 indicated that the percentage of Spaniards feeling excited about national symbols, particularly in the event of military events, keep declining – 59 percent feel excited in front of the flag and the national anthem and 51 percent feel excited on the occasion of military events. Nevertheless, the Armed Forces image improves thanks to their professionalism, the participation in peace keeping missions, the integration of women and the abolition of conscription.

•   The perceived Armed Forces preparation for defending the nation from foreign attacks increased throughout the professionalization process, but this tendency reversed in 2002 before the Perejil[1] incident as adverse news spread about soldier recruiting. The positive outcome of this conflict along with the participation in Afghanistan, Iraq, Haiti and Southeast Asia among other operations gave rise to an improvement of that image in 2005.

•   Six out of ten Spaniards believe that the military are qualified to accomplish their job effectively. After the aforementioned decline, public opinion kept improving in that sense.

•   Honesty, the highest rated military value in the 1990s, gives way to technical preparation; courage rating also improves.

•   52.5 percent think that the Armed Forces performance raises Spain's international reputation versus 11.8 percent who think no contribution takes place.

2E.3.1.2   Lack of National Defence Consciousness

Recently, under the Spanish Institute for Strategic Studies direction the Army Statistics Unit developed the System of Indicators of Defence Conscience. Although the national defence conscience has been increasing slightly over the last few years, it is still low among young people, particularly among university students. The April 2005 survey by the Institute of Sociological Research yielded the following results:

•   Perceived threat increased after 9/11 terrorist attacks in New York and the Afghanistan War. The Perejil incident, the Iraq War and the 3/11 terrorist attacks in Madrid made this perception rise – 31 percent of the population think so now.

•   Nevertheless, 54 percent believe that no military threat exists from any country.

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[1] Perejil is a tiny Spanish island next to the Moroccan coast which was invaded by Morocco. Spain expelled the invaders.

- From 1999, just before the air raids against Serbia because of the Kosovo conflict, perceived security has being decreasing among the Spanish population. Nowadays, only 12.5 percent think that Spain could be affected by any possible conflicts.

- Between 1997 and 2000 public interest in Defence issues declined only to rise since then until 2005.

- 39 percent of middle/upper social class talks frequently about military issues. This figures raises to 45 percent in the case of employers, high officials, top managers and self-employed.

- 56 percent of males and 40 percent of females would be willing to voluntarily defend their country against a military attack.

- Only 23 percent would sacrifice their lives for the motherland -5 percentage points less than 1997.

2E.3.1.3   Decreasing Birth-Rate

Birth-rate has being dramatically dropping in Spain from the 1980s, reaching its lowest peak in 1998 – with only 361,930 births. Ever since, there has been a slight recovery. This means that the pool of 18 year olds (the minimum age to apply for Defence jobs) will keep shrinking 10 more years – until 2016.

2E.3.1.4   Increasing Competition for the Labor Market

Owing to the increasing competition in the labor market, Defence job offer becomes less attractive.

2E.3.2   Career Personnel

2E.3.2.1   Services' Higher Officers

As any other organization, armed services have a permanent need to fill career personnel positions to counter natural and voluntary turnover. There had never been problems to fill yearly all career officer jobs. But recently, problems with filling these vacancies have arisen for a number of reasons including ignorance about military careers, emergence of new appealing university degrees, young people reluctance to move away from their home towns, dislike for adventure, travelling abroad or risk activities, along with the low birth-rate, lack of defence conscience. This has made application ratio (number of applicants per vacancy) dramatically decrease over the last few years: 10.69 in 2000, 6.95 in 2001, 6.29 in 2002, 5.17 in 2003, 4.53 in 2004, 4.42 in 2005 and 3.76 in 2006.

The Air Force continues to be the most popular among candidates, followed by the Army, the Civil Guard and the Navy and Marine Corps.

2E.3.2.2   Tri-Service Corps and Reserve Officers

Selection results from 2000 to 2005 let us draw the following conclusions concerning the Medical Corps:

- The Doctors Branch application ratio dropped from 8.27 in 2000 to 5.82 in 2001, 2.63 in 2002, 1.38 in 2003, 0.5 in 2004 and 0.33 in 2005.

- The Odontologists Branch declined from a ratio of 10 in 2000 to 2.5 in 2005, with fluctuations in between.

- The Doctors Reserve Branch ratio plunged from 4.4 in 2000 to 0.03 in 2005.

- Finally, the Nurses Reserve Branch ratio shrank from 6.1 in 2003 to 1.5 in 2005.

- To sum up, the current system is unable to satisfy the organization needs for personnel in the Medical Corps – critically in the Doctors Branch.

2E.3.3   Professional Soldiers and Sailors

Despite the number of candidates signing a contract, the total number of soldiers has declined year by year, which implies the existence of problems in retention. By 2001 the total PS&S force was 74,484, dropping to 71,955, 71,083 and 70,632 in 2004. A recovery began in 2004 – by December 31 2005 there were 73,641 soldiers and sailors.

2E.3.4   Non-National Candidates

Recruitment of non-national candidates has increased over time, along with a similar increase in the number of applicants in absolute figures: 1,221 candidates applied in 2002 for 300 vacancies; 2,350 non-nationals applied in 2003 for 1,696 jobs; there were 1,131 applicants in 2004 for 560 vacancies – only 368 vacancies were assigned. Finally in 2005 there was a record in applications with 5,786 non-national applicants. By June 1 2006, 2,188 non-nationals serve in the armed forces.

Countries most represented are Equator (454 soldiers) and Colombia (378 soldiers). No soldiers serve from Costa Rica, Cuba, Honduras and México and only a handful from Argentina (12), Chile (3), El Salvador (6), Guatemala (1), Nicaragua (1), Panamá (2), Paraguay (1) and Uruguay (5).

2E.3.5   Voluntary Reservists

Recruitment of voluntary reservists began December 2003 when the MOD announced 340 vacancies for commissioned officers (100), NCO (75) and troop (165). It was a great success, with 1,817 candidates applying (1,426 males and 391 females); 296 vacancies were assigned to males and 44 to females. In 2004, 3,821 vacancies were announced: 641 for officers, 764 for NCOs and 2,416 for troops. There were 3,723 applications; 1,321 vacancies were assigned to males and 428 to females. In 2005 8,245 vacancies were announced: 1,838 for officers, 1,899 for NCOs and 4,508 for troops. There were 9,877 applications; 3,185 vacancies were assigned to males and 1,027 to females.

Summing up, the demand has been increasing as people are becoming more and more acquainted with voluntary reserve to which people aged 18 to 58 may apply.

2E.4   RECRUITMENT STRATEGIES

2E.4.1   Strategies for Increasing the Number of Applicants

2E.4.1.1   Advertising Campaigns

Targets have widened to include not only prospective applicants, but also their environments – family, prescriptors, friends, workmates, etc. These were supposed to support applications.

2E.4.1.2   Prescriptors Plan

A prescriptor is a person who advises young people about their future careers. The MoD developed a prescriptor plan that was implemented in 17 Spanish provinces. The plan is specially aimed at school counsellors who are

reported about the Armed Forces jobs, so that they let recruiters visit their schools in order to inform students about the Armed Forces jobs. This action has been very successful so far – 70 percent of counsellors have reacted positively.

2E.4.1.3   Allies Plan

By ally we mean any person or institution that helps spread Armed Forces job supply. Major allies are the Civil Guard, employment agencies, women associations and immigrant associations. The outcome has proved very promising.

2E.4.1.4   Computerized Recruiting Management System (SICAP)

A computerized recruiting management system was implemented in 2003 which connects in real time the MoD Directorate of Recruitment with the recruitment directorates of the Services and with provincial recruitment centers. This system manages every recruitment practice across the nation, building applicant databases which will help further live marketing activities. This experience seems also to be very promising.

2E.4.1.5   Recruiting Web Page Embedded in Defence Intranet

Through this web page, professional soldiers and sailors can help in recruiting and spread recruiting information activities. All recruiting activities and selection outcomes are displayed on the web page.

2E.4.1.6   Promotion of Soldados.com Web Page

This web page is aimed at providing the public with high quality information through links to the Services and Civil Guard web pages. In April 2006, there were 192,245 visits, with a monthly average of 195,699. That month 1,756,360 web pages were browsed, and there were 292,612 searches of vacancies, 270,000 downloads and 3,081 consults. Subscriptions to Soldados.com newsletter reached 29,587. According to 2005 results, 13 percent of applications are managed through Soldados.com – 48 percent of them entered the training center. Internet becomes then a powerful recruiting tool.

2E.4.1.7   Hotline

A 902 line has been implemented so that potential applicants can be informed and apply later. According to 2005 data, there are 5,000 monthly calls as average. It appears to be a very effective strategy.

2E.4.1.8   Specific Recruiting Plans

Some recruiting plans have been developed concerning career officers, university students, professional soldiers and sailors, non-nationals and reservists. Each target needs a different plan. All plans include advertising campaigns, interactive marketing, internet, fairs and events, lectures in schools, colleges, etc.

2E.4.1.9   Enlistment Bonus

PS&S students will earn 542.47 € at the time of signing their first contract. No outcome evaluation has been done yet.

2E.4.1.10   Coming into Effect of the New Soldiers and Sailors Act

From December 2005 to March 2006 information about the coming into effect of this Act was spread, which improved recruiting. This has led to a relevant increase in the number of applications thanks to the lengthening of the service time and the creation of the reservist of special availability who will earn a salary compatible with his/her main activity along their labor life.

2E.4.2   Strategies for Lowering the Drop-Out during the Selection Process

2E.4.2.1   Change of Application Requirements

A significant number of applicants who are assigned a vacancy drop out whether before or after entering the training center for a number of reasons, and wait until the next selection cycle to get a better vacancy. In order to tackle this problem, a provision has been issued that penalizes candidates who reject entering the training center once they have been assigned a vacancy or those who drop out from training without a justified reason. Under this law, these candidates cannot apply again within the next five selection cycles. This measure has proved very positive.

2E.4.3   Strategies for Lowering the Number of Candidates who Pass, but Have No Vacancy

2E.4.3.1   Candidate Retaking

Another strategy for increasing the number of candidates who are assigned a vacancy is to recode some of the vacancies that are not requested by applicants and increase accordingly the number of vacancies in specialties where the number of applicants exceeds by far the number of vacancies. This can only be done within the same Service. The outcome has proved particularly satisfactory in the Army, where a significant number of applicants have been retaken.

2E.4.4   Strategies for Lowering the Number of Candidates who are Assigned a Vacancy, but Do Not Show Up at the Training Center

2E.4.4.1   Welcoming Program

A number of guidelines have been drafted in order to reduce the number of candidates who have been allocated an assignment and are supposed to join the training center, but do not show up in the end. Actions include sending personal letters to every candidate, welcoming him/her to the Armed Forces; letters also contain information about the training center. A follow-up of every student was also intended. This strategy failed because of the lack of cooperation by training centers.

2E.4.5   Strategies for Reducing Attrition in Training Centers

2E.4.5.1   Education Level Requirement

A significant amount of early turnover in training centers is caused by a lack of candidate education qualification. A minimum education requirement was established, schooling certificate. This measure is considered positive.

2E.4.5.2   Intelligence Quotient Requirement

In order to screen off applicants with low intelligence, the former IQ 70 cut-off score was raised to 80. This scale has a mean of 100 and standard deviation of 16.

2E.5   RETENTION STRATEGIES

2E.5.1   Compensation as Student and Enlistment Bonus

During the 2-month training stage, students will earn 60% of group D monthly pay (338.64 €), but no extra month's salary (twice a year). Once they have finished this training and signed the first contract, they will get their due salary (13,470.64€, taxes not included, a year) plus a 564.39€ enlistment bonus.

2E.5.2   Benefits for Service Time

There will be an extra compensation consisting of:

- Three extra monthly salary will be given all at a time in some Units once they have completed 3, 5 and 7 years of service time and have been posted at least 12 or 18 following months in the same assignment (respectively those having served 3 and 5 years).

- This compensation is provided in addition to the regular extra compensation (also all at a time) at 4 and 6 years of service time.

2E.5.3   Family Benefits, Rewarding Pensions

Service members will get those benefits that they have the right to.

2E.5.4   Monthly Housing Benefit

Service members entitled to get this benefit are those posted to: Gran Canaria, Tenerife, other Canary Islands, Arán Valley, Majorca, other Balearic Islands, Ceuta and Melilla. The amount varies according to the posting.

2E.5.5   Quality of Life Plan

The Ministry of Defence will provide facilities within barracks for cultural, social, sport and leisure activities. In units with less than 150 soldiers there will be at least a cafeteria, a library and a soldier information office. Units with more than 600 soldiers will be provided with a soldiers' mess and a socio-cultural center. The former will house a cafeteria, a game room, a gym and a video room; the latter will harbour a library, a computer room, a language laboratory and a multi-purpose room.

2E.5.6   Personnel Support Offices

These offices will keep PS&S informed about practices, provisions and news concerning their businesses. PS&S have warmly welcomed this strategy.

2E.5.7   PS&S Motivation Plan

In order to meet PS&S needs, a plan for improving their living conditions has been established in five areas: Living conditions, work conditions, career development, integration and labor reinstatement. The programs to be implemented include the following:

2E.5.7.1   Improving Lodging Conditions

Especially on board Navy ships and in training centers.

2E.5.7.2   Feeding Program

This program aims both at improving food quality and dining facilities.

2E.5.7.3   Schedule for Rationalization of Serving Time

This program will be implemented specially in the Navy in order to compensate sailors for their long working ours. Compensation may be financial or promotional in nature.

2E.5.7.4   Schedule for Service Outsourcing

Outsourcing aims at freeing soldiers from a number of duties which are not their business.

2E.5.7.5   Career Schedule

This may help soldiers decide the number of terms suitable for them according to their expectations, abilities and opportunities.

2E.5.8   Promotion and Job Opportunities

2E.5.8.1   Permanent Troop

Serving in the Armed Forces till they get the reserve (at 58).

2E.5.8.2   Promotion to NCO

80% of vacancies are kept for PS&S over 3 years of service time.

2E.5.8.3   Promotion to Officer

They can apply once they are NCO. They spend 2 years of training.

2E.5.8.4   Application to Local and Autonomic Police

The MOD will foster agreements to get some vacancies for PS&S who have served over 5 years.

2E.5.8.5   Application to the Civil Guard

50% of vacancies are offered to PS&S who have served over 5 years.

2E.5.8.6   National Police

At least 10% of vacancies for the Basic Scale are reserved for PS&S serving over 5 years.

2E.5.8.7   Vocational Training

Focussed on areas with more demand in the labor market, the MOD collaborates with the employment agencies of Autonomous Communities and other public and private organizations.

2E.5.8.8   Diplomas of Military Technician

There are 47 diplomas of military technician validated by the Education Ministry.

2E.5.8.9   Application to MOD Civil Service Jobs

At least 50% of the MOD offer for civil servant jobs will be kept for PS&S who have served for a minimum 5 years.

2E.5.9   House Renting Allowance

Reserve officers and professional soldiers and sailors who have served over five years may earn a monthly house renting compensation. Although the impact of this measure is positive (e.g., on retention) it could be stronger if the time required to get it were reduced to three years of service.

2E.5.10   Allowance for Buying a House

Every service member may apply for a compensation to buy a house. This compensation consists of a fixed amount delivered by the Armed Forces Social Institute (INVIFAS).

2E.5.11   Coming into Effect of the New Soldiers and Sailors Act

From December 2005 to March 2006 information about the coming into effect of this Act was spread, which improved retention. A lot of soldiers who harboured intentions to leave changed their minds and decided to stay until they get the rights granted by the new Act or become permanent troop.

Chapter 2F – RECRUITING AND RETENTION OF MILITARY PERSONNEL: TURKEY

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The Turkish Armed Forces (TAF) is composed of five sister services: Army, Navy, Air Force, Gendarmerie, and Cost Guard. The personnel of all services are subject to the same laws. For the professionals, it is the Turkish Armed Forces Personnel Law No. 926, and for the non-professionals, the Military Service Law No. 1111. Thus, the personnel categories are identical across the services, though the quantities in each category vary by service.

The services have the following personnel categories:

- Professionals
  - Commissioned officers;
  - Non-commissioned officers (NCOs);
  - Specialists; and
  - Civilians (officials and workers).

- Conscripts (non-professionals)
  - Reserve officers;
  - Short-term conscripts; and
  - Long-term conscripts.

Officers make up the core command structure. They come from various sources; 45% from the Military Colleges and military students in civilian universities, 13% from outstanding NCOs, and the remaining 42% from the contract officers. At present, 81% of the officers are in the Military School origin branches such as infantry, artillery, armor, transportation, ordinance, and the remaining 19% is in the civilian university origin branches such as engineer, teacher, judge, medical doctor, etc.

There are three levels of military schools for officers in Turkey. These are military high schools, military colleges, and military war academies. Students can apply for admission to a military high school after completing their 8 year compulsory education. Performance on a nation wide "aptitude + achievement" test is the first hurdle in entering a military high school, followed by background checks, interviews, medical, and physical examinations. When students are accepted to a military high school, they are not necessarily members of the armed forces, but prospective candidates.

There are three military colleges in Turkey: the Turkish Army College, the Turkish Air Force College, and the Turkish Naval College. The major sources of recruitment for these military colleges are the military high schools. Yet, based on the needs of the TAF, graduates of civilian high schools are also recruited. Performance

on a nation wide university entrance exam is used in screening out the civilian candidates for the military colleges. Civilian high school graduates passing this first hurdle are subjected to a number of other selection/ screening techniques, including background checks, interviews, medical, and physical examinations. Women have been accepted to military colleges since 1992. Currently, women can serve as officers in the TAF, but not as NCOs or enlisted personnel. After graduating from a military college or having a 4-year degree from a civilian university as a military student, officers have 15 years of obligatory service.

About 42% of the officers in the TAF are of non-military origin. They are graduates of civilian universities, specializing in a wide range of professions, such as engineering, teaching, medicine, and law. In the selection of these officers, academic performance, background checks, personality assessment, interviews, medical and physical examinations are used. Following their basic training, officers of non-military origin have a one-year try-out period during which they have the right to resign. Once this period is completed, these officers are also required to serve at least 15 years.

The purpose of the three military war academies (army, navy, and air force) is to select, train, and develop future military leaders and commanding officers of the TAF. Only graduates of military colleges, who have served at least 6 years in the TAF, could apply to these academies. Following a very rigorous selection process, candidates receive a two year graduate military education.

The NCOs stand as the intermediate command level between officers and the enlisted. The entire NCO corps comes from the NCO vocational schools. These schools accept high school graduates through an induction examination. NCO vocational schools are now equivalent of 2-year colleges. Recently, in the selection of candidates to the NCO vocational schools, personality inventories have been started to be administered along with aptitude/achievement tests, interviews, physical and medical examinations. Similar to officers, once on the job, non-commissioned officers have a 15-year obligatory service in the Turkish Armed Forces.

The specialists are professional enlisted leaders. They are employed at critical positions requiring continuity such as Squad Leader, Tank Driver, Tank Gunner, Repairer, Artillery Sergeant, etc. These specialists are selected from among qualified conscripts who have finished their military service. Their first contract is for 2 years, and later contracts may be between 1 to 5 years depending on the qualification of the person, his willingness, and the requirements of the service. They can serve until the age of 45 when they retire with pension pay and benefits.

Civilians are composed of state officials and workers. Civilian officials and workers are employed at positions requiring expertise and continuity, and they are selected according to educational proficiency.

Compulsory military service is embedded in the Constitution of the Turkish Republic. Every male citizen "has a right and duty to serve in the military" by our Constitution, though it does not specify conscription, voluntary or any other method. The Constitution leaves the description of the "manner how this service is rendered" to subordinate laws.

Service category and duration for the conscripts are determined according to the person's educational attainment. University graduates (holders of a bachelor's degree or higher) either serve as conscripted reserve officers at the rank of a third lieutenant or short-term conscripts with no ranks. Conscripted reserve officers are utilized to back up the manning shortages in the regular officer positions, which could not be filled by regulars due to shortages in the junior officer ranks.

About 30% of the university graduates are selected by the services to serve 12 months as conscripted reserve officers in the skill areas (in terms of professions) needed by the TAF, whereas the rest serve 6 months as

short-term conscripts. Personal preferences for service category and duration are taken into account, but with a lower priority than the needs of the services.

Those who have less than a 4-year university education have to serve 15 months as long-term conscripts. Conscripts subject to 15-month service undergo a 3-month basic and branch training and then are distributed to the troops.

The personnel mobilization system is also largely based on conscription. Recently released conscripts are assigned to the military units in their locality to be called up at mobilization. Most of these personnel do not undergo any refresher training with the implicit assumption that since they are released in the past three years, they will not need any extra training. Thus when they join their units, these units will be ready for combat even on the first day of the mobilization.

On June 2003, the Turkish Armed Forces took an important step toward reducing the size of the country's military. Accordingly, the period of obligatory military service was reduced from 18 months to 15 months for those who have less than a 4-year university education (i.e., long-term conscripts), from 8 months to 6 months for some of the candidates with a four-year degree (i.e., short-term conscripts), and from 18 months to 12 months for the remaining candidates with a four-year university degree (i.e., conscripted reserve officers). This move is part of the restructuring efforts, planned to be completed by the year 2020. Currently, 550,000 soldiers and 200,000 professional officers serve in the TAF. Over tome, the military plans to decrease the number of conscripts to 300,000.

Chapter 2G – MILITARY RECRUITMENT AND RETENTION STRATEGIES: UNITED KINGDOM

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2G.1 THE UK DEFENCE VISION[1]

The overall vision of the UK Armed Forces is to be a force for good in the world. The key principles which provide the basis of work of the UK Armed Forces are:

- Defending the United Kingdom and its interests.

- Strengthening international peace and stability.

The aim is to achieve this by working together on the core task to produce battle-winning people and equipment that are:

- Fit for the challenge of today.

- Ready for the tasks of tomorrow.

2G.1.1 Capable of Building for the Future

The MoDs capabilities depend on attracting, motivating and retaining sufficient quality people with the right skills.

2G.2 STRUCTURE OF THE UK ARMED FORCES

The UK Armed Forces is made up of three services; the Army, the Royal Air Force (RAF) and the Royal Navy (RN). The total Tri-Service strength of the UK Armed Forces is 196,220 (on 1 Jan 06). This is broken down as follows: All three Services include regular full-time manpower and additional reserve forces.

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[1] Source www.armedforces.co.uk.

Table 2G-1: Total British Armed Forces Overview (as at 1 January 2006)[2]

REGULAR FORCES	
Royal Navy	39,430 (includes some 7,200 Royal Marines)
Army	107,400
Royal Air Force	49,390
Total Regular Forces	195,960 (excludes approximately 3,350 Gurkhas; approximately 1,500 Full Time Reserve Service (FTRS) personnel; approximately 3,000 Royal Irish Regiment (Home Service); and 2,000 mobilised reserves)
REGULAR RESERVES	
Volunteer Reserves	44,000
Cadet Forces	153,100
Total Regular Reserves	191,500

Each of the three Services is made up of both Commissioned Officers and Other Ranks, known as soldiers (Army), airmen (RAF), or ratings (Navy). There are different types of commission within each Service for example: The six main types of commission in the Army are:

2G.2.1   The Short Service Commission (SSC)

The SSC is the normal first commission for those who become an officer in the Army. It is a commission for those who do not wish to commit to a long career, but would like to benefit from the high quality training and exceptional experience available to young officers. The SSC is also a first step to a mid-length or full career in the Army. SSCs are awarded for a minimum of three years (six years for the Army Air Corps on account of the length of pilot training), but can be extended to eight. Candidates for commissions should be over 17 years and nine months and under 29 years old when they begin officer training.

2G.2.2   The Intermediate Regular Commission (IRC)

The IRC offers a mid length career for a maximum of 18 years and can be applied for after 2 years SSC, subject to being recommended. On completion of 18 years after the age of 40 the officer will be entitled to a lump sum and regular monthly payments, which will convert at 65 to a further lump sum and pension.

2G.2.3   The Regular Commission (Reg C)

The Reg C offers a full career of 35 years or to age 60 whichever is first. It can be applied for after 2 years IRC, subject to recommendation. Those completing a full career will receive an immediate lump sum and pension from age 55.

2G.2.4   Gap Year Commission (GYC)

The GYC is a commission that is aimed at those who have a gap year prior to entering University. The selection procedure at RCB has to be completed after which a four-week course at Sandhurst is attended. Officers then join their chosen Regiment or Corps as probationary 2nd Lieutenants for a minimum of four

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[2] Figures include all trained and untrained personnel: taken from the DASA website.

months and a maximum of 18 months with a front-line unit, but not on active service. The purpose of the GYC is to create a pool of young men and women who will take a favourable impression of the Army into their careers.

2G.2.5   Undergraduate Army Placement (UGAP)

UGAP is a Commission for highly motivated undergraduates studying at UK universities requiring a placement as part of their degree. Up to 10 places are available each year. In all other respects the commission is identical to the GYC.

2G.2.6   Late Entry Commissions

A number of vacancies exist for senior Non-Commissioned Officers and Warrant Officers to be granted commissions known as Late Entry Commissions. They attend the Late Officer Entry Course (LEOC) at Sandhurst before commencing their officer careers. Because of their age they generally do not rise above the rank of Lieutenant Colonel.

Each of the Services is responsible for their own recruitment and selection of both their Officers and Other Ranks. Each Service develops its own recruitment and retention strategies. However, there is some commonality between the Services and the Strategic Defence Review (SDR) encourages more harmonisation of the UK Armed Forces.

There is a tendency amongst the Services to treat recruitment, selection and retention as separate entities. There are different processes, different policies and sometimes different agencies responsible for each element. For example Army policy states that "Recruiting can best be described as the steps taken to attract sufficient men and women of the right quality to meet the Army's personnel requirements. Selection is the process that is carried out to ensure that those who are accepted into the Army have the potential to be good soldiers and are capable of being trained to carry out their chosen trade".

This paper aims to give an overview of these general processes and strategies. In some areas the procedures used by the Army will be given as an illustrative example.

2G.3   RECRUITMENT

Within the UK individuals tend to be attracted to individual Services rather than the military per se. Each Service has their own identity, ethos, core values and standards People tend to join the Army, Navy or Air Force. This is reflected in the way that each Service conducts separate recruitment and marketing campaigns. Each has its own strapline (e.g., the Army's is "Be the best" and the RAF is "Rise above the rest").

One area in which is common across all three Services is the provision of Armed Forces Careers Offices (AFCOs). These are joint information centres where individuals can go for information regarding careers in any of the three Services. There are over 120 centre located throughout the UK. In addition recruiting activities will also be conducted by Schools Advisers/Careers Officers, Service Youth Teams and (for the Army) Regimental Recruiting Teams. Potential recruits are attracted into the Services in a number of ways including advertisements on the television, on the internet and in the press.

The MoD calculates the numbers that need to be enlisted to maintain the each of the Services manning levels. The MoD takes account of changing unit establishments, wastage caused by servicemen and women leaving the service at the end of their engagements, and those who might choose to leave before their engagements come to an end (PVR or Premature Voluntary Release). The number required in each trade in the each Service is assessed and figures are published at six monthly intervals so that adjustments may be made during the year.

Traditionally the Armed Forces have not met these recruiting targets. This shortfall in recruiting tends to be worse for the Army and for particular trades within the other two Services. For example, the Royal Navy has been experiencing problems in recruiting engineer officers.

A Comprehensive approach is being adopted by the MoD to its manning strategy to improve recruitment and retention. This includes upgrading service families' accommodation (SFA) and single living accommodation (Project SLAM), reducing disruption to family home life, creating family friendly policies, and improving terms and conditions of employment for civilian personnel.

In addition the single Services can adopt their own recruiting strategies. For example the Army use the adage "it takes a soldier to recruit a soldier". Working on the theory that word of mouth is the most effective advertising the Army send young, recently trained soldiers back to their home towns and schools to talk to their friends about life in the Army. In addition, the Army has introduced the Recruiting Bounty Scheme (RBS) in an attempt to improve the number of enlistments to the Royal Artillery and the Infantry. The RBS rewarded serving personnel with a financial bounty for every individual they successfully introduced as a soldier. This has proved successful and (within the Army at least) this year has shown a marked improvement in recruitment. This has also been as a result of significant extra investment in national and regional marketing.

Market Research is conducted on behalf of the Services and has found a number of barriers to joining the Armed Forces exist: RAF research found that recent barriers to joining the services included misconceptions about the qualifications needed, a lack of awareness of career options available, uncertainty about the type of training provided, concerns about military discipline, disruption to family life and the belief that you are cut off from civilian life. The main reasons found for young people not wanting to join the Army were; being away from home, being injured or killed, and having to follow orders. This research indicates that the focus for recruitment must be on providing potential recruits with accurate information about jobs in the Armed Forces.

The fresh recruitment strategy approach attempts to raise awareness of the Armed Forces across the full spectrum of society. People need to know what they do, how it is done and what the values and rewards are. As the amount joining is not enough to fulfil the manning requirements. There needs to be more awareness of the opportunities that are offered. The Armed Forces need to be set apart from other private sector employers. This awareness cannot just be directed at the whole population, a target audience needs to be determined. An initiative being undertaken by the Royal Navy is the opportunity for school children to work for a day on a ship on an engineering problem and for older students there are familiarisation visits. This gives them first hand experience as to what military life is like. Awareness of the Armed Forces needs to be established, the lifestyle needs to be communicated, training and qualifications emphasised and the career image enriched.

2G.4   SELECTION

Again selection is conducted separately for each of the Services, but the selection processes are similar in nature. All three Services have different selection procedures for Officers and other ranks. However,

all include interviews, aptitude and ability testing and some personality measures. There is a filtering system that will select people at initial application stage, others will be invited to attend an assessment centre which can last up to three days. As well as technical ability individuals will be assessed on their general qualities to be a member of the Armed Forces. In addition, preliminary medical examinations will also be carried out that checks on weight, eyesight and hearing and individuals will need to pass a physical fitness assessment.

2G.5   RETENTION

It has to be remembered that in order to have a fully manned service, the Armed Forces have to be able to hold onto the people that they have got. They need to be retained.

The RAF Officers Leavers Survey (2004) carried out by the Directorate of Personnel and Training Policy (DP&T pol) has highlighted a number of reasons why officers have chosen to leave the service. They include future job satisfaction, family stability, separation from family, employment opportunities outside the RAF and expected types of postings.

Demand for aircrew is increasing in the commercial world, which means that retention in the Armed Forces is crucial. Salaries and civilian lifestyle are more attractive in the airline industry. There is more stability and you get to fly more as you don't have to do any ground tours. The transferability of skills also creates major retention problems for pilots. The Strategic Defence Review (SDR) promises a full educational programme based on NVQs, but these qualifications are civilian not military. In a way they are preparing servicemen for a life out of uniform.

2G.5.1   Work-Life Balance

Recently, a top priority for employers has been the work-life balance of employees. People want time for learning, time for family and time for themselves. Increasingly young people have highlighted the fact that family and social life is sacred. If they can attain this work-life balance then they are more likely to be retained in their jobs. Both the 'Policy for People' and the 'Defence Mission' recognise the importance of families to the success of the Armed Forces.

2G.5.2   Professional Development

Creating the opportunities for advanced training, education and upward mobility is a suggestion by the Royal Navy to increase retention of its engineer officers. Knowing you are going to be invested in by your employer is a motivator to stay. However, in order for these to work awareness of the technical development available must exist.

2G.5.3   Better Pay and Conditions

If pay and conditions are tackled then it is possible that retention may become less of a problem. The Royal Navy wants to improve the working and living environment for individuals. However, it has to be remembered that there are a huge number of reasons why people may leave the Armed Forces and just improving the pay and conditions does not mean that these people will be retained.

The Bett report, published in June 1999 by the Independent Review of higher education, pay and conditions, was a wide ranging and independent report considering the framework for determining pay and conditions of service within the higher education sector. Recommendations were made in several areas including pay

structures, minimum pay levels, training, non-standard contracts and equal opportunities. As well as helping retention, this may feed into recruitment tools as well.

Pay 2000 was introduced in the RAF for regular forces at the ranks of Commodore, Brigadier, Air Commodore and below on 1 April 2000. This means that individual skills and experience will be recognised and there will be the incentive of incremental pay, subject to satisfactory performance.

2G.5.4   LINKUP and the Financial Retention Initiative (FRI)

LINKUP was a pilot retention scheme used by the RAF. It was introduced in May 1999. It refunded pilots with the costs associated with obtaining an Airline Transport Pilots Licence (ATPL) or equivalent, in exchange for an undertaking to serve to at least the 38/16 point. This is either at age thirty-eight or after sixteen years of service. This can mean that pilots are refunded up to £10,000 net of the costs associated with obtaining this licence.

Whether this scheme has had an effect is unsure as there are far more wide reaching issues. In a study it was found that quality of life, flying opportunities, pay and remuneration, job satisfaction and stability were more important influential factors. Also, being posted to a preferred location and promotion were influential retention measures.

The Financial Retention Incentive (FRI) was also a scheme that was used to increase retention. It was awarded to all pilots at or beyond their immediate pension point, which is either after sixteen years of service or at thirty-eight years of age, whichever comes later. This was intended to be a short term retention measure while retention in pilots was poor.

2G.6   CONCLUSIONS

The UK Armed Forces are currently experiencing manning problems in some areas causing parts of the services to be overstretched. However, since some of the recruitment targets have been lowered, the amount being reached is increasing.

Society needs to be made aware of the career opportunities available within the Armed Forces in order to increase the amount of applicants. Carrying out a brand-audit allows the target population to be highlighted so that recruitment efforts can be directed towards them. A lot of recruitment is focused on attracting youth from either school or university. Familiarisation visits and meeting actual servicemen are great ways for people to learn about the Services and gain motivation to join.

A lot of people have misconceptions about what working for the Armed Services would be like. By creating a brand essence the Services can create a constant theme to be communicated. Information should convey the wider aspects of working for the Armed Forces, especially that which will appeal to the youth population. Word of mouth information has been found to be more influential than that portrayed through the media as well.

In regards to retention, there are no proper retention strategies in place within the Armed Forces. However, retention is recognised as being important in helping to maintain manning and there are some measures that have been taken to try to increase the retention of personnel.

These include maintaining a work-life balance for employees, having better pay and conditions, chances for professional development and specific schemes like LINKUP and the Financial Retention Incentive (FRI).

Chapter 2H – RECRUITING AND RETENTION OF MILITARY PERSONNEL: UNITED STATES

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After facing the challenges of recruiting an all-volunteer force during the economic boom of the 1990s, the U.S. Navy acknowledged the need to improve recruiting processes and retention efforts. By the year 2000, the Navy undertook initiatives to increase enlistment bonuses, improve packaged incentives, improve applicant screening, improve recruiter screening, and increase recruiter support.[1] The initiatives were guided by Commander, Navy Recruiting Command, the organization charged with executing the Navy's active duty and reserve recruiting program. In addition, the Office of Naval Research (ONR) chose to fund science and technology (S&T) research to improve classification of incoming recruits into jobs, modernize the job assignment process, and develop decision support technologies for overall strategic management of the personnel pipeline. As recruiting challenges continue, some of these improvements have been implemented, and several interim products from the S&T initiatives have been demonstrated.

In fiscal year 2005, the Navy accessed 37,703 recruits against a goal of 37,635.[2] Accessions are those recruits who actually sign a contract and report to ("ship" to) the Recruit Training Command (RTC). Others who have signed a contract expressing intent to join the Navy, but do not immediately ship are put into the Delayed Entry Program (DEP). The DEP provides a recruiting "cushion" in that, if recruitments run high of target, intake can be regulated by putting more recruits in the DEP. Conversely, if recruitments fall short of target, more individuals can be shipped from the DEP. In 2005 the Navy began the year with the DEP holding 69% of the Navy's goal. By the end of that year, the DEP held 58%. In other words, in order to meet goal in 2005, the Navy reduced the DEP by over 4,000 recruits. The DEP provides that flexibility to the recruiting effort and provides benefits to recruits, as well. It allows extra time to make plans, settle personal affairs, finish school, study military terminology and protocol, and prepare for life in uniform. Studies have shown that the longer a recruit remains in the DEP (up to a point), the less likely he or she is to drop out of recruit training later, perhaps showing a measure of determination.[3]

Navy recruiters seek out enlisted applicants through leads (perhaps from messages left on the Navy's toll-free number, referrals, or walk-ins) or through "cold calls" to individuals who have not previously shown interest in military service.[4] To be successful, recruiters must maintain a level of visibility and build relationships with "influencers" in the community (e.g., school guidance counselors, social club leaders). They give presentations at schools, social clubs, recreation centers, etc. – wherever the target 17 – 24-year-old audience might gather. In rough order of magnitude, a recruiter will identify between 80 and 100 potential prospects for every recruit shipped to RTC. As a rule of thumb, of those prospects, only 20 appointments will be scheduled.

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[1] Slocum, W. Scott, United States Navy Recruiting Command Snapshot: A Look at the Process, Policies and People with Recommendations, 17 April 2000, pp. 51-55.

[2] U.S. Department of Defense Office of the Assistant Secretary of Defense (Public Affairs), DoD Announces Recruiting and Retention Numbers for September, News Release No. 1034-05, 11 October 2005.

[3] Slocum, p. 3.

[4] Slocum, pp. 31-32.

Of these 20 appointments, some will be "no-shows" and, ultimately, less than a third will actually complete the interview to the point where the recruiter starts taking personal information. Of these six-or-so individuals who are willing to be interviewed, only two will actually visit the Military Entrance Processing Station (MEPS) (the intake station for all armed services enlisted personnel) to begin testing. Odds are one will be disqualified due to drug test, criminal record check, bad credit rating, or pre-existing medical condition – or simply change his or her mind. Thus, out of the 80 – 100 original prospects, one might actually ship to the RTC.

Figure 2H-1 provides an overall view of the accessing process, from initial contact with the recruiter and processing at the MEPS through shipment to the Navy RTC.[5]

Contact with Recruiter	**Selection**	**Classification**	**Swear-in/ DEP**
• Ability screens	• AFQT	• Job & Career Info	• Swear-in
• Moral, financial, and educational screens	• Background affidavits	• School guarantee	• Delayed Entry Program
	• Medical exam	• Ship date	• Ship to RTC
		• ASVAB scores	
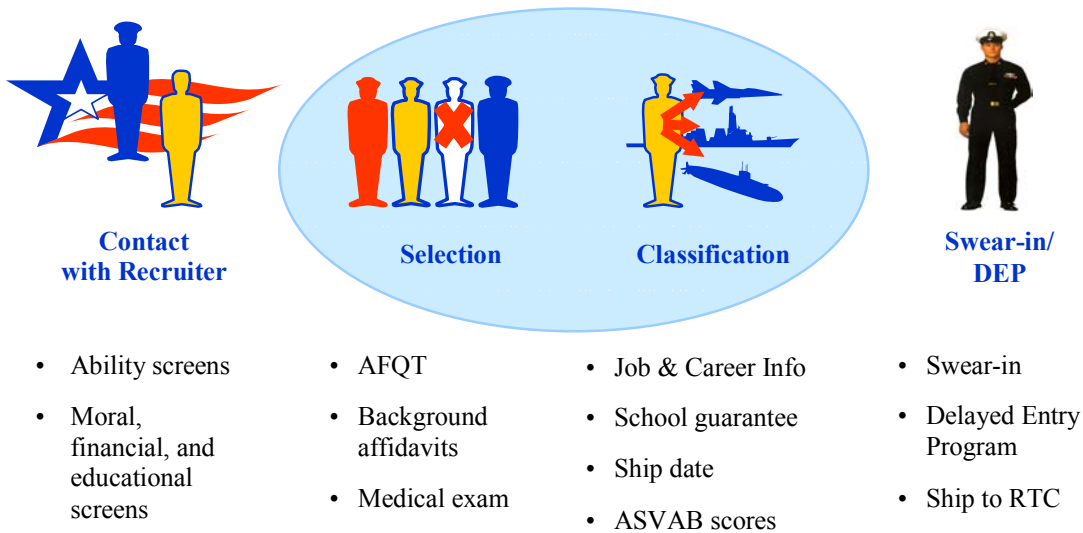
Figure 2H-1: The Accessing Process.

Selection is the process of legally qualifying a civilian for military service. The first step is for the applicant to take a group-administered test, the Armed Services Vocational Aptitude Battery (ASVAB), which takes from 1.5 – 3.0 hours and is composed of eight tests (two verbal, two math, general science, mechanical, automotive/shop, and electronics information) measuring verbal, math, and technical knowledge. Armed Forces Qualification Test (AFQT) is a combination of the math and verbal tests that are rescaled to a cumulative percentile (1 – 99) of the general youth population. The AFQT, high school diploma status, and rudimentary physical exam qualify a person to join the Navy. The selection process has been shown to minimize basic training (RTC) attrition, primarily through the requirement that 90% of recruits have a high school diploma.

Classification is the phase where a person is offered a particular job and signs a contract for service. There are roughly 80 entry-level jobs for the Navy. Classification consists of recombining the eight ASVAB tests into 12 – 16 composites (unit-weighed sums of two to four tests), and then determining for which initial technical training a person is at least minimally qualified. Minimum qualification is the Navy's numerical cut-off score to control "A" School (initial technical training) attrition. At the start of the applicant interview, the classifier queries a database and is shown the schools for which the applicant is qualified. The classifier also accesses

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[5] Alderton, David L., Whole Person Assessment Briefing, 2002 – 2005.

the list of jobs the Navy needs to fill most critically. Because it is in the Navy's best interest to fill critical jobs first, the classifier is motivated to "sell" one of these jobs to the applicant. This classification interview lasts 7 – 10 minutes, but dictates the applicant's entire Navy career, the training they receive, the places they will go, the ships to which they will be assigned, and even their post-service civilian job opportunities.

Because this process is not designed to optimize person-job matching – that is, ferret out those matches in which the Sailor has the greatest chance of successful job performance and career-long job satisfaction – ONR has funded research to improve selection and classification. The result will broaden the measures used to assess an applicant's suitability to the Navy in general and to a job rating in particular. In addition to the cognitive measures of the ASVAB and AFQT, the Whole Person Assessment will include non-cognitive measures, such as conscientiousness, social judgment, extroversion; and vocational interest. Job matches will be made with greater granularity and, when used with job performance measures, with greater predictability of job success.

Once Sailors complete initial and advanced technical training, they begin a career-long series of job assignments – assignments every two to three years, to a unit on shore or at sea, in a job that uses their technical specialty or a specialized skill. Assignments are made by "detailers," that is, individuals (usually other Sailors) who are given lists of jobs coming open and lists of Sailors coming up for job rotation. Within given parameters (e.g., limits on moving costs, sea-shore rotation schedules), detailers assign an individual to each job. Because some jobs are flagged as critical fills, the detailer, like the recruiter, is motivated to assign individuals to the critical jobs first, even if they are highly undesirable.

Dissatisfaction with job assignments and the job assignment process can be a major dissatisfier considered at re-enlistment time. An S&T research initiative currently underway has developed technologies which will improve difficult aspects of the assignment process and, hopefully, increase satisfaction with it. For example, principles of free-market auctions have been applied to demonstrate that difficult-to-fill assignments can be filled with volunteers at lower cost than "slamming" individuals into jobs non-voluntarily and paying across-the-board bonuses to compensate. Interim research demonstrations indicate that increased access to information about available jobs alone increase Sailor satisfaction with the process. In the final demonstration of the research, intelligent agent technologies will be used to give Sailors and commands representation during the assignment process, making their specific needs and preferences available for consideration by the detailer or detailing agent.

To help Navy leadership better manage the entire personnel pipeline (recruiting, selection and classification, training, detailing), a comprehensive set of decision support tools is under development. They will give Navy planners and managers the "big picture" view of what are now "stovepiped" processes and analytical tools to highlight changes occurring in the system, dissect causal relationships, and simulate implementation of various management decision options ("what if" gaming).

Poor personnel retention can further stress the recruiting process, thereby making it an area of concern, too. In fiscal year 2005, the Navy achieved only 91% of its mid-career retention goal.[6] Research now nearing completion will isolate factors which cause Sailors to decide to re-enlist or leave the Navy after their first term. These measures, along with data collected from Sailors, will help identify Sailors at risk of leaving so that appropriate intervention steps can be taken to persuade quality personnel to stay. Results from this work will be adapted to individuals at other career decision points as well.

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[6] U.S. Department of Defense Office of the Assistant Secretary of Defense (Public Affairs).

And change may to continue. Proposals for future S&T research focus on, among other things, further broadening and deepening personnel assessment – which in the future will include the total force (active duty, reserve, civilian, contract) – and empowering unit commanders to make more resource management decisions affecting their units. New personnel assessment tools and strategies would enable assessment throughout a career life cycle to help guide career development and job assignment. Elements of substitutability among members of the total force will be defined.

Driving decision-making down to unit commanders gives them direct control over resource decisions. Among those decisions would be direct selection of individuals for jobs within their units. Commanders would negotiate with and select from among members of the total force who "applied" for the job or matched as highly qualified. To encourage thoughtful decision-making, incentive structures, such as authorizing commanders to reallocate funds saved, would be explored.

Under Navy transformation initiatives, required end-strength is expected to decline from almost 366,000 in fiscal year 2005 to approximately 336,000 by fiscal year 2013, by and large from integrating the total force and from migrating from manpower intensive platforms (such as Nimitz class CVNs) to manpower efficient platforms (such as CVN21).[7] On the surface, that would seem to relieve pressure on recruiting and retention. On the contrary, the pressure to recruit and retain the *right people* will be on.

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[7] Bureau of Naval Personnel (N1/NT SPP), Manpower, Personnel, Training and Education brief, 11 April 2006.

Chapter 3 – LITERATURE REVIEWS FOR SELECTED RECRUITMENT AND RETENTION TOPIC AREAS

3.1 TOPIC CHAPTERS

The topics were chosen by an Exploratory Team and represented those subject areas with the greatest influence on recruiting and retention. Each of the chapters contains a one page executive summary, a main body, a section that describes specific links to the recruiting and retention models, and a list of practical recommendations to improve recruiting and retention in that subject area. While the issues of R&R are complicated and multi-faceted, the topics focus on key influences of individual decisions and policies that affect individual choice.

The information gathered for each of the topic chapters came from research literature in that subject area. In addition, the research examined came almost entirely from journals or organizations that published material in English. Therefore, they were not complete reviews of the subject area, but are focussed on how individual topics were related to recruiting and retention. For instance, quality of life and levels of PERSTEMPO and OPSTEMPO have had a number of very specific consequences on service personnel. The goal of the literature review for this RTG was not to describe all those consequences, but to examine research that explained how these consequences affected or would affect recruitment and/or retention. Where there was little or no research that pertained to recruiting and retention in a military setting, literature was used from academic and business settings to theorize how it would apply in a military setting.

Chapter 3A – THE IMPACT OF ADVERTISING AND MARKETING ON RECRUITMENT AND RETENTION

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3A.1   EXECUTIVE SUMMARY

As highlighted throughout this report, a number of economic, demographic and attitudinal issues have increased the challenge of recruitment and retention for military organisations in NATO countries.

The impact of advertising and marketing can be related to the various elements of the models of recruitment and turnover developed as a result of the work conducted by this NATO task group and presented in this report. Advertising and Marketing will have an impact on a potential recruit's perception, knowledge and understanding of the job and attributes of the organization. In terms of recruitment this will influence the individual's perception of how well they will 'fit' within the organization and thus affect the attractiveness of the organization and the individual's subsequent job pursuit intentions. Once an individual has joined an organization how accurate these perceptions were may influence; their transition into the organization, their fit with the organization, their levels of job satisfaction and ultimately their level of commitment to it and thus, whether the organization can retain them or they decide to voluntarily leave.

As advertising and marketing can have such an impact on recruitment and retention, organizations should ensure that these activities are conducted to the optimum affect. This chapter reviews the research in these areas and makes practical recommendations for military organizations to consider. These include: Consideration of organisational branding; Publicity should be used in conjunction with other recruitment activities; Both low and high involvement advertising and marketing strategies should be used; Advertising and marketing material needs to convey clear information about the range of opportunities available within military organizations and the range of entry standards. Advertising and Marketing and recruiters should reflect a realistic picture of military life; any recruitment campaign should ideally be aligned to either a competency model or a set of core military values.

3A.2   INTRODUCTION

Advertising and marketing plays a very important role in recruitment and retention. These activities will have an impact on a potential recruit's perception, knowledge and understanding of the job and attributes. This perception will influence an individual's decision on whether to join or ultimately stay with an organisation.

3A.2.1   The Impact of Advertising and Marketing on Recruitment

As discussed in the topic chapter, *A Proposed Model of Military Recruitment*, there are many definitions for recruitment. Earlier definitions, such as Rynes (1991) and Breaugh (1992), focused on recruitment outcomes rather than the recruitment process. To avoid defining recruitment in terms of its consequences, Barber (1998) adopted a narrower definition: "Recruitment includes those practices and activities carried on by the

organisation with the primary purpose of identifying and attracting potential employees." This definition has been extended to include an element of retention, for example, Taylor and Collins (2000) defined recruitment as "the set of activities undertaken by the organisation for the primary purpose of identifying a desirable group of applicants, attracting them into its employee ranks, and retaining them at least for the short term" (p. 306).

3A.3   LEVEL OF ADVERTISING ACTIVITIES

Advertising and marketing will influence potential applicant's opinions about an organisation through a number of mechanisms and can work at different levels. The literature on general marketing indicates that advertising strategies range from low involvement to high involvement in nature (MacInnis and Jaworski, 1989). This also seems to reflect recruitment advertising strategies (Cable and Turban, 2001). Low involvement recruitment practices are designed to require few search and processing efforts on the part of job seekers and high involvement activities require a greater degree of search and processing effort from the job seeker. Figure 3A-1 shows the direction of flow for an individual becoming a job applicant.
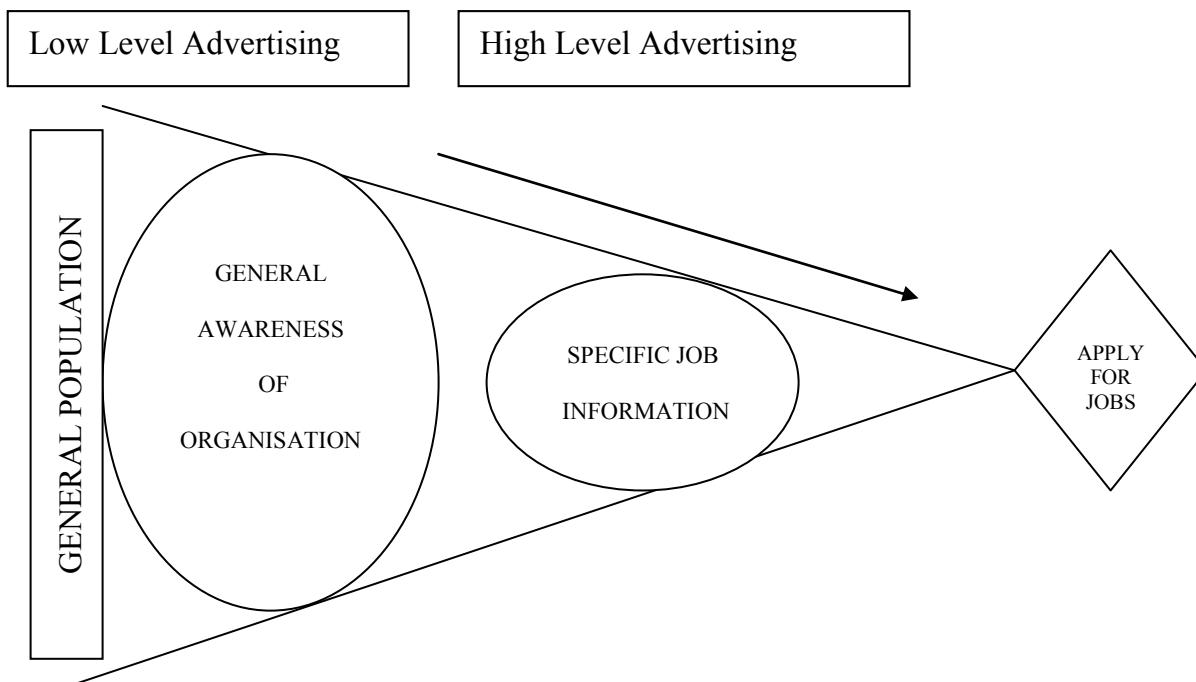
Figure 3A-1: Influence of Levels of Advertising.

3A.3.1   Low Involvement Advertising

Low involvement advertisements influence potential customers by exposing them to organisations in an incidental manner (Shapiro, MacInnis and Heckler, 1997). Similarly organisations are increasingly looking to influence job seekers through general recruitment advertisements that create awareness of the organisation as an employer, and convey positive cues to job seekers through logos, pictures and visual images that require little processing effort (Martinez, 2000). In this way organisations can influence potential job applicants, even when they are not actively searching for information about jobs or careers or even considering changing employment.

General marketing research has shown that mere exposure to a company can increase its attractiveness to consumers (Mitchell and Olson, 1981). This has also been shown to be the case in recruitment research. Gatewood et al, 1993 and Turban, 2001 found that job seekers are more attracted to familiar companies than unfamiliar.

One form of low-level advertising is sponsorship. Market researchers have found that sponsorship is effective because consumers develop positive, general feelings towards the sponsoring company based on their experiences during the sponsored event or activity (Johar and Pham, 1999). Similarly, Collins and Stevens (2002) found that recruitment sponsorship affected application decisions by increasing student job seekers' general attitudes towards an organisation. A recent example of this type of marketing activity was a high profile Everest expedition undertaken by the British Army. The expedition was well publicised in the media, including a dedicated website: www.armyoneverest.mod.uk.

3A.3.2   High Involvement Advertising

High involvement advertising seeks to provide more detailed information about companies or jobs. Examples of high involvement recruitment are detailed job advertisements and company brochures that provide detailed information about specific jobs and company attributes. High involvement practices require greater cognitive effort to process than do low involvement practices because they contain detailed information about jobs or organisations. Due to the nature of the information that they convey, high involvement advertisements cannot be processed subconsciously or peripherally in the way that low involvement ones can. Individuals must be motivated to seek out these sources of information. These recruitment tools cannot influence passive job seekers, but only those who actively look for this type of material and are prepared to process the information that they contain.

3A.3.3   Functions of Advertising

3A.3.3.1   Raising Employer Awareness

One area in which advertising and marketing can influence individual's job application decisions relates to organisational knowledge. Even before individuals consider seeking their first job or career they will be aware of organisations, industries or work environments. Their parents will also have opinions about organisations and career fields that may influence whether they will consider specific careers.

In order to apply for a job, or even seek out information about a particular organisation, a potential applicant needs to know that the organisation exists.

Recruitment activities should begin with increasing potential applicants' awareness of the organisation. At this initial phase of recruitment it is the general awareness and knowledge of a potential employer that is important. Familiarity with organisations can also affect the attractiveness of that organisation. Research has shown that increased exposure to previously neutral objects can lead to increased liking (Zajonc, 1968). Cable and Graham (2000) also found that those organisations perceived as more familiar, were also perceived as more attractive. Research has also shown that when individuals perceive that they have many alternatives with regard to potential employers, they are less likely to perceive a particular organisation as attractive. So organisations also need to focus on building a positive image so they become an employer of choice, rather than have people joining the organisation because they have 'no alternative'.

In summary, the earliest recruitment activities should aim to increase general awareness of the organisation within the general population. Also, advertising and marketing at this stage should create a positive image of the organisation to the general population.

It has been shown that a major function of advertising and marketing is to raise the profile of the organisation with the general population. However, it should also increase the awareness and realistic knowledge of the employer within the target recruitment pool. Cable and Turban (2001) define 'employer knowledge' as 'a job seeker's memories and associations regarding an organisation as a (potential) employer.' Employer knowledge provides applicants with a template to categorise, store and recall employer-related memories.

3A.3.3.2   Promoting Employer Image/Branding

Employer image consists of the beliefs that applicants hold about the employer: ranging from 'employer information' (beliefs about objective aspects of the organisation, such as historical information) to 'job information' (the attributes of a specific job they might apply for). There is a general awareness of military organisations; however, this awareness is not always positive or accurate.

In order to try and promote an accurate image of an organisation there has been a rapid growth in the importance of the 'employer brand' and communicating a consistent message is becoming a vital part of the advertising mix. Employer branding is far more than the tactical application of a logo or trademark to a company's packaging or other communications. A brand is to a company what a personality is to a person (The Recruitment Society, 2004). In its broadest sense, branding is a process, an ongoing practice where all the tangible and intangible elements that constitute a company's image and reputation are organised and communicated. In this sense, branding takes on a life of its own, it becomes a driver of satisfaction and loyalty. It can be a significant differentiating factor between organisations competing for job applicants. In the same way that attitudes affect the way people react to other people they are also more forgiving and trusting of a brand they know and feel good about (Hunt and Landry, 2005).

Two dimensions of employer branding that have been shown to impact on applicant intentions to apply for jobs with an organisation are; general attitudes towards the company and perceived job attributes (Collins and Stevens, 2002). These in turn have been identified as being affected by the early recruitment activities of publicity, sponsorship, word of mouth endorsements and advertisements (see Figure 3A-2).

Early Recruitment Activities	**Employer Image**	**Individual**
Publicity Sponsorship Word of mouth Endorsements Advertisements	General attitude towards the organisation Perceived job attributes	Job Application Decision
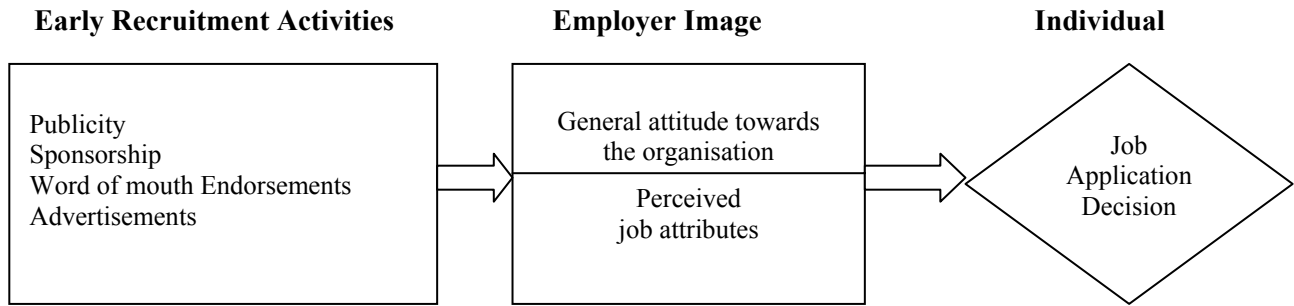
Figure 3A-2: The Interaction of Early Recruitment Activities and
Employer Image on Individual Job Application Decisions.

In addition, those early recruitment-related activities interact with one another such that employer brand image is stronger when organisations use publicity in conjunction with other early recruitment-related activities.

3A.3.3.3   Enhancing Employer Reputation

Another factor that contributes to the employer image is the reputation or prestige of the organisation. Highhouse et al (2003) suggest that social reference is the basis for the construct of organisational prestige. An organisation is considered to be prestigious if it inspires thoughts of fame and renown in the minds of those who hear of it. This prestige reflects a social consensus on the degree to which the company's characteristics are regarded as either positive or negative. Employer reputation also relates to the public evaluation of an organisation. Lievens and Highhouse (2003) put forward a 'trait-oriented' perspective of employer reputation. They suggest that potential candidates reliably and meaningfully ascribe traits to organisations. These traits describe the organisation in terms of subjective, abstract, and intangible attributes. They also convey symbolic company information in the form of images that applicants assign to organisations.

In summary, the impression that the general public has of an organisation will increase or reduce the attractiveness of that organisation as an employer to potential applicants, and very importantly for military organisations, the parents of potential applicants. Thus in order to increase the number of applicants, organisations should consider their image and how to portray this in advertising and marketing campaigns.

Marketing and advertising are major ways of influencing the impression that individuals have of an organisation. However, in the case of military organisations the media also has a huge impact on public opinion and this is not always positive. When the reputation and prestige of military organisations is reduced it is even more important to use appropriate marketing and advertising campaigns. Research has shown that both recruitment advertising and positive word of mouth can mitigate the effects of negative publicity on organisational attractiveness (Van Hoye and Lievens, 2005).

3A.3.3.4   Increasing the Recruitment Pool

The primary goal of early recruitment activities should be to attract the largest possible pool of qualified applicants to an organisation. Early phases of recruitment are crucial as later recruitment practices can only maintain and degrade the size and quality of the initial applicant pool and not increase it (Carlson, Connerly and Mecham, 2002).

When recruitment levels are low and target numbers of new recruits are not being met, then one way of attempting to address the problem is to aim to reach a larger pool of applicants. This is achieved by targeting sections of the population not normally considered as potential applicants. This strategy includes targeting a wider range of potential applicants than has previously been considered, and the use of new, innovative practices to reach potential applicants.

For example, one of the Republic of Singapore Navy's recruitment campaigns looks to spur response rates by sending potential applicants a personalised book that resembles thrillers written by such authors as Tom Clancy and John Grisham. Aiming to dramatise the core message, "Join the Navy and lead a life that has the makings of a great story," the books were sent out to approximately 4,000 final year students at Singapore's ITE and Polytechnic institutions. Three different books were sent out with the titles, *Courage at 640 Knots*, *Uncharted Depths*, and *Stealth Force*, followed by the subtitle, *A true story*. The books were personalised by using each recipient's name as the author of their specific book. In addition, the recipient's name was printed on the spine, and the recipient's address was included as part of the copy on the back cover. Inside the book, a personalised letter provided details of the life on offer at the Navy.

Another example of creative advertising is the UK's radio campaign for the Territorial Army (TA). Six advertisements illustrate the specialist areas within the TA, and then use a dialogue between a member of the regular Army and a member of the TA to challenge the listener to figure out which is which, leaving the listener realizing there is very little difference. The campaign also aimed to increase the response by the fact that a texting response mechanism supplemented the usual website call to action.

The Spanish have highlighted the changing focus of the military from war-fighting to peace-keeping in their marketing campaigns.

3A.3.3.5   Providing Accurate Information for Potential Recruits

Once the low involvement advertising and marketing of a company has achieved its aim of increasing general positive awareness of an organisation in the general population, high level advertising techniques should be used to provide accurate and detailed information about specific jobs and the attributes required for that job. As high involvement practices communicate detailed information about both the rewards and requirements of a job, these practices affect applicant pool quality by attracting appropriately qualified applicants (Collins and Han, 2004).

Expectancy theory (Vroom, 1964) can be used to explore the individual's motivations to apply to a company. Vroom suggested that individuals are motivated by instrumentality (likelihood that job has certain attributes), valence (the attractiveness of those attributes) and expectancy (the individual's belief that they would be successful in the process). Expanding on this theory Rynes (1991) argued that although high involvement practices may increase attraction, the detailed information they convey is likely to decrease the expectancy for less-qualified applicants. In contrast, job seekers with greater qualifications are likely to have high expectancies and should, therefore, be more likely to apply to firms that have used high involvement recruitment practices. Barber (1998) also found evidence that qualified individuals are more likely to respond to job advertisements when they provide specific information on what the organisation has to offer.

In summary, advertising and truthful marketing has the potential to educate individuals in order that they can fairly assess the organisation against the factors that make an organisation attractive to them. In addition, accurate information regarding entry requirements allows potential applicants to judge their likelihood of success in applying for a job to an organisation and thus increase the quality of applicants, which will impact on recruitment. As military organisations tend to have a wide range of job opportunities requiring varying levels of qualifications it is important that potential recruits are made aware of all the options available for them to consider.

3A.4   ALLOWING POTENTIAL RECRUITS TO ASSESS THEIR PERCEIVED FIT WITH THE ORGANISATION

Perceptions of the job and organisation have a positive, direct effect on applicant attraction. Organisational attributes (i.e., advancement, opportunities and location) all influence individual fit assessments. Schreurs found that job and organisational attributes will have a positive indirect effect on organisational attractiveness through influencing perceived fit (see topic chapter, *Realistic Information or Not? Short-Term Consequences of (Mis)Information*).

Individuals will be more inclined to pursue jobs that match their skills, abilities and values. Kammeyer-Mueller and Wanberg (2003) noted that those people who have accurate information about all aspects of a job

will be better able to assess the extent to which they will 'fit' in their new positions. This impacts on both recruitment and retention, as individuals are more likely to apply for jobs in organisations that they feel will match their requirements. By the same token, people who apply for jobs on the basis that the position will match their abilities and preferences rather than on the basis of limited information are more likely to report high job satisfaction and lower intentions to leave. This highlights the importance of the need to inform the recruitment pool of the military ethos and specific job opportunities in order to attract not only a large number of potential employees, but also the right ones.

The initial information that a potential recruit receives during recruitment will contribute to the psychological contract between the organisation and employee. (See topic chapter, *The Psychological Contract: A Big Deal!*). As the psychological contract is important for organisational commitment, setting appropriate expectations is of great importance in recruitment. Although Advertising and marketing campaigns must sell the organisation care should also be taken to ensure that they do not over-sell the benefits of working for an organisation. For example to offer a new recruit to the military geographical stability, a standard 35-hour week, civilian qualifications and a large bonus each year may be unrealistic. Recruiters should not try to 'over-sell' positions; they should focus on what is offered, and introduce candidates to other benefits of working for the armed forces. For example; many people join the military to travel, but recruiting offices should not suggest to new recruits that they will be posted to an exotic location within months of joining.

3A.5   THE IMPACT OF MEDIUM USED FOR ADVERTISING AND MARKETING

The choice of media used for advertising is important because media differ in their ability to communicate certain types of information effectively. Media Richness Theory (MRT) was proposed by Daft and Lengel (1984) and provides a framework for understanding the effects of communication media on organisational communication. MRT suggests that the effectiveness of recruitment media will depend on the match between communication requirements and media richness. Richer media possess the capacities or channels needed to communicate information that is high in volume, complex, ambiguous or unfamiliar to receivers. Therefore richer media should be used for the high level advertising. Four specific types of capacities are proposed to differentiate richer media from leaner media: opportunity for two-way communication, ability to convey a multiplicity of cues (e.g., verbal, non-verbal), ability to convey a sense of personal focus (e.g., warmth, personal presence), and language variety.

Some media are linked to a single type of communication channel (e.g., the radio uses only audio channels). Video messages on the other hand may provide audio, visual and text channels, whilst face-to-face recruitment will go further and may additionally support two-way communication between sender and receiver.

The style of advertisement will impact on its effectiveness. There is evidence that vivid persuasive information that uses colourful images, graphics, pictures, personal anecdotes or emotionally stimulating information has stronger effects on attitudes (Keller and Block, 1997). This also relates to classic long-term memory theories: if the information is portrayed in a vivid manner, and is rehearsed on a number of occasions, it is more likely to be recalled at a later date. Thus advertisements should be designed with these theories in mind.

It is also important to consider the target audience when deciding where to advertise the organisation. A recruitment advertisement aired on television in the daytime would reach a very different audience than an advert posted on a commuter train. The impact of advertising will therefore depend upon targeting the correct

audience. However, when the aim of the advertising is to increase the applicant pool, as previously discussed, then it may be beneficial to consider additional placement of advertisements.

3A.6   TRENDS IN RECRUITMENT ADVERTISING

The UK recruitment society identified the following trends within recruitment advertising at their 2005 conference. The previous three years had seen a year on year decline in recruitment advertisement, with a 35% drop in billings. However, public sector recruitment has grown and now accounts for 70% of the recruitment market. More recently there have been signs of a recovery with an increase in recruitment advertisement. For the military this could mean more competition for potential job applicants and therefore even more need to use effective advertising and marketing campaigns. The society concluded that there is evidence that the market is tightening still further and employers will have to become ever more innovative and imaginative.

The society also identified the following issues that will have to be confronted by advertisers:

- There has been and is likely to continue to be rapid growth in the importance of Employer Brand. The employer brand will influence the use of the media mix and more complex decisions will have to be made on the mix of media used. These decisions will increasingly be dominated by brand positioning and development.

- Client and candidate expectations have changed. The traditional waiting for responses by candidates will no longer be tolerated. The use of the internet has changed attitudes in the sector and this will have huge implications for employer behaviour and deployment of resources. This will be a particular concern for the military as the recruitment process is typically very long within the military, and therefore there needs to be an added focus on ensuring that strong interpersonal relations are maintained with the candidate throughout, and that the 'candidate-employer bond' is strengthened through reinforcing marketing campaigns. The attraction of candidates needs to be maintained up to the point they begin work, as they can pull out of the process at any time.

- There has been a growth in on-line recruitment. However, the offline market will not disappear. Creative solutions will be needed for effective use of this medium alongside online.

- Employers and agencies need to become more proactive in order to attract the best candidates. This means making more resources available for recruitment campaigns, including better research. Employers and agencies need to move more swiftly into new strategies.

3A.7   CONCLUSIONS

Advertising and marketing can have a significant impact on recruitment and retention in general employment areas and therefore it can be assumed it will also have an impact on the recruitment and retention of military personnel. Indeed as the military is well known to the general population and often receives negative publicity, it could be argued that military marketing and advertising campaigns have to work even harder than those of other organisations. Research has shown that a number of factors are important to be considered and these are summarised below in Table 3A-1. This is followed by practical recommendations for the military to consider.

Table 3A-1: Summary of Research

RESEARCH FINDING	PRACTICAL RECOMMENDATIONS
Recruitment sources affect the characteristics of applicants attracted.	Use sources such as referrals (e.g., from current employees) that yield applicants less likely to turnover and more likely to be better performers.
Recruitment materials have a more positive impact if they contain specific information.	Provide applicants with information on aspects of the job that are important to them, such as salary, location and diversity.
Organisational image influences applicants' initial reactions to employers.	Ensure all communications regarding an organisation provide a positive message regarding the corporate image and the attractiveness of the organisation as a place to work.
Applicants with a greater number of job opportunities are more attentive to and more influenced by early recruitment activities than those with fewer opportunities (i.e., less marketable individuals).	Ensure initial recruitment activities (e.g., web site, brochure, on-campus recruiting) are attractive to candidates as later activities.
Recruiters' demographics have a relatively small effect on applicants' attraction to the organisation.	Worry less about matching recruiter/applicant demographics and more about the content of recruiting messages and the organisation's overall image in terms of diversity.
Applicants will infer job and organisational information based on the organisational image projected and their early interactions with the organisation if the information is not clearly provided by the organisation.	Provide clear, specific, and complete information in recruitment materials so that applicants do not make erroneous inferences about the nature of the job or the organisation as an employer.
Recruiter warmth has a large and positive effect on applicants' decisions to accept a job.	Individuals who have contact with applicants should be chosen for their interpersonal skills.
Applicant's beliefs in a 'good fit' between their values and the organisation's influence their job-choice decisions.	Provide applicants with accurate information about what the organisation looks like so that they can make accurate fit assessments.

Taken from Ryan and Tippins (2004).

3A.8   PRACTICAL RECOMMENDATIONS

Military Organizations need to carefully consider their image. Having a brand that is consistently communicated will help differentiate between organizations. Where negative publicity exists recruitment advertising and word of mouth endorsements can mitigate the effect. Organizations should use publicity in conjunction with other recruitment activities such as sponsorships and word of mouth endorsements to improve their image with potential recruits.

Military Organisations should use both low and high involvement advertising and marketing strategies in order to increase potential applicants. Low involvement strategies should be used to increase the general awareness of the organisation and to present a positive image of the military to the general population. Low level advertising and publicity could also mitigate negative publicity. High involvement strategies should be used to provide accurate and detailed information regarding the range of jobs available within military organisations and the various levels of qualifications required.

Advertising and marketing material needs to convey clear information about the range of opportunities available within military organizations and the range of entry standards. It should be designed to allow potential applicants with a variety of backgrounds and ability to have realistic expectations of their chances of success with the organizations.

Advertising and Marketing and recruiters should reflect a realistic picture of military life to ensure recruits do not feel that they have been miss-sold the military life. Many recruits feel that their expectations of military life are not met, at least during training, and this will have an impact on retention.

It is important for the military to consider who they are recruiting, and their motivation for applying to the military. Any recruitment campaign should ideally be aligned to either a competency model or a set of core military values (see topic chapter – Values Research). The advertising campaign should then be tailored to attract the ideal candidate.

Chapter 3B – MANAGEMENT OF RECRUITMENT, SELECTION AND CLASSIFICATION

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3B.1 EXECUTIVE SUMMARY

This chapter focuses on the management of recruitment, selection, and classification of military personnel. The term 'management' as used in this chapter does not refer to the conduct of the day to day practice, but to the overall organization of a highly complex process aimed at providing the Military with adequate recruits. Particular attention is devoted to those areas where managerial decision-making is of critical importance in shaping the outcome of the whole process.

The chapter looks at the definition of recruitment goals and sheds some light on often unspoken basic options. Attracting applicants is only touched in this chapter as a separate chapter deals with Advertising and Marketing in Recruiting. Next section covers applicant processing and discusses different opinions of involved parties. To understand the whole process better, it is important to acknowledge these sometimes quite opposite opinions. Next topic is about applicant assessment: how required Knowledge, Skills, and other Attributes (KSAs) are identified and measured.

In addition, a number of special topics are discussed for these are very present in current discussions concerning recruitment for the Military. The special topics encompass accountability for the taken decisions, fairness for women and minority members, process management, the question whether skills and abilities must be sought through selection or acquired through training, downsizing, and the transition from conscription and the tri-service approach.

Finally, following practical recommendations are given:

- Challenge basic options;

- Recognize different visions pertaining to S&C;

- Use adequate methodology to define selection standards;

- Work towards utility analysis;

- Use batch classification;

- Make sure S&C decisions can be justified;

- Use quota or group-membership benefits when proportional representation is sought;

- During downsizing, avoid limiting recruiting; and

- Where possible, use a tri-service approach.

3B.2   INTRODUCTION

A few rules about personnel seem to apply universally to organizations and can therefore be considered axioms. A first rule states that no organizations can exist without personnel. A second one tells us that no one remains a member of personnel for an organization forever. As a consequence, for an organization to survive, it will need to replace personnel that leave. The Military is no exception to this set of rules. The management of attracting, assessing, and classifying new members of personnel for the Military is the topic of this chapter.

Some readers might infer from the title that this chapter will encompass practical management issues such as what tests must be used, how long can applicants be tested, what database management system should be used, etc. That is however, not the purpose of this chapter. Rather, we will focus on methodological principles, which we believe to be somewhat specific for the Military. Once these principles are clear, deriving practical consequences should be easily achievable. There is a vast literature available to help.

The Military is a large organization, even in smaller countries and in times of severe downsizing. Selection methods that are applicable to very small businesses cannot be used for the Military. In very small settings, it is feasible to have one person assessing all applicants over a short period of time and actually compare the applicants before choosing the right one. In larger systems, this approach is doomed to fail. In order to be effective, recruiting for the Military must be structured and managed in accordance with a set of principles that we will try to describe and illustrate in the following pages.

Before setting out for the remainder of the chapter, it might be useful to define a few terms that will be used:

- A vacancy: a single position or post of employment that is unfilled or unoccupied and for which a new recruit can be engaged.

- An entry: a set of identical vacancies.

- Selection: the assessment of suitability of applicants for the entries they want.

- Classification: the assignment of applicants to entries in a multiple-applicant, multiple-entry setting.

3B.3   DEFINING THE RECRUITMENT GOALS

3B.3.1   In General

Military organizations tend to be very well structured. In order to generate specific capabilities, units are designed. Their design includes possible missions, equipment, functional organization, and human resources. In the end, every unit has a list of positions along with their required competency profile. As we already mentioned, every member of personnel leaves his or her position sooner or later and needs to be replaced in order to maintain the unit's operational status. Two major sources of potential replacements can be considered: internal shifts of personnel or external recruiting of new personnel. Of course, shifting personnel is not a complete solution since somewhere down the line, a position will have to be filled by a new recruit.

Opening a new vacancy as a reaction to the loss of a member of personnel would of course prove to be a very poor recruiting policy. The reasons why are manifold. Here are a few.

First, there is the time delay between opening a vacancy and having a trained recruit able to fill that position. In general we can say that between those two events, following things need to be done: attract applicants, select and classify them, enlist them, train them and allocate them to the position that needs to be filled.

That process can easily take from months to years depending on the ease of recruiting and the length of the required training. To cope with that problem, anticipation is needed based on the certainty that a member of the Military will leave at a certain date (e.g., end of contract, retirement, etc.) or based upon statistical expectations.

Second, we need to consider the possibility that a person is lost between the moment he or she is accepted to enlist and the moment he or she can effectively be employed in the position that must be filled. All reasons for this are extensively covered in other chapters. The bottom line is that recruitment objectives must be adjusted for this. Statistics again, come as a useful tool to deal with the problem.

Third, there are many constraints coming from the training side as to when can be recruited for what trades. It is indeed unfeasible for any training command to start a specific training for each kind of entry say every week or month. That means that delays will occur between the time a person is ready to take the appropriate training and the time the training command can let the training begin.

When these and probably many other aspects have been taken into account, the recruitment objectives finally can be set. These will include the numbers to recruit, the selection criteria and the timing for enlistment for each entry that needs to be recruited for.

3B.3.2   Basic Options

When we have a look at the entries the Military recruit for, a number of basic and often implicit options become apparent.

Most Military distinct three personnel categories: enlisted personnel, non-commissioned officers (NCO) and officers. In most settings, a direct entry to each of them is possible. This however, is not a necessity. In the US for instance, there is no direct recruiting of NCOs. This personnel category does exist, but is composed exclusively of persons that joined the Military as enlisted personnel and got promoted. In Israel, there is only a recruiting of enlisted personnel and the NCOs and officers are drawn from the lower category. The chosen option bears upon propensity and personnel quality. While it is easy to assume that NCOs will be better assessed and more experienced when they are drawn from a pool of enlisted men than from a pool of civilians applying for direct entry, it also may have a negative effect on the propensity to become an NCO.

A second thing that is apparent is that in general only the lowest rank of each personnel category is made available for recruiting: You can join the Military with the prospect of being a second lieutenant after your academy training, but you cannot apply to become a major or a general. In our opinion, the reasons for this developed historically and are twofold. On the one hand, competencies gained through military experience are believed to be a major subset of the competencies needed in more senior positions. On the other hand, the military promotion system is very much based on the assumption of lifetime employment. Promotion is usually automatic after a number of years of service or based upon a suitability assessment that cannot take place before a number of years after the previous promotion. We believe that both causes can be challenged.

In some countries where the principle of lifetime employment is still embraced by the Military, recruiting is limited to the combat trades. The idea behind that choice is that personnel in combat trades must be young in order to meet the harder physical requirements. In order to keep these people at work in the Military well into their fifties, it is necessary to employ them in less demanding jobs once they are say 35 or 40 years old. So, a system is put into work where all young people join for combat trades and change to less demanding trades once they reach a certain age. From a recruitment perspective, such systems have two major drawbacks. One, they severely limit the diversity of jobs for which the Military recruit and that significantly reduces the

segment of the population that is prepared to join. Secondly, such a system assumes that the distribution of qualities needed for the physically less demanding trades is present in the group of persons hired for the combat trades and that is questionable.

In this section, we just reviewed a few basic options that are taken in many military recruiting settings. We did this to illustrate the fact that these options bear an influence upon the recruiting and suggest putting these under scrutiny when recruiting situations are less favorable.

3B.4   ATTRACTING APPLICANTS

Attracting applicants is the next logical step in trying to meet the recruitment goals. This chapter will however not deal with this important step as it is covered in Chapter 3A on *Advertising and Marketing*.

3B.5   PROCESSING APPLICANTS

After having defined the recruitment objectives and hopefully having had some success in attracting applicants, we face a situation in which we have a number of applicants for a number of (usually different) positions. The question that now needs to be addressed is who are we to enlist and for what entry?

The way in which the question will be solved depends on a number of fundamental, yet often-implicit beliefs of the decision makers in charge of recruiting. Let's briefly review some possible points of view.

The I/O psychologists usually look at psychometric aspects of the recruiting situation. They try to predict some external criteria such as training results based upon selection data. The relative importance of the different selection tools is then derived from their incremental validity. Although their approach is very valuable, it easily can be biased for two reasons: first there is the choice of the external criterion. For reasons of standardization and duration of the feedback loop, it is very appealing to them to choose training results as validity criterion. Yet it is very doubtful whether this is the best criterion to choose since it is only distantly related to job performance. Secondly, as an artifact from the used statistical methods, it very well may be that an important attribute is overlooked. That will be the case when the measurement of the attribute is particularly difficult as it is the case for personality and motivation for instance. That translates in relatively low reliability and validity and consequently in a lower weight in the selection procedure.

Training commanders have a different view. They usually are keen on getting recruits that can be trained easily. There is nothing wrong in that unless the KSAs required to succeed in training depart from those needed for later job performance. That typically can occur in officer training at military academies. In such situations, training commanders will influence the way selection and classification (S&C) works to maximize academic qualities at the expense of qualities that are less useful in a training setting such as leadership for instance.

Politicians tend to have a slightly different view on recruiting for the Military too. They don't focus exclusively on what they perceive as being the best quality for the Military. Instead, they see the Military within a broader societal perspective. In that context it may for instance be important that the composition of the Military reflects the overall sociological composition of the country. This brings them to take decisions to ensure a balanced representation of linguistic or ethnic groups and both genders. In some cases, the Military is also used to provide social promotion to less favored groups and measures are taken to accept (certain numbers of) persons with very low educational credentials or from specific ethnic background.

The military commanders have probably the best view on the job performance of military personnel. That knowledge can be very useful in directing the recruiting and selection effort. Yet, since they only deal with the combined outcome of selection, classification, and training, it is often difficult for them to differentiate between actions that need to be undertaken in the different phases preceding job performance. Military commanders also usually lack the adequate methodological background to influence the used techniques in an appropriate way. It therefore is highly recommended that managers and technicians of S&C work in close relationship with the military commanders at different levels.

The applicants finally are usually not considered to be part of the 'decision makers in charge of recruiting.' Yet they are, even if their decision-making is limited to their own person. Stopping their selection process or not accepting an entry that is proposed to them are the decisions they can make and these affect the overall recruitment outcome. That is why it is important to incorporate personal preferences and interests in the S&C decision-making and to adapt the recruitment process to meet their collective or even individual needs and expectations as far as possible.

The described points of view need to be combined in order to reach a practicable and acceptable recruitment system. For each entry, a set of pertinent attributes must be identified along with their relative importance in determining an applicant's suitability for the entry. This will essentially shape the applicant processing, as practical answers have to be provided to questions such as:

- How much overlap is there between the pertinent attributes for different entries the candidate is applying for?

- What measurement tools are needed to assess the different attributes (how long does it take, is it used individually or in group, must all applicants for an entry be assessed simultaneously [e.g., exams])?

- Is there interaction between the assessment tools (is there an order effect, is there a maximum workload for the applicant during a certain period of time)?

- Can the assessment be done remotely (at a decentralized location or via the Internet)?

- Does the applicant need additional information or practice to be able to be assessed (e.g., An applicant needs information on different trades before being able to express his preference. A pilot-candidate needs study time and maybe practice before being ready to be assessed on a flight simulator.)?

- Does the organization needs time to assess attributes in the absence of the applicant (e.g., for security clearances)?

The answer to these questions together with the number of applicants that must be processed, the time that is available for doing so, the available resources (personnel, material, information systems, facilities) will further narrow down the solution that is used to process the applicants.

Now we have set the conceptual framework for managing selection and classification, let us have a closer look at more specific aspects. We'll first deal with applicant assessment and decision-making.

3B.6   APPLICANT ASSESSMENT

As stated earlier, the recruitment goals do not only encompass numbers and a timeframe to meet these goals, but also a set of requirements concerning the applicants that are to be enlisted. In this section, the origin of these requirements and the tools that can be used to assess the applicants is discussed.

The origin and the scope of these requirements are varied. From a methodological point of view, selection requirements should be derived from performance appraisal on the job. Job analysis, occupational measurement or subject matter experts are among the most widely used methods to do so. Of course, the Knowledge, Skills, and other Attributes (KSAs) needed to perform well on the job, are not the sole merit of S&C. Training and the particular circumstances in which the job has to be done, are important determinants of job performance as well. We'll discuss the issue of selection versus training later in this chapter. In addition to the requirements directly deriving from the job performance, other sources of requirements, often only remotely related to job performance, are still quite common: citizenship, age, general biometric standards or gender are examples of such requirements. The origin of these requirements is more often historical than based on empirical evidence. There are for instance good examples of soldiers not having the country's nationality, yet being very effective within the Military (e.g., French foreign legion or the Gurkha in the United Kingdom). Sometimes economical reasons are invoked to deny access to particular entries to certain groups (e.g., women not allowed to become fighter pilots because of the anticipated costs resulting from unavailability due to pregnancies). There is a tendency to challenge requirements that cannot be linked to job performance and courts seem prepared to rule against such requirements.

The identified requirements do not only enumerate the attributes that are pertinent for an entry, but they usually also specify the desired level of these attributes. This comes in two formats: cut-off scores and attribute weights. A cut-off score is a level of a measured attribute under which an applicant is rejected for an entry. The attribute weights express the relative importance of the attributes in determining the suitability of the applicant for an entry. We'll discuss the use of cut-off scores and weights later.

Let's now take a closer look at the appropriate assessment tools. Given the variety of attributes that need to be assessed, it is no wonder that the tools needed come in very different shapes as well. These can include administrative checks, psychometric tests, interviews, medical examination, scholastic exams, physical fitness tests, security checks, and many others. Yet, despite this apparent variety, we can rate all these tools on three important aspects that are relevant for their use inside S&C systems: their measurement scale, their quality, and their costs.

A sometimes criticized (Velleman and Wilkinson, 1993) but still useful measurement scale taxonomy was proposed by S.S. Stevens (1946). Stevens enumerates four scale types (nominal, ordinal, interval, and ratio) according to the mathematical operations that are allowed to perform on the data. Recognizing the scale type to which selection data belong is paramount when we need to combine scores originating from a variety of selection tools in order to compute scores expressing the suitability of an applicant for an entry.

A second characteristic of assessment tools is their quality. The Standard Error of Measurement (SEM) indicates how much individuals' scores would be expected to vary if they had taken a different set of questions or if they were to retake the test. Some assessment tools have very small SEMs (e.g., biometric) while other have a quite large one (e.g., personality). Large SEMs have a negative effect on reliability and hence predictive validity. In addition, predictive validity depends not only on the quality of assessment during selection, but also on the cross-temporal and cross-situational stability of the measured attribute and the reliability of the used criterion. For relatively stable attributes, a large SEM (usually both at the predictor and criterion side) will lead to severe underestimation of the true relationship (if present) between the attribute measured during selection and job performance. In practice, two approaches to this issue are found; either the low quality of the assessment tool is recognized and that tool is not used or only with a very limited weight or the measured attribute is deemed to be so important that it is used in the decision process despite the low quality of the used measurement tool. In the latter case, it is paramount to be very cautious and to take the SEM into consideration. In any case it is recommended to do whatever is possible to lower the SEM of the assessment tools.

The third pertinent aspect of selection tools is their cost. Selection can easily been seen as a cost-saving activity. If it weren't for the costs related to training, it would be tempting to enlist all applicants and only keep the ones who succeed in training best or perform best on the job. Yet, when the number of applicants is significantly larger than the required numbers, this approach is far too expensive. The task of the S&C system is to identify these applicants that will be hired. While doing so, two somewhat contradictory goals need to be pursued simultaneously: minimizing the prediction errors and minimizing the costs of selection. In order to model this, 'utility models' were developed. A first attempt called the Taylor-Russell tables was developed by H.C. Taylor and J.T. Russell (1939). They used three parameters to build their tables: the validity coefficient, the 'base rate' (proportion of able persons in the applicant pool) and the 'selection ratio' (proportion of applicants to be selected). Their tables failed however to include a number of important elements. A major advance in the development of utility models was later achieved by Brogden, Cronbach and Gleser (Cronbach and Gleser 1965). Their 'BCG' model is basic linear regression equations for determining the impact of improved personnel selection on workforce output. It incorporates job performance measured in monetary value and allows the estimation of gain in productivity in dollars as a result of using a modified selection procedure. More recent applications derived from the BCG model (Schmidt and Rauschenberger, 1986) show the gain in productivity in an interactive way for a given recruitment situation as illustrated in next figure (Horey, 2005).
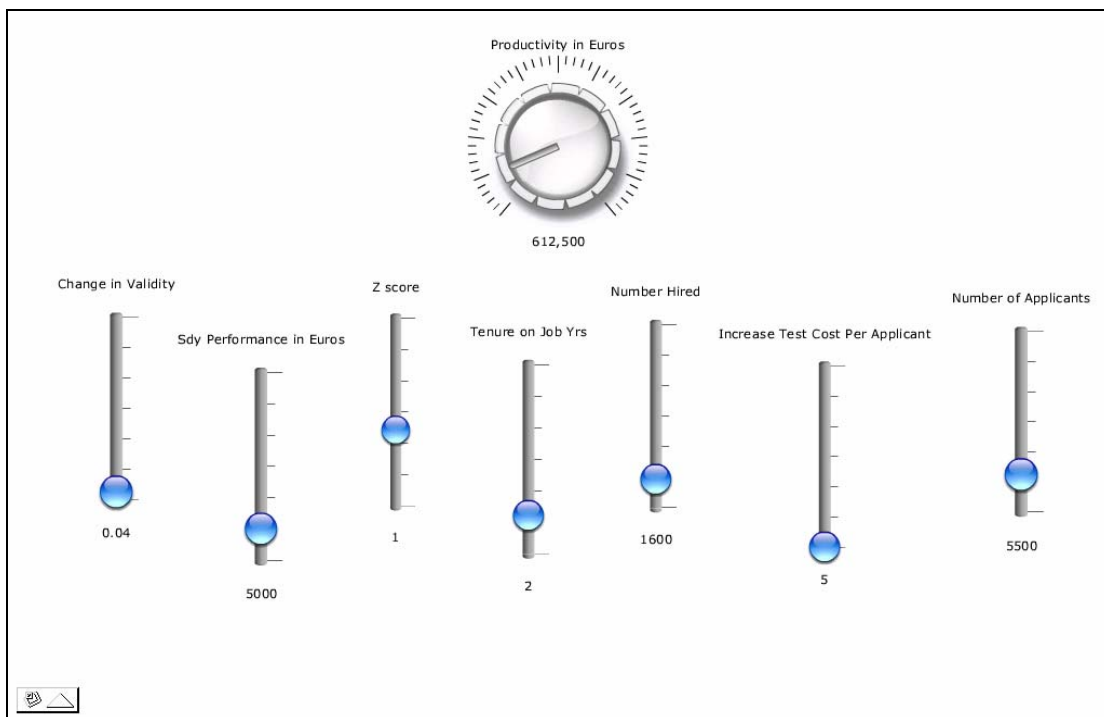
Figure 3B-1: This Tool Allows Describing a Recruitment Situation and Subsequently Estimating the Costs and Benefits of Adding a New Selection Tool Based upon the New Tool's Incremental Validity.

It is hard to overestimate the importance of utility analysis for S&C systems for it allows quantifying the usefulness of the different selection tools. Unfortunately, there are a number of prerequisites: stable prediction models and monetary value estimates of both selection costs and job performance. In practice, it often appears difficult to have both.

3B.7   DECISION MAKING

Two types of decisions have to be made concerning the applicant. First, it has to be established whether or not an applicant is eligible: does he meet the requirements to be enlisted? That decision has to be made for each entry the person is applying for. A question of particular interest related to this is when, or based upon what evidence, the decision can be reached. The second decision deals with all applicants that have been declared eligible for one or more entries. The question at stake is now: who among the applicants will be accepted and for what entry? Let us discuss both types of decisions now.

3B.7.1   Applicant Rejection

Let us consider a simple case in which a person applies for a single entry. For the sake of clarity, we'll take the example of Mr. A applying for the entry 'Infantryman'. During the selection process, different attributes will be assessed. If the applicant meets all requirements, he will be considered eligible for the entry. If not, enlistment for the entry will be discarded as an option. We'll now review decisions that can be made based upon individual or combined attribute scores.

3B.7.1.1   Rejection for a Single Attribute

In practice, it is often seen that a person is rejected for an entry based upon the measurement of a single attribute. For instance Mr. A could be rejected for his eyesight is completely deficient or because he doesn't meet the physical fitness standards. In theory, we can distinguish two cases, depending on the measurement level of the assessed attribute: categorical or metric.

For categorical measures, a person only belongs to one of a limited set of possibilities. Education level is one example. For instance, educational level could be categorized using one categorical variable with three classes: 'Less than high-school', 'High-school' and 'More than high-school.' For some reason, based upon empirical evidence, selection ratio or HR policy, it could be decided that persons belonging to the class 'Less than high-school' cannot be enlisted. If Mr. A happens not to have finished high school, his application ends there.

For metric measures, an applicant can obtain any one of a vast range of scores. Typical metric measures encompass test- or exam scores or biometric data for instance. Rejection of an applicant is then based upon a cut-off score. A cut-off score consists of a particular value on a metric or ordinal selection variable under which an applicant is unconditionally excluded from further participation in the selection process for an entry. The variable can be a simple measurement or test score, but also can be a composite score. One fundamental problem is due to the measurement error of the used selection instrument. To see the problem, let us consider what decisions are taken in the immediate neighborhood of the cut-off score. Imagine following theoretical situation. Say there is an applicant having a true score equal to the cut-off score and imagine the variable to be a true continuous one, which implies that the probability of obtaining an observed score, which is exactly the cut-off score, is zero. The dramatic consequence of what is described here is that whether the observed score will be larger or smaller than the cut-off score is entirely random and that is not very defendable. In fact, considering the usual magnitude of the standard errors of measurement and the tremendous consequences for a candidate of obtaining a score leading to rejection or not, all thresholds are heavily questionable. A second important problem is connected to the association between the selection variable on which the cut-off score is set and whatever external criterion is used. If we take a typical example of external criterion, say training performance, and study the relation between the selection and the criterion, we'll usually end up with a linear or curvilinear relationship. In selection practice, a pattern showing extremely low training results for low

results up to a certain value on the selection variable (which would be the obvious choice for a cut-off score) and showing acceptable or even good training results from that point on is most unrealistic. In practice, the relationship can often be represented by logistic regression curves. If a cut-off score were needed, it certainly would be advisable to choose it in the area where the logistic regression curve is the steepest – but then again, the exact choice of a point on the scale remains essentially arbitrary.

3B.7.1.2   Rejection for Combined Assessment (Composite Scores)

In many S&C systems, rejection of applicants is based upon composite scores. These scores combine a number of individual test scores and are often used to prevent the assignment of a person to specific jobs or job families. For instance, the U.S. Air Force Mechanical Aptitude Score is computed from the following ASVAB[1] tests: Mechanical Aptitude = General Science + Mechanical Comprehension + 2x Auto/Shop. This score is, for instance, used to reject applicants with poor results for the Helicopter Maintenance trade. In general, rejection based on composite scores is more acceptable than that based on single attribute measurement; this approach addresses one of the major drawbacks of single attribute rejection: the impossibility to compensate for a particular weakness.

3B.7.1.3   Risks and Benefits of Rejecting Applicants

From the management perspective, rejecting an applicant for a single attribute or composite score has both beneficial and potentially harmful consequences. The beneficial facet lays in the fact that the selection process is aborted. This means that from the organization point of view, no more costs associated with the further selection process of the applicant have to be endured. That benefit is a major reason why selection activities with a high rejection rate are usually placed at the beginning of a selection process. From the applicant side, this is also to be considered beneficial. If the applicant is rejected for the right reasons, which means that there would be no point in carrying on with the selection process since the final result would be in any case that the applicant doesn't get the entry he applied for, it is advisable to abort his selection process as soon as possible. By stopping him in an early stage, it will save him time and effort, possibly travel money and the increasing stress of remaining in competition for a job. On the other hand, terminating one's application early involves a number of risks. We'll briefly discuss three.

3B.7.1.3.1   Impossibility to Compensate for Weak Results

The first risk is about the fact that a final decision is made before all pertinent attributes are assessed. That means that a person doesn't get the possibility to compensate for a particular deficiency. In systems where overall aptitude is based on a weighted sum of scores for instance, this can become apparent. In such systems it is perfectly possible that a person with a high overall aptitude does not meet the requirements for a particular attribute whereas another person who meets all requirements ends up with a much lower overall aptitude. The question here is who is the best person to hire? The answer depends on how solid the reasons to reject the first person are. Maybe a little extra attention for the deficiency shown by the first applicant is enough to help him to be the best recruit. If that is likely, a possibility should be available to grant him a waiver for the attribute where he doesn't meet the standard. In the US for instance, enlisted personnel should have a high-school degree. It is however possible to enlist non-graduates if they show relatively high aptitude scores.

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[1] ASVAB is the Armed Services Vocational Aptitude Battery.

3B.7.1.3.2 *Supply and Demand Issues*

In selection settings where early rejection is applied, the entry standards are set in advance, without taking the score distribution of the actual applicants into account. This might have adverse consequences when, for some reason, the number or the quality of the actual applicants don't match the expectations. This could lead to difficulties in reaching the recruitment goals. Of course, one can argue that the entry standards must not be changed in order to maintain recruit quality. On the other hand, given the fact that there is no selection process with zero false negative decisions, it might be worthwhile considering lowering entry standards in time of shortages. The point is that maintaining or adapting entry standards should be a decision made by the HR director while being aware of the current recruitment situation. This is not compatible with early rejection.

3B.7.1.3.3 *Justification*

Finally, an important drawback of the use of rejection is that it is not well accepted by the applicants. This holds especially for rejection based upon a single attribute. Indeed it is hard to accept that you missed the job of your dreams because you just were one point short for a test. That especially holds when discussions about standard error of measurement of the test or the arbitrary level of the applied cut-off score are hardly convincing. In general, it will be easier for an applicant to accept not to get the job he wants because other applicants were found to be more suitable than because of not meeting some questionable standard.

In conclusion, I would recommend using applicant rejection with caution. In general, two reasons seem adequate. First, there are circumstances in which it is obvious that an applicant has no chance at all to be enlisted for the desired entry. If it is clear that irrespectively of both the quality of other attribute scores the applicant might obtain and the possible negative evolution in selection ratio, the person will not be accepted, then it is advisable to stop his selection process. Secondly, when the number of applicants is large compared to the vacancies, the probability of enlistment of an individual not only depends on the applicant's quality, but also on the aptitude distribution within the applicant pool. Again, if in such circumstances it becomes clear that an individual has no chance at all to be accepted, it is adequate to stop the selection for that person. How small the selection-ratio needs to be per entry before considering rejecting weaker applicants, will probably depend on the stability of the recruitment situation.

3B.7.2 Assignment (Classification)

The situation in which assignment or classification starts playing a role is one in which we have one or more applicants who are eligible for one or more entries. For a given set of applicants and jobs, numerous solutions to allocate the persons to the jobs are conceivable. We next will demonstrate that the choice of the used classification methodology has a significant influence upon the level of job specific aptitudes that can be expected within the groups of persons that are assigned to the different entries.

Among the possible classification strategies, two broad families can be identified. The first family aims at immediate decision-making. That usually means that a decision about the allocation of a person to a vacancy is done while the candidate still is at the selection center, disregarding the aptitudes and other relevant attributes of the following applicants. The second family on the other hand is referred to as 'batch classification'. This approach compares all persons in the applicant pool before making decisions. It will be shown that the second type of approach produces far better results.

When we consider the highly complex multiple-applicant, multiple-job situations that we encounter in Military recruiting settings, the logic can be described as follows. For each job, the relevant attributes must be identified and their relative importance is to be known. On the applicants' side, each of them needs to go

through an assessment system that will evaluate his or her aptitudes and interests and define an individual profile. Based upon the individuals' profiles and the jobs profiles, the utility of assigning each person to each vacant job can be computed. Typically, the required attributes and their relative importance will differ for each trade. And whereas an individual's skills and aptitudes are essentially independent of the examined job, his or her degree of interest for each kind of job usually varies. This means that the utilities we're interested in may vary from person to person and for each person, from job to job. When we consider a group of vacancies and the applicant pool applying for at least one of the vacant jobs, we could represent the decision-making problem by means of a matrix. We could have the jobs as column headers and the persons as row headers. Each cell would then contain the utility of assigning the row-person to the column-job. The task at hand is then to link persons and jobs. That is referred to as classification. The number of possibilities to assign applicants to jobs rapidly becomes astronomical as the number of jobs and applicants increase and that makes the problem both challenging and interesting. The interesting part comes from the fact that this problem has lots of degrees of freedom and that it makes sense to investigate the relationship between the method used to solve the classification problem and the quality of the reached solution. We now will discuss a few methods that are used to solve the classification problem and illustrate how the chosen method affects the quality of the hired group. The examined methods are:

- Immediate classification;

- Single criterion batch classification;

- Batch classification based upon multiple rank order criteria (parallel processing); and

- Smart classification (i.e., batch classification based upon multiple rank order criteria using an optimization algorithm).

The first method, called '*immediate classification*,' assigns an applicant as soon as all his relevant attributes are assessed. In order to decide about his assignment, his 'profile' is compared to a set of trade specific criteria. If the person meets the set criteria for his preferred job, he gets it. This system, also known as a 'first comes, first served' system is widespread for enlisted personnel. The main reason for this is that it usually is considered to be important to tell the applicant immediately what job he will get.

The second method that we will refer to as '*single criterion classification*' is based upon a single rank order criterion. In this method, all applicants are assessed first. They subsequently are rank ordered by their score on one (composite) score. Then the applicants are processed sequentially, starting with the best-ranked person. The preferences of the applicant will then be examined sequentially and the applicant will get the job he prefers if he meets the other eligibility criteria and there still is a vacancy available for the chosen trade.

The third method, called '*multiple criterion classification*' is again a batch classification method. Now however, a ranking is made for each trade separately, based upon trade specific weighted criteria. The classification can for instance be obtained in following way[2]: For each trade a table is made. The tables contain three fields: the person identification, the payoff or utility assigning the person to the trade, and the rank of their preference for the table-entry (a value 1 indicates that the entry is the first choice of the applicant, 2 is his/her second choice, etc.). The tables are sorted in descending order of the payoff. The method then examines the number of vacancies per entry. If n is the number of vacancies, then the method will assign persons to the trade if they are among the n best ranked persons for the entry **and** the entry is their first choice. This would be done for all entries. Once a person is assigned to a job, his or her record is deleted in the other tables. This causes shifts in the tables, potentially leading to new assignments. This procedure is continued as

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[2] The described method is called the 'sequential parallel assignment method' and was proposed by the Belgian Royal Military Academy.

long as persons can be assigned to their first choice. Then, after adapting the number of vacancies per entry (set to the original number minus the number of persons assigned to the entry in the run examining first choices), the second choice is examined in a similar way. Then the third choice is reviewed and so on[3]. The method stops as soon as there are no more vacancies or all choices have been reviewed.

The fourth and last method is the so-called '*smart classification.*' This is a batch classification method in which the aptitude estimate based upon trade specific weighted criteria and the preference for an entry are integrated into a single utility value for each possible person-job combination. Then, these values are organized in a single matrix featuring the persons as row headers and the jobs as column headers. Next, the persons are linked to jobs using an optimization algorithm that maximizes the sum of utilities for the group of assigned persons[4].

In order to assess the outcome of the different classification methods, we took an existing dataset describing Belgian NCOs[5]. The dataset encompasses 393 eligible[6] applicants for 22 trades and a total of 94 vacancies. The measures shown in the next graph are the average scores for different selection variables of the persons that were assigned by the different classification methods.

Mean scores of hired applicants as a function of used classification method
(Dataset: Belgian Francophone NCO's, Level 2, 2000)

Legend:
- Random (theoretical)
- First Comes First Served
- Sequential (single criterium(Intelligence))
- Sequential (multiple criteria, parallel processing)
- Smart Class. (multiple criteria, optimization)

Y-axis: Standard scores (Avg: 50, StDev: 20)

X-axis categories: Personality score, Intelligence score, Physical fitness, Mechanics test score, Electricity test score

Figure 3B-2: Mean Scores of Hired Applicants as a Function of Used Classification Method.

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[3] In this method, it can happen that an applicant is assigned to his/her second choice for instance because at that time s/he doesn't qualify for the entry of his/her first choice. If, during the classification process, due to the deletion of the records of persons who were assigned to an entry of a higher choice, this person's first choice becomes available for him/her, then the person will be assigned to his/her first choice while the vacancy of his/her second choice will be made available again for other persons.

[4] The described method is called 'The Psychometric Model'.

[5] Recruitment for Belgian francophone NCOs, level 2 in 2000.

[6] By 'eligible' we mean applicants that meet all requirements and therefore can be assigned to a job as NCO.

First the bottom line is given as a benchmark. It represents the (standardized) averages for all persons in the applicant pool. The next line (with open squares) is based upon the immediate classification. The third (dots with open diamonds) is produced by the single criterion classification. In this example, the criterion that was used was the intelligence score. So it isn't surprising to see the very high average intelligence score produced by this method. It is interesting to note that the averages of correlating aptitudes (mechanics and electricity) benefit from this method while these of uncorrelated attributes (personality and physical fitness) don't. The fourth line (open triangles) originates from the multiple criterion classification. This method produces a more balanced profile. Finally, the last line (filled circles) comes from the smart classification. The line shows a balanced solution that is markedly better than the one produced by the immediate classification and slightly better that the multiple criterion classification[7].

In assessing the outcome of the different classification methods, it is also useful to look at some other results. The following graph presents the average utilities, how well the applicants' preferences are respected and the fill rate.
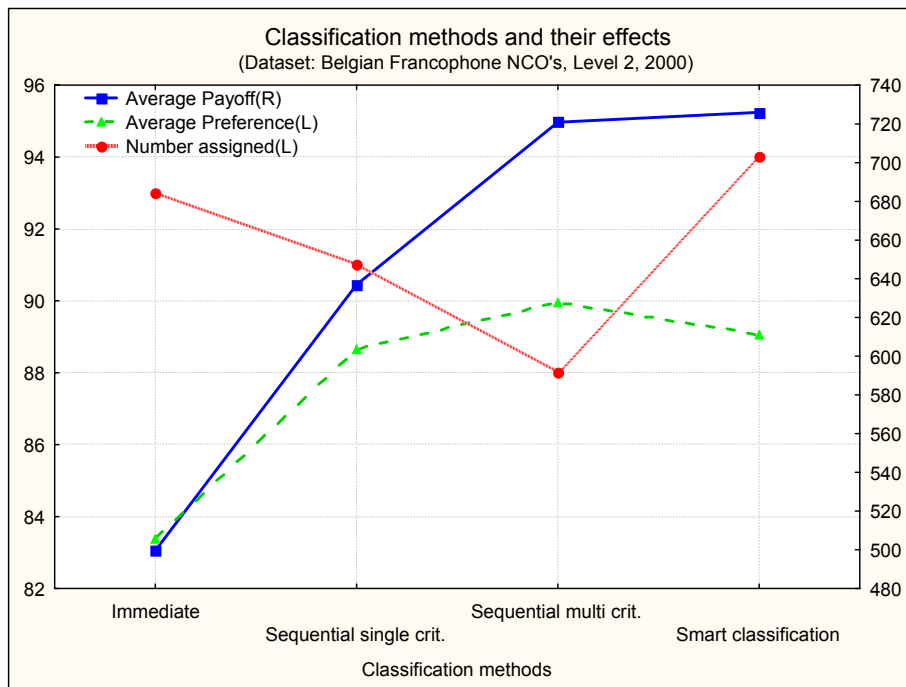
Figure 3B-3: Classification Methods and their Effects.

When looking at the average utility (payoff) of the assigned persons, it is quite clear that an increased complexity of the classification method results in an improved quality. This also seems to be the case with the respect of the applicants' preferences. In our dataset, the applicants expressed their preference for each trade on a scale ranging from 1 to 99.99 is the highest value and is given to the most preferred trade. The graph presents the average of the preference of the applicants for the trade they were assigned to. An increasing average reflects a higher degree of satisfaction in the hired group. The third line, representing the number of

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[7] Although this doesn't entirely show in this example, unpublished research by the author based upon a large number of datasets demonstrates this statement.

assigned persons, also puts the preference line in a broader perspective. For the preferences, we see that the average resulting from the multiple criteria classification is somewhat higher than the one produced by the smart classification. This is not in accordance with findings based upon other datasets demonstrating that the smart classification usually produces the highest degree of satisfaction. The reason why this doesn't occur in this dataset might be due to the fact that the multiple criteria classification only succeeded to fill 88 out of 94 vacancies. In such circumstances, the comparison of mean preferences is biased and overestimates the mean preferences obtained with the multiple criteria classification. As one can see, only the smart classification was able to fill all vacancies. The reason why the sequential methods couldn't is due to the fact that for some trades, only a few applicants qualify. By classifying them sequentially, the methods assign them without taking into account that this might create a problem for more critical trades. Only the smart classification considers all trades and all applicants globally and has the necessary flexibility to solve the problem.

3B.8   SPECIAL TOPICS

3B.8.1   Accountability

Selection and classification systems are increasingly called to account. More and more applicants, their parents, or even lawyers tend to challenge S&C decisions more often than they used to. This is a societal evolution recruitment managers need to acknowledge. In order to sustain criticism, it is recommended to develop and maintain an adequate monitoring system aimed at documenting decisions and justifying them. Let us have a closer look at both aspects.

3B.8.1.1   Documenting Decisions

S&C decisions are based upon attribute assessment of the applicant. Some of these assessments are easily traceable and can be retrieved when the applicant challenges the decision. When an applicant disagrees with the test-score he obtained for instance, it usually is possible to retrieve the answers he gave to each item and what time he needed to answer them. There is evidence that can be shown to the applicant. Other elements are usually less documented. What was said during the interview? Did the interviewer or classifier suggest things or did he try to convince the applicant not to pursue a course of action? If what really happened was not recorded well, these questions may lead to endless discussions. It is therefore advisable to record these interactions by means of video or at least audio. In S&C systems where the applicant's personality is assessed, it is paramount to be able to demonstrate the evidence upon which the personality assessment relies.

3B.8.1.2   Justifying Decisions

Being able to retrieve the elements that lead to a decision is not enough. The second requirement to have an accountable S&C system is to be able to demonstrate the rightfulness of the decision itself. There must be evidence at hand that the assessed attributes are related to and pertinent for the trade the applicant is applying for. The assessment must also be of good quality implying reliability and validity. The integration of attribute measures into more general aptitude scores must be based upon empirical evidence or at least upon an acceptable decision-process such as the use of subject matter experts. Finally, the classification method must also be accountable for.

Creating and maintaining an S&C system that really is accountable requires both extra personnel and material resources.

3B.8.2   Fairness

The issue of fairness will be discussed only briefly in this chapter. A specific chapter on 'Gender and Minority Issues' covers this topic in more details. In this section, we'll have a closer look at methodological aspects.

From a methodological point of view, S&C systems are designed to identify the most suitable persons for the jobs irrespective of their gender, age or ethnicity. Yet, in many cases the probability of being hired differs significantly for members originating from different gender-, age- or ethnicity-groups. Two major causes can be identified for this. One is acceptable and the second one is not.

Identical probability of being hired can only be expected when the distribution of pertinent attributes is similar in the different subgroups. Empirical evidence shows however that this is not always the case. Let's us take an example. If there is a need to recruit infantrymen (or should we speak about infantrypersons?) and accept that physical strength is an important attribute for job performance in the infantry, we will assess physical strength and give the attribute an important weight in our S&C system. Given on the other hand that men are known to perform better on physical strength tests, it should come as no surprise that a higher proportion of men is enlisted for the infantry compared to women.

A different situation occurs when there are reasons to assume that the distribution of the attributes is similar in the subgroups, but that the score distributions from the attribute measurement are different. This results from the use of biased assessment tools and that is to be proscribed. While it is trivial to detect differences in score distributions, it is much harder to find evidence-based proof for the assumption of equal attribute distribution in the subgroups. So, in practice it remains hard to identify the origin of score distribution differences: are they due to true differences in the groups or to assessment tools that are biased?

As was mentioned earlier, there may be political reasons to depart from the objective of equal treatment (although paradoxically, these reasons will claim to originate from equal opportunity concerns). These reasons lead to the goal of enlisting minimal numbers of minority group members or women. This can be achieved in a number of ways.

A first approach is to work with quotas: a certain number of vacancies are reserved for members of a particular group. In Belgium for instance, separate vacancies are available for Francophones and Flemings, the two major population groups. This is done in order to obtain an ethnical composition of the Forces that is similar to that of the overall population. By doing so, the applicants from the two groups are not in competition with one another. This approach has the advantage to be very straightforward.

A different approach consists of giving some advantages to members of minority groups. These advantages will increase their probability of being hired. This can be done at the attribute assessment level for instance by using different sets of standards such as different physical fitness norms for men and women. For a same level of fitness, women will get higher scores. The advantage also can be granted during classification. An example of this is the minority fill-rate feedback mechanism that was used in the U.S. Navy (Kroeker and Rafacz, 1983). The difference between the actual and desired minority proportions at any given time was used to indicate the status of the uniform fill-rate objective and was employed as the driving mechanism of a feedback function. The function compensates for existing conditions either by awarding additional utility points when the actual minority proportion is less than desired, or by subtracting utility points in the opposite case.

In addition to the means we described in this section on fairness, there is a vast scope of possible actions to influence the propensity to apply within specific gender, ethnic or age groups. These encompass targeted

advertising and recruiting, the provision of special facilities such as day-care centers on the bases or special programs to help minority members to acquire the skills necessary to get enlisted.

3B.8.3   Process Management

3B.8.3.1   Centralization versus Decentralization

The easiest and soundest solution for 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; and

- Frequent rotation or exchanges among the assessors of the locations.

In making up his/her mind and decide about the centralization issue, the 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; and

- The savings from reduced reimbursement of travel or lodging costs.

3B.8.3.2   The Internet and Distributed Assessment

Emerging technologies offer the possibility to test applicants over the Internet. There are however a number of issues that make this technology unsuitable for assessment purposes at the time we write this chapter. These issues pertain to applicant identification and test standardization.

One of the obvious conditions for an effective S&C system is that the applicant is assessed and not some impostor. In a selection facility, it is rather easy to check the identity of the test takers. Over the Internet, it is not. There exist devices allowing reading the fingerprint of a person or a chip-card certifying the person's identity. However, these devices are not widespread and fraud is quite easy when the applicant is present and has some gifted friend prepared to help him.

A second problem relates to standardization. The problem has two causes: one is technology and the other is linked to the circumstances in which a test on the Internet would be taken. On the technology side, one must

be aware of the wide variety of platforms on which Internet tests would be taken. Differences in used browsers, operating systems and background programs, screen resolutions, Internet connections, firewalls, local network traffic, and chipsets may induce an unacceptable variance in the way a test is displayed and processed locally. On the other side, Internet testing provides virtually no control of the circumstances in which the test is taken: in a quiet student's bedroom versus a crowded and noisy Internet-café…

There is little doubt that these issues will be addressed and that Internet testing might become acceptable in a not too distant future. In the meantime, some solutions can overcome the sketched problems. For instance, when supervision is given and all applicants can be tested on identical computers, Internet testing is feasible – but then the question to address is, why use the Internet and not an alternative technology allowing more control.

3B.8.3.3   Burden and Compensation

The S&C process for the Military involves some investments both from the applicants and the organization. The applicants need to commit time and effort to pass the tests and sometimes even more time to prepare themselves for physical fitness tests or academic exams. In many countries, they also have to pay for their transportation to the selection facility. Often the costs are high for the selection process can involve several selection days and locations. On the organization side, investments essentially include personnel and infrastructure.

While it may be clear that the applicants consent to these efforts in an attempt to be rewarded by an enlistment and that the Military is willing to pay for S&C to get more and better recruits, it might be less obvious that there is some degree of interaction between the efforts made by both sides. Let's take an example. Applications usually don't come in a very regular pace: some days or weeks may be very successful whereas they are rather scarce during other periods (depending on many parameters). To be cost effective, the Military may decide to format the S&C facilities to the average number of applications. This would however result in – possibly long – waiting times for applicants who happen to apply during a peak period.

3B.8.4   Selection versus Training

The ultimate goal of Military recruitment is to provide the Services with people fit to serve in operational duties. Given the specificity of the Military, it is hardly conceivable that a recruited civilian can immediately be assigned to such a duty. Before that kind of assignment, training will have to be undergone. This has a number of consequences for the management of recruitment. We'll discuss the interaction between recruitment and training in two aspects: the assessment of suitability for a job and the allocation to a particular job.

When we look at the assessment of the suitability of a person to be employed as an infantryman for instance, we usually can distinct two phases. First, a civilian applicant is assessed during the S&C process and enlisted as infantryman-apprentice. Second, the recruit gets a specific training he has to pass before being allocated to a job as infantryman. This situation raises the question as to what facets of suitability need to be assessed during selection versus during training. For facets that require training to be acquired, such as shooting a rifle or knowing military regulations, it is obvious that training is the place to assess these facets. For other facets, such as medical fitness for instance, it is better to do the assessment during selection for postponing the assessment to the training phase includes some risks. For a third type of facets, such as cognitive abilities, there is a possibility to choose the most appropriate moment and place to assess the considered attribute.

In some cases the assessment of suitability for a job requires gradually more sophisticated assessment tools. An example of this is the selection of pilots. Such a selection procedure could for instance include following steps:

- General assessment of suitability as an officer;

- Screening of suitability as a pilot (medical screening, elementary psychomotor task, personality and motivation screening);

- More detailed assessment (detailed medical check, detailed cognitive evaluation, detailed personality and motivation assessment);

- Assessment using a flight simulator; and

- In-flight screening.

A similar sequence will be found in many procedures designed to assess suitability as a military pilot. Yet in some cases, all elements are part of the selection procedure (e.g., in The Netherlands) whereas in other countries, in-flight screening for instance will be included at the beginning of the training. To certain extend the choice as to where the responsibility of selection stops and where that of training starts may seem arbitrary; the choice to put an assessment tool on one side or the other bears consequences. Let's see the advantages that each side can offer:

- The pros of having the tool within selection:
  - Costs are lower for the Military since applicants are assessed and not personnel that was equipped and must be paid;
  - Consequences of rejection are less painful for the testee; and
  - Management of required numbers is easier.

- The pros of having the tool within training:
  - The selection burden is less for the applicants;
  - The numbers to be assessed are smaller; and
  - Time is less a constraint during training.

The allocation of the recruits during the S&C process can be more or less detailed. In some S&C systems, applicants are assigned to a particular job in a particular unit prior to training whereas in other S&C systems, they are only assigned to broader job-families. In such systems, the more detailed assignment is usually done after training. Again, both approaches have pros and cons:

- The pros of having detailed allocation before training:
  - The applicants have more certainty: obtaining the job they're hired for depends on whether they succeed in training only, not on how well they succeed or how the other trainees perform and what job they choose; and
  - Minimal requirements can be set per specific job rather than per broader job family. This yields more degrees of freedom to solve the classification problem.

- The pros of having detailed allocation at the end of training:
  - Training results can be taken into account; and
  - Attrition during training can be taken into account.

Some will look at a 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 be 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 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.

3B.8.5   Influence of Downsizing and Transition from Conscription

Downsizing implies the reduction of personnel numbers. In downsizing scenario's, it is therefore tempting to limit or even stop recruiting temporarily as alternative strategies to lower the numbers fast enough are usually expensive. Yet, limiting recruitment can have severe adverse impact, especially in organizations relying on an in-stream at the lower ranks from which the following ranks are drawn. Doing so leads to disproportionately low numbers of personnel in the lower ranks. In addition, this 'gap' will remain in the organization for the whole lifetime of the cohort. The right thing to do in downsizing scenario's, is to set the recruiting objective to the numbers that are needed based upon the new size of the Forces. That objective is expected to be smaller than it used to be. Limiting the objective further might solve the number issue in a cheap way, but it causes major problems in the long run and therefore should be proscribed.

Transition from conscription to an all-volunteer Force yields its own set of issues. Draftees usually originate from all layers of society and have a varied educational background. Personnel managers are often keen to capitalize on that variety and assign highly educated conscripts to specific jobs that are hard to fill with regular personnel. These conscripts usually don't complain since they get the opportunity to use and develop their knowledge and skills. So this situation seems to be a win-win situation and to some extend, it is. The risk stems from the fact that if personnel managers rely on the huge potential of conscripts to fill jobs that otherwise would be hard to fill through recruitment; they may face critical shortages when the decision is made to cease conscription.

3B.8.6   The Tri-Service Issue

In this section, we'll use the recruitment of officers as an example. The explained principle however, is by no means limited to the officers. 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 U.S. 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.

3B.9   PRACTICAL RECOMMENDATIONS

Throughout this chapter, quite a number of topics pertaining to S&C were touched. These will now somewhat be summarized to provide the reader with practical recommendations.

3B.9.1   Challenge Basic Options

All current military S&C systems inherited to some extend beliefs and practices from the past. While these seemed adequate at the time they were introduced, it is important to verify whether this still holds in the present or anticipated situation. Options that should be put under scrutiny if still current include recruiting for the lowest ranks only, recruiting for lifetime employment and not recruiting for one of the traditional personnel categories (officer, NCO and enlisted).

3B.9.2   Recognize Different Visions Pertaining to S&C

As was pointed out, politicians, military leaders, training commanders, S&C methodologists, and others usually have a quite different conception of what the recruitment objectives should be. It is therefore important to pursue a shared and explicit vision in order to foster a common approach and minimize criticism of the S&C system.

3B.9.3   Use Adequate Methodology to Define Selection Standards

Selection standards should be based on empirical evidence of relationship between predictor and criterion and supply and demand data.

3B.9.4   Use Relevant Selection Criteria Only

Sometimes selection criteria are used that only show circumstantial relevance. For instance age could be used as proxy for physical fitness or educational background as estimator of general intelligence. This should be avoided: if physical fitness is important, measure physical fitness and do not substitute this by an indirect measure such as age.

3B.9.5   Work towards Utility Analysis

The ultimate management tool for S&C is the utility analysis. Yet, utility analysis is not that common for the conditions to meet are far from trivial in practice. Utility analysis is however a goal that every S&C manager should pursue.

3B.9.6   Use Batch Classification

Since more elaborated batch classification methods yield far better results than simpler ones such as first comes first served methods or single criterion classification methods, at no extra cost, these should be used.

3B.9.7   Accountability: Be Prepared!

Make sure that S&C decisions can be justified to applicants and other interested parties. Thereto, document these decisions well and base them on solid theoretical and empirical grounds.

3B.9.8   Fairness: Use Quota or Group Membership Benefits

Make sure your assessment tools are not biased against gender, age, or ethnicity. Try to influence propensity of minority groups to enlist using targeted advertising and dedicated programs to prepare them better and to accommodate their specific needs. While there are many means to increase the probability of enlistment of minority group members, choose S&C methods that acknowledge the benefits of belonging to a minority group clearly (such as quota or extra utility-points based on group membership). These methods are more effective and more transparent than some subtle attempts to conceal existing group differences (e.g., choosing physical fitness tests where males and females perform equally well).

3B.9.9   Avoid Limiting Recruiting during Downsizing

Even during downsizing periods, do not limit the recruitment goals below the numbers required when the new Force structure is in regime. Limiting them further will cause gaps in the age and ranks structure that risk to last for a very long time.

3B.9.10   Tri-Service Issue

If there is no essential reason to use separate S&C systems for the different services, work with a tri-service approach. If there are good reasons to work separately, ensure that the selection burden for an applicant not accepted for the preferred service is minimized when she applies for a different Service (e.g., by using the same tests and exchange test results between the concerned Services).

Chapter 3C – REALISTIC INFORMATION OR NOT!:
SHORT-TERM CONSEQUENCES OF (MIS)INFORMATION

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3C.1   EXECUTIVE SUMMARY

This chapter describes the various facets of information that might have an effect on turnover during military training. First, a typology of information provision is presented. A distinction is made between intentional and unintentional information provision, and between the accuracy of the information provided and the accuracy with which the information is perceived. The first part of this chapter deals with organizations' intentional efforts to provide accurate (both favorable and unfavorable) information to applicants in early recruitment stages. Realistic job previews (RJPs) are undoubtedly the most well-known recruitment technique with regard to the communication of both favorable and unfavorable job information. RJPs are intended to reduce the initial turnover rate and are assumed to improve a variety of other organizational outcomes (e.g., job satisfaction, performance, commitment). The five most common theoretical explanations of RJPs are presented: Freedom of choice, coping, trust and honesty, self-selection, and unmet expectations. Next, three potential moderators of the RJP-turnover relationship are discussed: Context, timing, and method of presentation. RJPs seem to have the most impact on voluntary turnover when they are presented in a field setting, just before hiring, by means of a two-way communication process. Then, a brief overview of recruitment source research is offered, followed by a discussion of newcomer orientation programs and two alternatives to RJPs, decision-making training (DMT) and expectation-lowering procedure (ELP). The second part of this chapter extends the view taken in part one by proposing that all recruitment and selection procedures, and thus not only RJPs, convey information about the organization, intentionally or unintentionally. Three theoretical frameworks are briefly discussed: Signaling theory, socialization theory, and organizational justice theory. Signaling theory suggests that in the absence of other information about the organization, applicants interpret information they receive in the course of the recruitment and selection process as 'signals' about what it would like to be employed by the organization. Along the same line, socialization theory and organizational justice theory propose that recruitment and selection procedures convey information that may influence post-hire turnover decisions. In the final part of this chapter several practical recommendations are put forward. For example, we recommend the military to install RJPs, but not to think of them as a single event. Instead RJPS should be considered as a process of providing accurate information at several points during the hiring process.

Sergeant Oldham was sitting at his desk, recovering from his third exit-interview that day, when his superior knocked on his door and stuck his head in.

"Carl, I have another recruit waiting for you outside. This one is also determined to quit. Says we have misled him at the recruiting center. Can you deal with him?"

"Of course, Captain."

Carl Oldham is a seasoned interviewer. His job is to ask recruits why they want to leave the Army, and what measures the Army could take in order to retain them. Often, the answer to the first question sounded "I had

not expected that military life would be like this." The answer to the second question usually was "if I had received better information beforehand, I would have never applied in the first place." Carl assumed this case would not be any different.

"State your name and number, please."

"Private Jones, 9958248, Sir."

"Sit down, Jones, and tell me, why do you want to leave the Army? You know you can speak freely. There is no one listening but me. And I promise that everything you say is confidential and will stay within these four walls."

"I believe I am not cut out for the Army, Sir."

"Why do you believe that?"

"I can't put up with the instructor's shouting and raging, Sir. All he ever does is yell at us, like we are animals. I cannot stand it any longer."

"You know this is just a temporary situation, don't you? It is necessary for all recruits to get acquainted with military habits and traditions. I know the first weeks have been tough, but eventually you will be glad that you've lived through it, like we all did."

"It is just that this is not what I had expected, Sir."

"Didn't the recruiters at the recruitment office warn you that this was going to happen?"

"No Sir, they didn't. They told me about the excitement and adventure I would experience in the military. They also told me about possible career paths and military operations I could participate in, but they kept silent on the instructors' attitude. It's like they deliberately didn't tell me the whole story. Somehow, I get the feeling that I'm deceived. If I had known in advance that military training would be like this, I would have never applied in the first place."

Sergeant Oldham heaved a sigh. Four in a row: all of them claiming to be misinformed. No wonder they wanted to quit. He probably would feel the same.

3C.2   INTRODUCTION

Recruits who drop out of initial training often complain that they had "a wrong idea of what the organization was really like"; that they "had not expected military life to be like that;" that "insufficient information was provided to them to make thought-out career choices." It is often heard from recruits who drop out of boot camp that "if they had known beforehand that military training would be so hard, they would have never applied in the first place." These comments show that newcomers are not always well informed about the characteristics of the job and the organization. Their initial idea of military life differs from reality. Their initial expectations remain unmet. This disappointment of initial expectations will lead to a decrease in job satisfaction and to a high risk of voluntary turnover.

In this chapter, the various facets of information that might have an effect on post-hire consequences are looked at. One of the more critical decisions that (military) organizations must make about their recruitment

materials and practices involves the accuracy, or realism, of the information they provide. One approach is to focus on pre-hire attraction by emphasizing positive features and disregarding negative features. By portraying the organization in a favourable light, prospects are attracted to apply. However, this 'selling' approach has a serious drawback: newcomers who had inaccurate information are more likely to drop out once they have joined the organization. An alternative is to focus on post-hire commitment (or job tenure) by providing complete and balanced information about the organization and the job, revealing both positive and negative features. This is the basic idea behind realistic job previews (RJPs). RJPs are designed expressly for the purpose of conveying realistic information about the job and/or organization to applicants (Anderson and Ostroff, 1997). In this chapter, I will summarize the literature on RJPs, thereby focussing on the relationship with employee turnover early after entrance.

However, the information process is not restricted to the provision of purposeful (realistic) information on the part of the organization. In line with recent scholarly work (e.g., Anderson, 2001; Anderson and Ostroff, 1997; Herriot, 1989; Iles and Robertson, 1997), I will argue that *all* recruitment and selection techniques contain at least some information on job and organizational attributes. More specifically, at early recruitment stages when applicants still have incomplete information on their potential future employer, they are likely to make inferences on organizational and job attributes based upon their experiences during recruitment and selection. This inferred information might unintentionally attract or repel applicants. Therefore, I believe it is important that organizations investigate and take into account the embedded message that is communicated by their recruitment and selection procedures. However, before addressing RJPs and the informational value of recruitment and selection procedures in more detail, I think it is necessary to make a distinction between various types of information provision.

3C.3   CATEGORIZING INFORMATION PROVISION

A first important distinction that can be made is that between intentional and unintentional information provision. Intentional information provision relates to messages that are sent by design on the part of the organization, whereas unintentional information provision refers to messages that are communicated although this was not planned by the organization. In a hiring context, most recruitment and selection techniques are not designed to explicitly convey any particular type of information to applicants, but to assess applicant attributes and predict job performance. Yet, these recruitment and selection procedures "can and do portray a great deal of information about the organization to applicants" (Anderson and Ostroff, 1997, p. 428). For instance, through the use of situational judgment tests (SJT) hiring organizations can predict how effective applicants will be in handling actual job situations. Because applicants are faced with actual job situations they can learn quite a lot about the organization as well. More specifically, SJTs provide the applicants with an accurate picture of the job, allowing him or her to make a decision as to whether to continue with an application (Iles and Robertson, 1997).

Secondly, a distinction can be made between the accuracy of the information provided and the accuracy with which the information is perceived. In a recruitment context, accuracy of the information provided boils down to the realism of the recruitment message. In recruitment advertisements and media messages hiring organizations often tend to over-represent the positive aspects of the organization in order to attract as many applicants as possible. Other organizations adhere to realistic messages to limit the number of post-hire dropouts. The accuracy of the provided information is not necessarily tied up with its intentionality. For instance, during selection interviews recruiters might unsuspectingly picture the organization somewhat better towards what they perceive as "good" applicants as against to "weak" applicants. Therefore, intentional messages are not necessarily accurate messages and unintended information can be accurate. Likewise,

the information provided by the organization can be interpreted accurately or inaccurately. Although this observation seems pretty straightforward and certainly not earthshaking, in my opinion it is often overlooked by HR managers. Recruitment departments are repeatedly criticized because of their alleged misrepresentation of the (military) work situation. If a dropout complains that s/he has false expectations, this surely must mean that the recruiter did not perform his or her job well, wouldn't you say so? But what if turns out that all prospects already receive the same accurate detailed information in a standardized way? Then the conclusion must be that the message is misconstrued by the prospect. Maybe the prospect was distracted by the impressive computer infrastructure present in the recruitment station or was overwhelmed by the amount of given information. Or maybe the prospect was not interested in hearing too many details at all, but just needed a job. How this misconstruction exactly occurs goes beyond the scope of this chapter.

Figure 3C-1 depicts the 2 x 2 factorial with the dimensions of accuracy from the organizational and individual perspective.

Organizational Message

		Accurate	Inaccurate
Applicant Perception	**Accurate**	Quadrant 1 Realistic – Correctly construed	Quadrant 2 Unrealistic – Correctly construed
	Inaccurate	Quadrant 4 Realistic – Misconstrued	Quadrant 3 Unrealistic – misconstrued

Figure adapted from Anderson and Ostroff (1997).

Figure 3C-1: Categorization of Information Provision.

Clearly, Quadrant 1 is the most preferable state. The hiring organization provides realistic information on the job and organizational attributes, and applicants are able to correctly interpret this information. In this situation, applicants can determine whether they really want to continue to pursue a job with that organization. Maybe they have now come to the conclusion that the organizational context is not an appropriate fit for them (Anderson and Ostroff, 1997), and that they should self-select out after all (Wanous and Colella, 1989). In Quadrant 2, applicants are misinformed by the hiring organization. This may result in "good" applicants deciding to self-select out of the process, thereby decreasing the utility of the hiring system (Murphy, 1986). Furthermore, unrealistic information will surely lead to inflated expectations and/or may applicants give the false impression that they fit the organization. In either case, unrealistic information is likely to have

detrimental effects on the socialization and integration of newcomers in the organization. In Quadrant 4, the hiring organization provides realistic information, but applicants misinterpret this information. In Quadrant 3, unrealistic information is provided by the organization and is misconstrued by applicants. In both cases, applicants are likely to make poor job decisions (Anderson and Ostroff, 1997).

For a long time practitioners and researchers have been occupied with the question whether recruitment messages (e.g., job advertisements) should only emphasize the positive side or should convey a balanced/ realistic message by including negative information about the organization as well. In the following section, I present an overview of research findings on realistic information and the theoretical rationales for the effects of realistic information on post-hire outcomes.

3C.4 REALISTIC INFORMATION

I would like to start the discussion on realistic information with an extract based on a true conversation between an examinee and his professor HRM.

P: Would you always tell the truth when an applicant would ask you about the working conditions in your organization?

E: *(very convinced)*. Of course I would! I believe all applicants are entitled to know what they can expect once they enter the job. Otherwise, they will be disappointed and leave for sure. They will feel betrayed. At least, I would.

P: Imagine that your boss has just sacked three newly hired employees and that since his divorce his outbursts are even worse than before. Would you tell this to your applicant?

E: *(still convinced)*. Yes. It is better to tell him in advance and face the consequences than to conceal this fact and end up with a very disenchanted co-worker who will probably quit after all.

P: I understand what you are saying. Imagine now that your department desperately needs to recruit in order to attain the organization's recruitment objectives. Your salary depends on it. So far, your strategy to be as honest and realistic as possible has only led applicants to self-select out. In this situation, would you still openly tell your applicant about a possible take-over by a competitive firm and all consequences attached?

E: *(not so convinced any more)*. Probably, although it might be better for my wallet to keep silent about it, I guess. Still, I think I would try to improve the working conditions first, before raising false hopes.

P: Of course, but that is not always possible. Consider the hostile take-over and the angry boss. Besides, don't you think that newcomers are able to adjust fairly easily to their work environment, despite all unmet expectations?

E: *(silence)*.

The above conversation concerns the extent to which applicants should have a full and accurate picture of what life in the organization is really like. From an ethical point of view the answer to this question is probably affirmative: organizations should try to be as complete and honest as possible (Buckley, Fedor, Carraher, Frink and Marvin, 1997). In the conversation, the examinee approached the question about "telling the truth" from an ethical point of view as well ("all applicants are entitled to know what they can expect"). Yet, his main objection to being dishonest/incomplete was that newcomers would probably quit once they note that organizational life is not what they had expected. Many practitioners agree with the examinee as appears from the numerous organizations that have implemented recruitment programs to provide applicants

with balanced information in order to reduce post-hire turnover. Realistic job previews (RJPs) are probably the most well-known recruitment technique with regard to the communication of both favorable and unfavorable job information. RJPs may range from videotaped demonstrations of the job to having the applicant talking directly to current employees, but usually RJPs are administrated via a written booklet or brochure (Saks and Cronshaw, 1990), or by recruiters during the employment interview or orientation (post-hire) (Griffeth and Hom, 2001). As I will discuss later, the latter complicates the interpretation of many of the RJP research findings. The military typically makes use of recruiting centres to convey realistic information to potential applicants (Schreurs et al., 2005) or alternatively, include RJPs as part of their regular selection and assessment program (Bradley, Lawrence and Noonan, 1998).

In the first published account of a realistic job preview experiment almost 50 years ago now, Weitz (1956) lauded the potential usefulness of having potential employees' expectations as realistic as possible. During the years following this research, equivocal accounts of the effectiveness and rationale behind the use of RJPs and related techniques devised to improve a variety of organizational outcomes (e.g., job satisfaction, performance, job tenure, commitment) have been reported. Several RJP studies have been carried out within the military (Ganzach, Pazy, Ohayun and Brainin, 2002; Ilgen and Seely, 1974; Meglino, DeNisi, Youngblood and Williams, 1988), probably because the military historically has high annual turnover rates (Grissmer, Eisenman and Taylor, 1995; Mael and Ashforth, 1995).

Despite the compelling logic behind RJPs, results from RJP studies are rather contradictory. They vary from a significant reduction of turnover (e.g., Ilgen and Seely, 1974; Suszko and Breaugh, 1986) to little or no effect on turnover (e.g., Dean and Wanous, 1984; Reilly, Brown, Blood and Malatesta, 1981). Yet, most meta-analyses[1] on RJP research (e.g., McEvoy and Cascio, 1985; Phillips, 1998; Premack and Wanous, 1985; Wanous, Poland, Premack and Davis, 1992) suggest that RJPs are effective in facilitating some positive organizational outcomes, especially when several variables are attended to (medium of RJP, timing of RJP, and research setting) (Buckley et al., 2002). I will discuss these moderating variables in more detail later in this chapter. In addition, utility analysis suggests that RJPs can result in substantial employee-replacement cost savings (Premack and Wanous, 1985). Considering the beneficial effect of realistic information on post-hire outcomes, it is important to unravel the mechanisms of RJPs. Which psychological mechanisms mediate the impact of RJPs on employee attitudes and turnover? In the next section, I will give an overview of the theoretical explanations of RJPs that can be found in the literature.

3C.4.1   Realistic Information: Theoretical Rationales

3C.4.1.1   Freedom of Choice

RJPs would emphasize freedom of choice (Ilgen and Seely, 1974; Salancik and Pfeffer, 1978). Having received an RJP, the applicant believes he/she was able to make a fully informed job choice. According to Salancik and Pfeffer (1978), "having made a choice, and having made it with full information, the individual will be more committed to the choice" (p. 246). Or put differently, "RJPs cause applicants to feel greater commitment to the decision to accept the job which leads to more positive attitudes and lower probability of turnover" (Reilly et al., 1981, p. 828).

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[1] A meta-analysis is a statistical practice of combining the results of a number of studies that address a set of related research hypotheses. Analyzing the results from a group of studies can allow more accurate estimation of effects.

3C.4.1.2   Coping

Secondly, RJPs may reduce dissatisfaction and turnover by improving a new employee's ability to cope with job demands. "If employees are made aware of problems to be faced on the job, they cope with such problems better when they arise, either because they are less disturbed by the problems about which they have been forewarned or because they may pre-rehearse methods of handling these problems" (Dugoni and Ilgen, 1981, p. 828). In a related vein, RJPs may encourage individuals to change the importance they attach to certain job attributes (Locke, 1976), cause individuals to worry about the particularly noxious aspects of the job (i.e., 'work of worry' hypothesis, Janis, 1958), or reduce role ambiguity (i.e., 'reduction of ambiguity' hypothesis, Horner, Mobley and Meglino, 1979), and, therefore, decrease turnover (Fisher and Gitelson, 1983). Suszko and Breaugh (1986) found evidence for the coping hypothesis. They asked employees the degree to which they were upset by four commonly occurring stress-provoking situations, generated by job incumbents during the RJP development phase (e.g., "You were assigned to count an area that was disorganized and messy," "other employees were not very friendly; some may even have teased you about being a rookie"). In addition, they were asked the extent to which they handled the situations well. The results showed that RJP recipients were consistently less upset by stressful job demands and felt that they handled them better. However, others (Meglino et al., 1988; Premack and Wanous, 1985) were unable to find support for the presence of coping mechanisms.

3C.4.1.3   Trust and Honesty

RJP as a form of communication is assumed to transmit an underlying meta-message of trustworthiness, honesty and care (Schein, 1968; Wanous, 1977). Applicants may, therefore, have a more positive view on future interactions and communications with the organization (Dugoni and Ilgen, 1981). Evidence for the honesty hypothesis has been found by several authors (e.g., Suszko and Breaugh, 1986; Meglino, DeNisi, and Ravlin, 1993; Meglino et al., 1988). Suszko and Breaugh (1986) randomly assigned 28 individuals, who applied for the position of inventory taker, to either the experimental (RJP) or the control (no RJP) condition. Those in the RJP group received a written and oral RJP. Those in the control group did not. Results showed that the experimental group perceived the organization as being more open and honest with them than applicants who did not receive RJPs. Meglino et al. (1988) used a longitudinal experimental design involving 533 U.S. Army trainees to evaluate the effects of two different types of RJPs: one designed to reduce overly optimistic expectations (called by the authors a reduction preview), and one constructed to enhance overly pessimistic expectations (called an enhancement preview). It was found that applicants exposed to either a combined enhancement or reduction preview or a reduction preview alone saw the organization as more honest and trustworthy. Meglino et al. (1993) assigned 1,117 correction officer (prison guard) applicants randomly to two groups. One group was not given a realistic job preview. The other group saw a 22-minute videotaped realistic preview that contained accurate positive and negative job information. They found that RJP recipients perceived the organization as more honest, trustworthy and caring. Although the authors did not find an overall effect of RJPs on retention, the results showed that those with previous job exposure were less likely to quit during a probationary period (but more likely to quit thereafter).

3C.4.1.4   Self-Selection

RJPs are thought to screen out individuals whose needs are incompatible with the demands of the job or the culture of the organization (Wanous, 1973; 1980). Applicants provided with realistic information will be better able to make a more informed choice about whether or not to accept an offer of employment. They will be better able to decide whether the job is consistent with their preferences and needs, "and those applicants who find the context described by the realistic preview to be unacceptable will self-select out of the process" (the 'self-selection' effect, Wanous and Colella, 1989). There is substantial evidence for the self-selection

mechanism in that exposition to RJPs is found to be associated with higher job rejection rates (Meglino et al., 1988; Premack and Wanous, 1985; Suszko and Breaugh, 1986; Wiesner, Saks and Summers, 1991). For that matter, RJPs are often criticized: attraction, and particularly pre-entry attraction, would decrease when negative information about the organization is revealed. However, a meta-analysis by Phillips (1998) found an average correlation of -.03 between RJPs and applicant withdrawal from the selection process. Due to the large number of subjects involved, this correlation was statistically significant. However, it is reasonable to conclude that this correlation rather indicates the absence of a relationship than the opposite (Rynes and Cable, 2003). In addition, Highhouse, Stanton and Reeve (2004), studying individuals' online reactions to simulated computer-based recruitment messages, found that negative information about prospective companies was discounted more than positive information. Based on these findings, the authors suggested that negative information in recruitment messages "may not be as harmful to attraction as some have suggested" (p. 94), and that the potential adverse impact of negative information is cancelled out by the positive information included in the message.

Furthermore, several studies have found that the effects of RJPs on job acceptance may depend on applicants' prior work experiences and their job alternatives. Meglino et al. (1993) found that applicants *with prior job exposure* are likely to overemphasize negative job information, resulting in *reduced job acceptances*. On the other hand, those *without prior job exposure* are likely to show *increased job acceptances*. Meglino, Ravlin and DeNisi (1997) concluded that for organizations whose applicant pool consists mainly of persons without prior job exposure, realistic job descriptions should be highly appropriate. According to the authors, in addition to providing information about the job, RJP can be considered as a recruiting device in circumstances where applicants have had no prior job exposure, since it tends to increase the rate of job acceptance for such applicants. They believe that:

> "Perhaps this is one reason that the U.S. military has actively supported motion pictures about war even when they contain particularly noxious images. Since potential recruits are unlikely to have had direct wartime experience, the negative images are not likely to overwhelm the more glorious depictions contained in such films. It's not surprising that such motion pictures have historically tended to increase enlistments in the armed forces." (p. 419).

In addition, several studies have found that the effects of RJPs on job acceptance depend on job alternatives. More specifically, it has been found that RJPs are most likely to result in lower job acceptance rates when subjects have a job alternative presented to them via a traditional job preview (Saks, Wiesner and Summers, 1994; Wiesner et al., 1991).

In a related vein, Rynes and Barber (1990) argued that the effects of RJPs are likely to be not independent of job and organizational characteristics. As a test of this hypothesis, Saks, Wiesner and Summers (1996) conducted a laboratory study in which subjects were asked to choose between a job described by an RJP and a job described by a traditional (i.e., all positive) job preview (TJP). The conditions varied by the compensation policy of the jobs presented in the job previews (high versus average). Results indicated that subjects preferred the TJP when compensation levels were higher than or equal to compensation levels associated with the RJP. When the RJP job offered higher compensation than the TJP no differences in attraction were observed. These results suggest that the effects of RJPs on applicant attraction and job choice might depend on the compensation of the job and other job attributes.

Bretz and Judge (1998) examined whether self-selection based on job expectation information may be adverse from the organization's perspective. That is, whether the best qualified applicants are most likely to self-select out when presented with negative information about the organization. The results of this study yielded mixed

support for the adverse self-selection hypothesis. That is, high quality applicants placed more weight on negative information than lower quality applicants. Ryan, Sacco, McFarland and Kriska (2000) found that applicants who dropped out the selection process for police officers tended to have less commitment to law enforcement, suggesting that self-selection was rather beneficial from the organization's standpoint. Yet, they concluded "we need better means of assessing whether self-selection is adverse, both from the organizational and the individual perspective" (p. 177).

3C.4.1.5   Met Expectations

Last, but certainly not least, RJPs are thought to reduce overly optimistic expectations to levels more consistent with actual work conditions (i.e., the 'inoculation' or 'vaccination' hypothesis, Wanous, 1977; 'met expectations' hypothesis, Porter and Steers, 1973). That is, individuals whose expectations are met will be more satisfied with the job and therefore less likely to voluntarily leave it (Wanous, 1980). Newcomers whose pre-hire expectations are met are more likely to remain on the job, while newcomers whose expectations are not met are likely to be dissatisfied with their job and eventually to leave it (Barber, 1998). Porter and Steers (1973) used the met expectations mechanism as the core of their turnover model. According to these authors:

> "The concept of met expectations may be viewed as the discrepancy between what a person encounters on the job in the way of positive and negative experiences and what he expected to encounter. Thus, since different employees can have quite different expectations with respect to payoffs or rewards in a given organizational or work situation, it would not be anticipated that a given variable (e.g., high pay, unfriendly work challenges, etc.) would have a uniform impact on withdrawal decisions. We would predict, however, that when an individual's expectations, whatever they are, are not substantially met, his propensity to withdraw would increase." (p. 152).

Of all possible rationales for RJPs, the met expectations hypothesis has been examined the most thoroughly (Griffeth, Hom, Fink and Cohen, 1997). Substantial meta-analytical support has been found in favor of this hypothesis, suggesting that RJPs are able to lower pre-entry expectations (McEvoy and Cascio, 1985; Premack and Wanous, 1985; Reilly et al., 1981; Wanous et al., 1992). Despite this extensive support in favor of the met expectations, some authors have thrown doubt on these findings. Drawing on the work of Edwards and his colleagues (Edwards, 1994; Edwards, 2002; Edwards and Parry, 1993), Irving and Meyer (1994; 1995; 1999), argued that most RJP research was done in a methodologically flawed way. More specifically, the use of difference scores and direct measures of met expectations has been heavily fired at, which has led some scholars (Hom, Griffeth, Palich and Bracker, 1999; Irving and Meyer, 1995) to conclude that the results of studies using these flawed measures are misleading and that "using RJPs to lower expectations in an attempt to ensure that pre-expectations are met may be an inappropriate strategy for improving work attitudes and reducing turnover" (Irving and Meyer, 1995, p. 1172). In a related vein, Hom et al. (1999) concluded that "RJP scholars should focus on other mediation theories rather than expectation fulfilment to elucidate how RJPs work" (p. 107). In fact, studies on met expectations (Colella, DeNisi and Wanous, 1994; Irving and Meyer, 1994) using polynomial regression analysis suggest that organizations would be better advised to focus on positive work experiences as a means of minimizing turnover. This criticism is by no means meant to be a deathblow for RJPs. It is sufficiently demonstrated that RJPs have a positive – albeit small – effect on post-hire outcomes, but apparently "these effects are achieved through mechanisms other than reduced expectations" (Irving and Meyer, 1995, p. 1173).

3C.4.2   The Role of Context, Timing, and Method of Presentation

Through a meta-analytic study, Phillips (1998) investigated whether setting (field versus laboratory studies), timing (RJPs presented before versus after hiring) and method of presentation (verbal, written or videotaped

RJP) moderated the effects of RJPs on various outcome variables, such as attrition from the recruitment process, level and accuracy of initial expectations, affective reactions (e.g., organizational commitment), performance, and turnover. He found moderating effects for most outcome variables. For example, a negative effect of RJPs on voluntary turnover was found in the field ($r = -.09$), but not in the lab ($r = -.01$), suggesting that RJP processes may differ depending on the setting (in laboratory settings, subject know they will only be "employed" for a short time, regardless of whether or not they wish to continue working on a task) and that turnover may be best studied in the field, where relevant RJP processes are operating. Voluntary turnover was reduced when a verbal RJP ($r = -.15$) or a written RJP ($r = -.05$) had been administered. Videotaped RJPs, on the other hand, were unrelated to voluntary turnover ($r = .00$). Apparently, "RJP information presented via a two-way communication process (i.e., verbally) facilitates applicant attention and comprehension better than RJP information presented via one-way communications like brochures or videotapes" (Phillips, 1998, p. 685). Interesting are Phillips' findings with regard to RJP timing. He found that RJPs presented very early in the application process were unrelated to voluntary turnover ($r = .02$), whereas RJPs presented just before hiring ($r = -.09$) and after hiring ($r = -.07$) were negatively related to voluntary turnover. The results were somewhat different for all turnovers (leaving the organization for any reason): RJPs given just before hiring were found to be related to reduced turnover ($r = -.08$), as were post-hire RJPs ($r = -.03$) and RJPs presented very early in the recruitment process ($r = -.05$). These (and other) results indicate that RJPs may operate differently depending on when in the hiring process information is presented.

3C.4.3   Realistic Information Sources

One of the first decisions hiring organizations are facing is what channels or sources to use to reach the target group. Traditionally, research on job information sources has drawn a distinction between formal and informal recruitment sources. The former involves the use of formal intermediaries such as placement offices, and recruitment advertisements, whereas the latter does not involve the use of formal intermediaries (e.g., friends and relatives) (Saks and Ashforth, 1997).

Wanous (1992) distinguished three groups of recruitment sources: *internal* ('inside') recruitment sources, *external* ('outside') recruitment sources and *walk-ins* ('unsolicited applications' or 'direct applications'). Internal recruitment sources contain internal information about the organization available to applicants before they enter the organization (e.g., referrals, rehires, internships, in-house notices), whereas external sources (e.g., job advertisements, employment agencies, executive search firms) typically do not contain such inside information. There exists no clear evidence on the kind of information walk-ins have before entering the organization (Moser, 2005).

More recently, Cable and Turban (2001) conceptualized the various informational sources along two dimensions: an internal-external dimension, and an experiential-informational dimension. Internal sources (e.g., recruitment advertising) are largely under the control of the organization and are used to disseminate recruitment-related information to potential applicants, whereas external sources (e.g., word-of-mouth, publicity) are not under the direct control of the organization and generate information that is available to the general public. Experiential sources (e.g., interviews) require applicants to personally experience some aspect of the organization to obtain information, whereas informational sources include media coverage, advertisements, and annual reports that contain 'pre-processed' information.

Barber (1998) gave the following overview of the various recruitment sources: "Traditional sources include employee referrals, employment agencies (including campus placement offices and executive search firms), newspaper or radio advertisements, and unsolicited applications or 'walk-ins'. More recently, organizations have turned to alternative sources, such as on-line (internet) hiring services, job fairs, and competitors'

layoffs/outsourcing programs as means of identifying candidates (Glickstein and Ramer, 1988)" (p. 22). The military usually makes use of (formal) recruiting centres to inform job seekers about organizational characteristics and job opportunities.

Research on recruitment sources has primarily focused on the effects of different sources on various post-hire outcomes, such as job satisfaction, job performance, and most important to our discourse, turnover. Interestingly, little is known about the relationship between recruitment sources and more proximal recruitment outcomes, such as the identification and attraction of applicants (Barber, 1998). The majority of studies (e.g., Kirnan, Farley and Geisinger, 1989; Saks, 1994) have found that applicants who were recruited through informal recruitment sources tend to have higher job survival rates than applicants hired through formal sources. This led Saks (2005) to conclude that organizations should "use informal sources of recruitment such as employee referrals, direct applications, as well as rehires to recruit employees rather than formal sources (i.e., newspaper advertisements and employment agencies)" (p. 53).

Two prime hypotheses have been offered to explain the differences in post-hire outcomes, in particular, tenure of employees recruited from different sources: the 'realistic information' hypothesis and the "individual differences" hypothesis. The realistic information hypothesis stems from Wanous' (1978; 1980) work on RJPs. It proposes that informal recruitment sources provide more accurate and more specific job information to applicants than do formal sources, "thus leading to greater role clarity, more realistic expectations, and better adjustment to the new job, which in turn would lead to better attitudes, performance, and greater longevity" (Barber, 1998, p. 23). According to the individual differences (or pre-screening) hypothesis, formulated by Schwab (1982), different sources attract applicants with differing qualifications and other outcome-related attributes. This means that recruitment sources might differ in the kind of applicants they reach, and that these differences in applicants might result in different post-hire outcomes, such as job tenure (Barber, 1998; Rynes and Cable, 2003). For example (from Taylor and Schmidt, 1983, p. 345), a recruitment advertisement aired only on daytime television would be expected to reach a different group of people than would a radio advertisement broadcast during heavy commuting hours. Previous research primarily focused on demographic differences (e.g., age, location, and educational level), leaving personality and motivational constructs largely untouched despite their theoretical importance (Buyens, De Witte and Martens, 2001).

Consistent with these two hypotheses, several studies have indeed shown that different recruitment sources generate applicants with different individual characteristics, job-related information, or both (Blau, 1990; Griffeth et al., 1997; Kirnan et al., 1989; Werbel and Landau, 1996; Williams, Labig and Stone, 1993). However, direct tests of the mediating effect of realism and individual differences are less conclusive. Some studies (e.g., Werbel and Landau, 1996; Williams et al., 1993) failed to find mediation, whereas others (Griffeth et al., 1997) only found partial mediation. These findings led several authors to conclude that future research should include a broader range of potential mediators, such as personality and motivational constructs (Blau, 1990; Griffeth et al., 1997; Wanous and Colella, 1989; Williams et al., 1993). Several scholars (e.g., Barber, 1998; Breaugh and Starke, 2000; Rynes, 1991; Werbel and Landau, 1996; Williams et al., 1993) have suggested that future research on recruitment sources should also place more emphasis on pre-hire outcomes (e.g., applicant number and quality) instead of focusing solely on post-hire outcomes.

3C.4.4   Realistic Job Preview versus Newcomer Orientation

Realistic information administered after job offer acceptance strictly speaking is a different construct from a realistic job preview since job candidates no longer have the possibility to self-select out of the application process. RJP information administrated after acceptance is therefore better termed "realistic socialization" (Meglino and DeNisi, 1987; Miceli, 1983; Wanous, 1978; Wanous, 1980; Wanous and Colella, 1989).

Realistic information is often presented as part of newcomer orientation programs (Wanous, 1993). Newcomer orientation programs are designed for people who have just entered a new organization. With regard to time, "orientation programs should probably be thought of as occurring during the first week of formal employment, preferably the first day" (Wanous, 1993, p. 127). The main objective of these programs is to help newcomers cope with the stress of organizational entry (by presenting realistic information among other things; see *coping hypothesis*).

Newcomer orientation programs differ from RJPs in two ways. Firstly, as already mentioned, whereas in RJPs the emphasis is on self-selection (i.e., encouraging applicants to withdraw from the application and selection process), orientation programs are focused on helping newcomers cope with the organizational entry *transition* (Wanous, 1993; for more information on transition, see topic chapter *Transition*). Secondly, whereas RJPs are solely designed to increase job survival, orientation programs are concerned with increasing both job survival *and* performance. Several studies (Githens and Zalinski, 1983; Horner et al., 1979; Meglino et al., 1988; Novaco, Cook and Sarason, 1983), all of them conducted in the military, were able to directly compare the effects of RJPs and newcomer orientation programs. The results of these studies suggest that newcomer orientation programs produce more self-efficacy (Novaco et al., 1983), and somewhat lower attrition (Githens and Zalinski, 1983; Meglino et al., 1988) than RJPs.

3C.4.5   Alternatives to Realistic Job Previews

As mentioned above, RJPs are often criticized on the assumption that pre-entry attraction decreases with the disclosure of drawbacks. Ganzach et al. (2002) proposed decision-making training (DMT) as an alternative to the RJP. "DMT is a form of training that teaches candidates how to use a balance sheet in order to identify and weigh positive and negative outcomes of a set of alternatives (Fishbein and Ajzen, 1975; Janis and Mann, 1977)" (p. 615). According to Ganzach et al., DMT transmits an essentially similar meta-message of care and concern as that of RJP, that is, that "the organization expends effort so that candidates will independently and competently make decisions that are good for them (even if it is not 'good' for the organization, such as when the candidate refuses to accept a job that the organization would like to staff)" (p. 615). In their research, Ganzach et al. designed a workshop in decision making to teach applicants how to make compensatory decisions. At the end of the workshop, participants were advised to use the trained principles in their decision concerning their preference for military service. The group receiving DMT was compared to a group receiving RJP and to three control groups. The results showed that pre-entry commitment was higher among participants in the experimental groups. Yet, the effect of DMT lasted longer than the effect of RJP, suggesting that DMT is a viable alternative to RJP.

Buckley, Fedor, Veres, Wiese and Carrahar (1998) developed an expectation-lowering procedure (ELP) with the purpose of directly targeting applicants' expectations without job-specific details. Contrary to the RJP, the ELP is a non-job specific procedure that may be useful for a wide array of job situations and that may offer an alternate route to facilitating positive organizational outcomes early in the hiring process. Buckley et al. (2002) further compared a group receiving ELP to a group receiving RJP, a group receiving RJP and ELP, and a control group. The ELP consisted of information that emphasized the importance of appropriate expectations when entering any new job. Applicants for a telemarketing entry-level position were told about the *psychological contract* and the high likelihood of developing unrealistic expectations prior to organizational entry. They were told that unrealistic expectations many times result in decreased organizational satisfaction, resulting in newcomers leaving the organization after a very short period. They were further told a fictional story to illustrate the potential negative effects of unrealistically high expectations. The results showed that participants in the experimental conditions (ELP, RJP, ELP and RJP) reported significantly lower expectations than did the control group. Yet, only participants who received both

an ELP *and* an RJP had longer tenure in terms of number of days worked. There was no significant difference in number of days worked between the control group and the RJP group.

3C.4.6   Realistic Job Previews: Conclusions

Research has repeatedly demonstrated that there is a positive relationship between unrealistic information and employee turnover. Several mediating mechanisms have been suggested to explain this relationship. The most popular among these theoretical rationales is the (un)met expectations theory, suggesting that inflated job expectations lead to dissatisfaction with the job, low commitment and job performance, and ultimately to turnover. To some extent, RJPs succeed in lowering inflated expectations, yet meta-analytical studies showed that the correlation between RJPs and turnover is only modest. Furthermore, the interpretation of this relationship is complicated by the methodological weaknesses many RJP studies suffer from.

RJPs tend to vary considerably vis-à-vis context, timing, and method of presentation. In addition, one of the main problems in RJP research is that the RJP construct may differ substantially from one study to another in the amount of and type of negative information (Highhouse and Hoffman, 2001). In view of this lack of standardization in administering RJPs, Breaugh and Starke (2000) suggested to think of RJPs not as a single event, but as a process of providing accurate information at several points during the recruitment process. For example, the military could begin to convey realistic information with its job advertisements. More realistic information could be provided by career counsellors working in the military career offices/ recruitment centers. During the selection process, interviewers could probe whether applicants' job expectations are in line with reality and set them right if necessary. Work samples, situational judgment tests, and assessment center exercises could be used to inform applicants about their future job. Additional information could be communicated to eligible applicants through tailored-made (e.g., entry-based) information sessions or during site visits after the final selection hurdle. In sum, the communication of realistic information goes beyond the use of RJPs. The informational value of recruitment and selection practices other than RJPs will be discussed next.

3C.5   THE INFORMATIONAL VALUE OF HIRING PROCEDURES

Imagine the following situation: You are determined to apply for the military. This is what you dreamt of from childhood on. Therefore, you decide to visit the local career office to get more information on career prospects in the military. When you arrive at the office, you discover that it is closed because 'the personnel went on excursion'. Disappointed but forgivingly ("excursions are necessary to stimulate the work force"), you decide to come back later. The following visit, one week after your first attempt, turns out to be a concatenation of surprises: you have to wait more than fifteen minutes before someone serves you, although there are no other candidates in the office; you are requested to complete a whole lot of forms, which all look alike; the information you receive is impersonal and seems to be part of a 'standard package'; the counselor pushes you to apply for infantryman, whereas you give preference to engineering; and when you finally agree with his offer (although you are still sitting on the fence), he unashamedly tells you to wait until the selection will take place … about two months later – but since the military is your childhood dream, you patiently endure this delay, concluding that sufferings are warranted to become a genuine soldier. At the selection center, three months later, the circumstances are even worse: you hear the personnel passing racist comments on allochtonous applicants; the computer infrastructure is prehistoric; the interviewer asks very personal questions that you feel are irrelevant to the job; feedback on your performance is completely lacking; and again, you are requested to wait several weeks before you will get notice on the selection outcome. Meanwhile, you seize the opportunity to reflect on the military hiring process. Based on your experiences,

you conclude that the military is not as innovative as you had expected, that it is very bureaucratic and cumbersome, that the personnel lacks training and motivation, and last but not least, that you prefer another employer after all.

Admittedly, the above description is oversimplified. It is very unlikely that all experiences someone encounters are negative. Moreover, I could have portrayed the organization as pioneering, flexible, and competent as well, thereby communicating the same underlying message. This message is that recruitment is a series of activities; any one of which is a potential source of information and can affect applicants' pre- and post-hire attitudes, intentions and behaviors toward the organization. In the following, I will present the three most important theoretical frameworks explaining this relationship: signalling theory, socialization theory, and organizational justice theory.

3C.5.1 Recruitment and Selection as Organizational Signals

In the absence of other information about the organization, applicants interpret information they receive in the course of the recruitment process as 'signals' about what it would like to be employed by the organization (Turban, 2001). This assumption stems from propositions from signalling theory (Spence, 1973; Spence, 1974). Spence developed the signalling theory by applying it to the labor market. Specifically, his theory developed on the problems that employers face in the recruitment process, given that they have no prior information about people's skill-sets. His theory states that high productivity people will seek more education than low-productivity people. This will prompt employers to take higher education as a signal, and offer higher salaries to such employees. Similarly, prospects and applicants will make inferences about the organization from various aspects of the hiring process if the information is not clearly provided by the organization (Behling, Labovitz and Gainer, 1968). For example, it is suggested that *recruiter characteristics* (warmth, informativeness, competence) influence applicant attraction through influencing applicants' perceptions of job and organizational attributes (Turban, Forret and Hendrickson, 1998). Similarly, *the timing of recruitment activities* may influence applicants' job pursuit through influencing their perceptions of the job and organization (Arvey, Gordon and Massengill, 1975; Rynes, Bretz and Gerhart, 1991). Turban and his colleagues (Turban, 2001; Turban, Campion and Eyring, 1995; Turban et al., 1998) provided support for the signaling theory by demonstrating that the relationship between recruiters/recruitment activities and applicant attraction is mediated by characteristics of the job and organization. There is also some evidence that the effect of navigational ease or usability of *company Web sites* on applicant attraction is mediated through prospects' perceptions of the organization (Braddy, Thompson, Wuensch and Grossnickle, 2003). As Ehrhart and Ziegert (2005) recently noted, signaling theory has the potential to explain the role of a large number of variables in attraction, "as virtually any characteristic observable can serve as a signal of actual organizational characteristics and can shape perceived organizational characteristics" (p. 904). The downside is that it cannot predict which recruitment characteristics are the most important at particular stages of the attraction process.

3C.5.2 Recruitment and Selection as Socialization

Traditionally, selection methods have been considered as neutral predictors of applicant suitability and subsequent job role performance ('psychometric perspective', Borman, 2001; Guion, 1998; Schmidt, Ones, and Hunter, 1992). Obviously, selection methods do act as predictors, but at the same time they are much more than that. Anderson (2001) suggested that selection methods can have a 'socialization impact', indicating that selection methods may facilitate or impede the integration of employees into the organization. Anderson further assumes that the impact of selection procedures is measurable in five domains:

1) First – Similar to signaling theory, a fundamental postulate of the socialization perspective is that organizations, often unintentionally, convey information to applicants through their recruitment and

selection practices ('*information provision*'). For example, in situational interviews applicants are presented a preview of the actual work environment that may influence unconsciously their attitudes/intentions toward the job and organization.

2) Second – Not all selection practices are equally liked by applicants ('*preference impact*'). Anderson suggested that the use if unpopular selection methods (e.g., drug testing, the stress interview) can result in an overall negative affective reaction to the organization, even when the applicant has accepted a job offer from the organization.

3) Third – Selection methods create expectations on a variety of issues, such as expectations of the organizational culture and climate, the future job role, and promotion opportunities ('*expectational impact*'). These expectations represent the cornerstones on which the psychological contract (Rousseau, 1995) is built. A violation of the expectations implied by the psychological contract is likely to result in negative attitudes and behavior to the organization (see *The psychological contract: A big deal!*), similar to the effects of unrealistic recruitment information on employee turnover.

4) Fourth – Selection methods can influence applicants' attitudes and beliefs ('*attitudinal impact*'). For example, Macan et al. (1994) examined the influence of manufacturing applicants' perceptions of an assessment center on their attitudes and intentions toward the hiring organization. They found that applicants' perceptions were significantly related to job acceptance intentions, even after controlling for applicants' pre-test attitudes toward the organization.

5) Fifth – Anderson argued that selection methods have the potential to elicit desirable pre- and post-entry behaviors ('*behavioral impact*'). For example, in a multiple hurdle selection process for the military applicants may learn very quickly that pro-social behaviors are rewarded and anti-social behaviors are penalized. Anderson hypothesized that these 'lessons learned' may also have an impact applicants' initial post-entry behaviors.

3C.5.3   Recruitment and Selection from an Organizational Justice Perspective

Gilliland (1993) developed a justice model of applicants' reactions to selection methods. According to the model, applicants' perceptions of the selection *process fairness* (i.e., procedural justice) and *outcome fairness* (i.e., distributive justice) are significantly related to applicants' self-perceptions (e.g., self-esteem, self-efficacy) and several important pre- and post-hire outcomes (e.g., test motivation, recommendation intentions, job acceptance, turnover). Fairness reactions result from the satisfaction or violation of *justice rules*. Based on earlier applicant reaction models (Arvey and Sackett, 1993; Iles and Robertson, 1989; Schuler, 1993), Gilliland put forward 10 procedural justice rules, which are related to formal characteristics of the selection (e.g., job relatedness, opportunity to perform), information offered during selection (e.g., feedback, honesty), and interpersonal treatment (e.g., propriety of questions, two-way communication). Several studies (e.g., Bauer, Maertz, Dolen and Campion, 1998; Ployhart and Ryan, 1997) provided support for Gilliland's model, and more recent models of applicant reactions (Chambers, 2002; Hausknecht, Day and Thomas, 2004; Ryan and Ployhart, 2000) continue borrowing from his framework. Up to my knowledge, until now only selection practices have been studied from an organizational justice perspective. Therefore, an interesting avenue for future research may consist in applying the justice perspective to *recruitment* practices.

From these three theoretical frameworks, it is apparent that recruitment and selection procedures may influence applicants' subsequent pre- and post-entry expectations, attitudes, intentions, and behavior through the information they convey. All hiring procedures carry information and therefore have the potential to affect how applicants will relate to the organization, even after hiring.

3C.6   RELATIONSHIP TO THE RECRUITMENT AND RETENTION MODEL

This chapter heavily focuses on the recruitment model's (see "A proposed model of military recruitment") 'informational sources' variable. RJPs and other hiring practices carry information on the characteristics of the organization (e.g., culture, values) that will influence (potential) applicants' decision to continue to pursue employment. Surprisingly, most recruitment source and RJP research has focused on *post-hire* consequences, including job satisfaction, commitment, performance, and turnover. However, recently there has been a shift in attention toward more immediate (proximal) recruitment outcomes, acting upon calls from several recruitment scholars (e.g., Barber, 1998; Rynes, 1991). Rynes (1991) argued that "we need to accord the immediate objective of recruitment – applicant attraction – higher priority" (p. 435). Barber (1998) stated that "given the tendency to focus on longer-term outcomes in the existing literature, redirection of research in the direction of attraction might be needed to develop a more balanced knowledge base" (p. 150).

The post-hire consequences of inflated expectations (resulting from misinformation) are portrayed in the turnover model (see "A proposed model of military turnover"). Unmet expectations lead to a violation of the *psychological contract* and to perceived *procedural and/or distributive injustice*. Breach and injustice perceptions are likely to influence job satisfaction and commitment through quality of life perceptions. Future studies could examine whether quality of life perceptions also influence more affective-emotional variables, such as burnout and work engagement (Gonzalez-Roma, Schaufeli, Bakker and Lloret, 2006), in addition to more attitudinal-cognitive variables, such as job satisfaction and commitment.

3C.7   PRACTICAL RECOMMENDATIONS

In the following section some practical recommendations are put forward. All recommendations are listed in Table 3C-1.

Table 3C-1: Practical Recommendations

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
RJPs	(1) RJPs have a small but significant positive effect on employee retention (2) RJPs are beneficial in terms of cost-savings	By presenting positive and negative information the dropout rate will decrease	Install RJPs Do not think of RJPs as a single event, but as a process of providing accurate information at several points during the hiring process
How?	(3) RJP effects are mediated through the knowledge structure applicants develop from RJP exposure	In order to be effective, RJPs must at least have the capacity to allow recipients to comprehend and retain the message	The method of communication should be geared to the applicant population: use audio-visual and oral-interview RJPs instead of written booklets and brochures
Who?	(4) Information from credible sources is processed 'centrally' (as opposed to 'peripherally')	Applicants will pay more attention to the content of the recruitment message if it is communicated through credible sources	Use testimonials from current job incumbents to transmit the message
When?	(5) Effort expenditure builds commitment	Early self-selection results in reduced selection costs and a highly committed applicant pool	Present the RJP early in the hiring process
Expectations	(6) The relationship between RJP and turnover is mediated by (un)met expectations	RJPs succeed in lowering applicants' inflated/unrealistic expectations. When employees' expectations are met, they are less likely to voluntarily leave the organization	Try to uncover motivators or reasons that individuals have for joining the organization, for example by using work value and job expectation questionnaires Update the information that is communicated to potential applicants Involve jobholders in fine-tuning and updating the recruitment materials Examine the views of current employees to get an indication of the 'internal image' of the organization

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
Other reasons	(7) Most variance in turnover behavior cannot be explained by RJPs	Employees leave organizations for a variety of reasons, most of which are not related to unrealistic information	Use exit-interviews and exit-surveys to uncover the reasons why people leave
Time delays	(8) Time delays are positively related to applicant withdrawal from the hiring process	Applicants who are facing long time delays between selection hurdles are more likely to withdraw from the process	Avoid time gaps in between selection hurdles as much as possible Try to maintain contact with applicants throughout the process
Orientation	(9) Newcomer orientation programs are positively related with self-efficacy and negatively with early turnover	Orientation programs can help newcomers cope with stress associated with organizational entry and result in reduced turnover	Organize newcomer orientation programs to facilitate the transition from civilian to military
Selection	(10) Selection methods implicitly convey information about the organization's values and culture	Applicants use selection methods to derive information on how it would be to work in that organization	Use work samples, situational judgment tests, and assessment centers to inform applicants about their future jobs

Based on the above review of the RJP literature, there can be little doubt that RJPs are associated with consistent (but small) increases in employee retention. We have also seen that despite the small increases, organizations may benefit from installing RJPs in terms of cost-savings. Finally, I recall that the RJP construct can vary heavily from one study to another, and that the RJP effect sizes are likely to vary accordingly. Therefore, practical questions may arise as how and when to install an RJP.

For example, which medium should be used, written or audio-visual? Saks and Cronshaw (1990) found that RJP effects are mediated through the knowledge structure applicants develop from RJP exposure. An important implication is that in order to be effective RJPs must at least have the capacity to allow recipients to comprehend and retain the message. Therefore, the method of communication should be geared to the applicant population. For example, "if the recipients of an RJP do not have at least a high school reading level then an audio-visual or oral-interview RJP might be more effective than a written RJP" (Saks and Cronshaw, 1990, p. 234). Phillips (1998) found that RJPs presented via a two-way communication facilitated applicant attention and comprehension even better than audio-visual RJPs. Therefore, I would recommend the military to make use of audio-visual and oral-interview RJPs instead of using written booklets and brochures.

Second, who should present the (audio-visual) RJP message, job incumbents or others (actors or other company personnel)? Job incumbents are probably the most credible source of information because they have expertise, they can be trusted and they are similar to the auditor (Wanous, 1989). Cable and Turban (2001) hypothesized that job seekers are more motivated to process information 'centrally' (as opposed to 'peripherally', Petty and Cacioppo, 1981) when it stems from a credible source. Therefore, I recommend the military to use testimonials from current recruits. In addition, it is worthwhile investigating whether credibility can be gained by using testimonials from former recruits ('dropouts') or whether this has an inverse impact.

Third, should the RJP be presented early or late in the organizational entry process? Both options have advantages and disadvantages. On one hand, presenting the RJP late is probably cheaper because fewer eligible applicants remain in the process. Furthermore, top management will be more likely to approve this option because fewer people will be exposed to the negative information (Wanous, 1989). On the other hand, presenting the RJP early enables applicants to self-select out of the process. Early self-selection results in reduced selection costs since less personnel and material are needed to screen a smaller applicant pool. Moreover, those who continue to pursue employment will be more committed to the organization because they have already taken a selection hurdle. Based on this argumentation, Wanous recommended organizations to present the RJP early in the process.

Fourth, how much negative information should be included? The majority of RJPs contain a medium degree of negative information. Wanous (1980) argued that the RJP should reflect the job and the organizational climate, as uncovered by an organizational analysis conducted previous to the RJP development. Although no research evidence is available, Wanous (1989) assumed that a high degree of negative information is most likely to result in a dramatic increase of the self-selection rate and may be used as evidence of management's negligence in a lawsuit. In contrast, a medium degree of negative information could increase an applicant's ability to cope with newcomer stress. In line with Wanous, I therefore recommend the military to combine positive information with a medium degree of negative information concluded from job and organizational analyses.

The modest relationships between RJPs and employee turnover suggest that RJPs are not sufficient to prevent recruits from leaving. To foster a true understanding of why people leave, organizations should try to uncover motivators or reasons that individuals have for joining the organization as well (Baker and Jennings, 2000).

The use of work value questionnaires and other 'motivational' inventories may help the military to disclose the reasons that applicants are drawn to the military. Similarly, the military may want to consider surveying applicants' job expectations early in the recruitment process. Not only will this reveal information on how the military is looked upon, but also it creates the opportunity to tone down inflated expectations by providing additional realistic information.

It is necessary to update the information that is communicated to potential applicants. As organizations and jobs are dynamic entities, recruitment information should evolve as well. To watch over the content and level of realism of the messages conveyed, I recommend the military to involve jobholders in fine-tuning and updating the recruitment materials. In a related vein, I advise the military to examine the views of current employees to get an indication of the 'internal image' of the organization. The internal image represents the pros and cons of the job/organization as experienced by actual jobholders and might be very useful to monitor recruitment activities. Finally, information gathered through exit-interviews and questionnaires can be included in the RJPs. Note that these recommendations can only be successfully implemented if there is efficient and prompt communication between the recruitment/HR departments and more 'operational' departments.

Hiring procedures may carry organizational information beyond what is explicitly mentioned through the recruitment message. For example, work samples; situational judgment tests and assessment centers may be very revealing in addition to the information provided by recruiters and recruitment materials. By using realistic selection methods unqualified applicants may decide to self-select out from the process after all. On the other hand, some characteristics of the selection procedure may unintentionally upset and discourage applicants from further pursuing a job. For example, several studies have found that applicants are more likely to drop out of the recruitment process when there are long time gaps between phases (Arvey et al., 1975; Rynes et al., 1991). It is advisable to minimize the time gap in between selection hurdles and to maintain contact with applicants throughout the process.

3C.8   CONCLUSION

This chapter described the various facets of information that might have an effect on turnover during military training. Numerous studies have examined the influence of information accuracy or realism on employee turnover, with mixed results. The majority of studies indicate that the combination of positive and realistic information (usually labelled 'realistic job preview', RJPs) has a small but significant positive effect on job survival. Several mediators of this relationship have been proposed, of which 'met expectations' is by far the most popular. Expectations that remain unmet would have an adverse impact on job satisfaction, commitment, job performance, and retention. RJPs would help to lower inflated/unrealistic job expectations. The unsound methodology used in many RJP studies have thrown doubt on the met expectation theory and several scholars looked for other mediators, such as freedom of choice, coping, trust and honesty, and self-selection. These rationales are not mutual exclusive and empirical evidence for most of these theories have been found. Research has also shown that the effect of RJPs on turnover varies according to the timing, context, and method of presentation. Other recruitment and selection techniques (e.g., work samples) contain information on job and organizational attributes as well. Applicants are likely to make inferences on organizational and job attributes based upon their experiences during recruitment and selection. This inferred information might (unintentionally) influence applicants' decision to continue to pursue employment. Based upon the available research findings, recommendations for military recruitment/selection practitioners and policy makers were discussed.

Chapter 3D – TRANSITION

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3D.1   EXECUTIVE SUMMARY

This chapter presents a review of literature on the process of transition. The focus is on people joining the Military – the process of organizational entry – and the process of change within the Military.

The process of transition with respect to matching the individual and the organization is one of the most critical phases of organizational life. Hence, recently hired workers are the most likely to turn over. With respect to this, conceptual models were chosen from the research literature. These describe the underlying mechanisms, which are discussed and translated into practical implications. With respect to the latter, procedurally fair selection tools/processes with face validity and perceived predictive validity are recommended. Stress as the most relevant factor in the immediate post-entry period should be reduced by means of appropriate coping strategies. Socialization of newcomers is divided into stages and corresponding countermeasures for those stages are presented.

The process of transition with respect to changes within the Military affects the organizational context and the serving individuals. This is exemplified by the transition from compulsory service to all-volunteer forces. With respect to the national level, policy aspects (e.g., forms of military capability, social and institutional needs) and the arguments pro and contra this transition are discussed and a dual system is recommended. With respect to the organizational level, the consequences and necessary organizational adjustments are discussed and translated into practical implications. With respect to the latter, the costs of transition should be monitored carefully, armed forces shall be prepared to interact with other players on the labor market and recruitment and selection need to be adapted. In order to predict consequences like these, simulation programs are recommended.

3D.2   INTRODUCTION

The goal of the NATO Task Group on Recruiting and Retention (R&R) of Military Personnel is to foster a true understanding of the mechanisms that influence recruitment and retention outcomes. In order to achieve this goal, generic military models were developed, which are based on 10 topic areas within the framework of R&R literature. One of these topic areas addresses the process of transition, which will be discussed below.

3D.2.1   Introduction to Transition

The Armed Forces of the NATO nations are in a constant process of change. This in turn imposes specific requirements on their military personnel and as an outcome, recruiting and retaining military personnel has become a major concern. This, among others, addresses the concept of transition, which holds true for newcomers and for those who are already in the Armed Forces. One of the most negative outcomes of failed transition is early (voluntary) turnover and in fact, the Military is facing an important loss of personnel who choose to leave. If transition fails, then early turnover is one likely result, if it is successful, then it eases the entry of newcomers and helps to retain the incumbents.

In order to reach this important goal, it is crucial to understand the process of transition (Section 3). In Sections 3.2 and 3.3 classifications and models will be discussed. Section 3.4 addresses the process of change in the organization itself, exemplified by the transition from compulsory service to all-volunteer forces. Section 3.5 deals with how to translate the results of this literature review into appropriate action by means of practical implications.

3D.3   THE TRANSITION PROCESS

One major aspect of transition is matching the individual and the organization. As part of this, the early period following entry is one of the most critical phases of organizational life. Hence, recently hired workers are the most likely to turn over (Farber, 1994) before the organization has been able to realize returns on its investments. This holds true in very much the same way for private industry and the Armed Forces (Wanous, 1992). It also should be taken into account that the newcomers' initial attitudes, preferences, expectations and perceptions strongly influence their subsequent attitudes, behavior and self-perception (Adkins, 1995; Wanous, 1992).

3D.3.1   Definition of Transition

Transition as a process encompasses the positive or negative reactions to significant changes in life circumstances. The concept of transition relates to both, the individual and the organization. With respect to R&R, transition is structured in the following way:

a) Recruiting/Individual:

The culture shock of joining: This means the movement by individuals from a civilian to a Service culture, where assumptions, attitudes, expectations, and practices are different and unfamiliar.

b) Recruiting/Organization:

Organizational requirements: From the perspective of the organization, recruiting means finding sources to address qualified job candidates, attracting and selecting them.

c) Retention/Individual:

Changes in needs and wants during Service: Changes in attitudes, expectations, aspirations and behavior which an individual undergoes during his or her service. For example, an unmarried soldier may desire interesting operational postings, but once married, the same individual may feel reluctant to leave home for long periods. Reasons for staying in the Service change as these transitions take place.

d) Retention/Organization:

Effects of significant organizational change: Changes in the organization, brought about by technology, or by movement in policy or operational stance. Examples are post Cold War strategy changes such as force reductions, expeditionary missions, high-technology military operations, and transition from compulsory service to all-volunteer forces. Changes like these affect the organizational context in which individuals serve; hence appropriate organizational coping strategies are required.

3D.3.2 Phases of Organizational Entry

In order to understand the process of transition, it is necessary to conceptualize the move from outside to inside the organization and to identify the relevant factors of this step. Accordingly Wanous (1992) distinguishes four phases of this "organizational entry", divided according to the perspective of the newcomer and the organization. He calls the first two pre-entry phases *recruitment* and *selection*, followed by the two post-entry phases *orientation* and *socialization*.

Although the phases are not as distinct and sequential as expected, they are helpful in breaking down the process of transition into meaningful chunks, as described below.

Phase 1 – Recruitment: Refers to the process of mutual attraction between a potential job candidate and the organization (see also *Realistic Information or Not? Short-term Consequences of (Mis)information* in this report).

According to Barber (1998), the organization has to conduct primarily those practices and activities by which potential employees can be identified and attracted. For the organization it is also of interest, how their marketing is evaluated by potential employees.

The individual on the other hand looks for job-relevant information, evaluates it and decides whether or not to apply.

Phase 2 – Selection: Refers to the process of mutual choice (see also chapters *Management of Recruitment, Selection, and Classification* and *Realistic Information or Not? Short-term Consequences of (Mis)information* in this report).

The organization selects from applicants and classifies newcomers who fit best. In order to predict future job performance, the match between required and given capabilities/abilities is assessed. The main aspects are job analysis, definition and realization of criteria and predictors and also validity and utility analysis. This increases the probability of finding the right person for the right job at the right time and represents the traditional approach of personnel selection research (Hom, Griffeth, Palich and Bracker, 1998; Avner, Gusastello and Aderman, 1982; Farber, 1994; Wanous, 1992).

Selection from the individual's perspective means choosing among job offers, deciding to apply and coping with the selection procedure. An additional contribution to the predictive value of the selection procedure is provided by understanding the applicants' perceptions and reactions to the selection process. The applicants' initial attitudes, preferences, expectations and perceptions are relevant, because these strongly influence their subsequent attitudes, behavior and self-perception (Adkins, 1995; Anderson, 2001; Hausknecht, Day and Thomas, 2004; Wanous, 1992).

A comprehensive overview of this social process perspective is provided by Hausknecht et al.'s (2004) updated theoretical model of applicant reactions to selection, which is tested by means of meta-analysis. It considers antecedents (e.g., person characteristics), applicant perceptions (e.g., attitudes towards tests) and outcomes (e.g., self-perceptions). In contrast to the traditional approach, the focus is on the applicant's perspective. This in turn enables the organization to take antecedents of selection and selection induced effects into account.

According to Hausknecht et al.'s (2004) model, the following can be concluded:

- Applicants with positive perceptions of the selection procedure are more likely to view the organization favorably, report stronger intentions to accept job offers, perform well on selection tools and recommend the employer to others.

- Applicants' perceptions are positively correlated with actual and perceived performance on selection tools and with self-perceptions.

- Face validity (selection tool seems to be relevant for the job) and perceived predictive validity (correlation between predictor and criterion) of the selection procedure were strong predictors of many applicant perceptions (e.g., procedural and distributive justice, attitudes towards tests and selection).

- Interviews and work samples were perceived more favorably than cognitive ability tests. The latter were perceived more favorably than personality inventories, honesty tests, bio-data and graphology.

Selection is a process of mutual choice and hence should be considered from the perspective of the organization and the applicant. Hence, the choice for tools of a selection procedure on the one hand should suffice statistical demands (reliability, validity, etc.) and on the other hand should be based on research results about applicants' reactions toward these tools.

Phase 3 – Orientation: Newcomer orientation refers to the post-entry phase. In order to distinguish it from socialization, Wanous (1992) delimited its time frame and content. Hence newcomer orientation is restricted to the first week after entry and deals mainly with stress.

With respect to Wanous' matching model, stress is a relevant factor, which can originate from unrealistic expectations, concerns about the capability to fulfill the demanded job requirements, role transitions and significant change in life circumstances. Accordingly, the objective for the organization is to facilitate the orientation phase by means of stress management interventions (e.g., coping strategies).

Programs that are designed to deal with anticipated forthcoming stress are a better choice for this situation than those dealing with stress after it has occurred. Based on a review of specific programs for stress preparation, Wanous suggested Realistic Orientation Programs for new Employee Stress (ROPES) in order to reduce newcomer's stress. According to Wanous the guidelines for developing ROPES are as follows:

- Present realistic information (realism also can cause negative by-products like reducing pre-entry attraction or negative interpretation of post-entry experiences; Ganzach, Pazy, Ohayun and Brainin, 2002);

- Provide general support and reassurance;

- Use models to show coping skills and discuss the model's actions;

- Rehearse coping skills;

- Teach self-control of thoughts and feelings; and

- Target specific stressors for specific newcomers.

Phase 4 – Socialization: According to Wanous (1992, p. 194) "organizational socialization is the transmission of important norms and values to the newcomer by the 'insiders' in the organization," which clearly distinguishes it from newcomer orientation. Hence, organizational socialization refers mainly to the match between organizational climates and individual job wants. This match is of interest because of its influence on job satisfaction, organizational commitment, and job survival (see section below).

The phase of organizational socialization encompasses the first year, although it could last for longer. In order to conceptualize this phase, stage models are the method of choice. DeVos, Buyens and Schalk (2003) surveyed factors of newcomer perceptions during the socialization process and divided the latter into an encounter and an acquisition stage (Louis, 1980). The first stage roughly encompasses the first half year after entry. In this period of high role and status uncertainty (Ashforth and Meal, 1989), newcomers assess the difference between their anticipations and work reality. In order to overcome this more or less apparent reality shock, coping strategies like sense-making and adaptation of expectations are recommended (Morrison, 1993). The acquisition stage roughly encompasses the second half year after entry. In this period uncertainty is reduced because of more stable cognitive schemas about the employment relationship. The newcomers become more acquainted with their new job setting; hence sense-making is not as important as in the first stage.

Sense-making is a cognitive process which is employed to cope with novelty. It helps newcomers to understand, interpret and respond to their new environment (Louis, 1980). With respect to sense-making, DeVos et al. (2003) examined how changes in newcomers' perceived promises are associated with their interpretations of experiences encountered after organizational entry. According to their results, employers should 'set the stage' (e.g., provide information about their inducements), especially in the encounter stage, for what newcomers can realistically expect. This is indicated because at that period newcomers are more flexible to adapt their initial expectations. Furthermore, "employers can manage employees' perceptions of their own promises directly by providing them with concrete information and feedback about their own contribution within the work setting" (p. 555).

Wanous (1992) reviewed well-known stage models and integrated them into a model of four stages in socialization. The first three stages represent the socialization process and the last one refers to the transition from newcomer to insider. The stages are titled as follows:

- Stage 1: Confronting and accepting organizational reality.
- Stage 2: Achieving role clarity.
- Stage 3: Locating oneself in the organizational context.
- Stage 4: Detecting signposts of successful socialization.

The above 2-stage and this 4-stage socialization model enable organizations to anticipate which demands newcomers will encounter and what their reactions will probably be. These stage models are formulated in a general way and hold true for a variety of organizations. With the same intention, but with respect to a specific socialization, Bourne (1967) categorized the army basic training into four stages. These represent the first two stages of Wanous' (1992) stage model and reflect the match between the individual's specific job wants and the organizational climates Bourne's four stages are as follows: environmental shock, engagement, period of attainment and period of termination:

- Environmental shock: In this first stage (induction) two main factors are the sources of stress: the recruits' expectations are disconfirmed and the administrative processing is very time consuming, boring and ambiguous. Typical reactions are daze, apathy, over-reaction, and extended orientation towards authority.
- Engagement: In this second stage (basic training), the stress level decreases, because the procedures (e.g., haircut, wearing uniform, less privacy) reflect what was expected – but during the first four weeks, the level of anger and resentment rises, because of outsider feelings and because of lack of appreciation of skills.

- Period of attainment: In this third stage recruits learn how to handle weapons. They receive positive feedback on acquired skills and this in turn leads to positive reactions of the recruits.

- Period of termination: In this fourth stage almost at the end of the basic training, there is a definite shift to feelings of euphoria and self-confidence (the experience could have been tougher).

3D.3.3   Models of Matching Individuals and Organizations

Two models are presented below, which conceptualize the step from outside to inside by means of interaction of the main factors that are relevant in this phase.

3D.3.3.1   Model by Wanous (1992)

Based on the Minnesota studies of vocational adjustment (Dawis and Lofquist, 1984), Wanous developed a matching model (p. 8), which focuses on organizations especially with respect to the entry process. This model expresses how individuals and organizations get matched to each other. Outcomes of these matches among others are job performance, job satisfaction, organizational commitment, and voluntary turnover.

In this model, on the one hand, the person-job fit (Kristof-Brown, Zimmerman and Johnson, 2005) is represented by the match of capabilities/potential abilities between individual and organization. It is assumed that job performance is directly affected by this match. This reflects the traditional viewpoint of the organization with respect to selection and classification. The person-organization fit (Kristof-Brown et al., 2005) on the other hand is represented by the match between specific job wants and the capacity of organizational climates/culture to reinforce those wants. It is assumed, that the impact is directly on job satisfaction and indirectly on organizational commitment, rather than on job performance.

The matching model is quite complex, hence no single study has tried to examine it in its entirety. Nevertheless, evidence is given for assumptions underlying parts of the model as follows:

- Job performance: Ghiselli (cited in Wanous, 1992, p. 14) summarized studies from 1920 – 1966 and concluded that it is easier to predict success in training (R = 0.39) than job performance (R = 0.22). Hunter and Hunter (1984) reviewed these data. With focus on mental ability tests predicting job performance, they found high validity coefficients (R = 0.50). The Army Ability Test Battery predicted on-the-job performance with higher coefficients (R = 0.65) by means of multiple regression (McHenry, Hough, Toquam, Hanson and Ashworth, 1990).

- Job performance, job satisfaction and turnover: Firstly, job satisfaction should be lower for those who quit voluntarily in comparison to those who quit involuntarily. Secondly, job performance ratings by supervisors should be higher for those who stay in the organization or who leave voluntarily in comparison with those who leave involuntarily. Thirdly, there should also be moderately strong correlations between job performance and involuntary turnover on the one hand, and job satisfaction and voluntary turnover on the other. All three predictions were confirmed by Wanous, Stumpf and Bedrosian (1979), although involuntary turnover is only of minor importance in this chapter. These results address the person-job fit and the person-organization fit separately, but not their relationship.

- Job performance and turnover: According to the matching model, McEvoy and Cascio (cited in Wanous, 1992, p. 14) found in a comprehensive review, that high performance is linked to staying in the organization, and poor performance is linked to having to leave. Besides this reasonable result,

sometimes high performance was also linked to high voluntary turnover; high performers leave because they can leave (Jackofsky, 1984).

- Commitment and turnover: In study reviews, the correlation between the rate of turnover and organizational commitment varied from r = -0.20 (Randall, 1990) up to r = -0.28 (Mathieu and Zajac, cited in Wanous, 1992, p. 13).

- Job satisfaction: Based on 440 Navy recruits, Farkas and Tetrick (1989) found that job satisfaction is a direct result of a newcomer's matching between his/her specific desires and the fulfillment of those by the organization's various climates.

3D.3.3.2   Model by Kammeyer-Mueller and Wanberg (2003)

In a longitudinal study of newcomers in seven organizations, Kammeyer-Mueller et al. (2003) examined a set of predictors as antecedents of proximal and distal indicators of newcomer adjustment.

In distinction to the above mentioned matching model of Wanous (1992), Kammeyer-Mueller et al. (2003) tested their structural model almost in its entirety by means of LISREL (Jöreskog and Sörbom, 2001), which estimated the standard path coefficients for the latent variables. The path coefficients confirmed most of the hypotheses, although some of them are lower than expected (see sub-section *Antecedents of Newcomer Adjustment* below).

Kammeyer-Mueller et al.'s (2003) model is based on a set of variables, which are described as follows (except for turnover, all data are self-reports):

- *Distal Adjustment Outcomes:* These should reflect important attitudinal (commitment) and behavioral (work withdrawal, turnover) reactions to the workplace. These are assumed to be influenced by proximal learning and social integration on the part of the employee. The following outcomes fall into already well-established categories.

    - *Organizational Commitment:* It consists of a belief in the organization's goals and values and the willingness to exert effort on behalf of the organization.

    - *Work withdrawal:* Is a combination of behaviors that reflect an attempt to psychologically disengage from work tasks (e.g., failing to attend meetings, avoiding work, etc.) and it also reflects poor task performance. Taken together, work withdrawal behaviors are ways to avoid one's job task while remaining within the organization. These behaviors are actually worse for the organization than if the person were to turn over.

    - *Turnover (part of work withdrawal):* Is the complete withdrawal from a work setting. Turnover as an indicator of newcomer adjustment is often examined with respect to realistic job preview (see also topic chapter *Realistic Information or Not? Short-term Consequences of (Mis)information* in this report) and sometimes with respect to socialization.

- *Proximal Adjustment Outcomes:* Based on a literature review, Kammeyer-Mueller et al. (2003) distilled the following four primary salient proximal outcomes and tested their relations to the above mentioned distal adjustment outcomes.

    - *Task Mastery:* Acquiring the necessary knowledge and skills to complete expected task behaviors is a major issue for newcomers. Meta-analytic evidence is given for a negative relationship between task performance and withdrawal behaviors (Bycio, 1992). Hence Kammeyer-Mueller et al. incorporated this in their model and found the expected negative correlation between task mastery and work withdrawal.

- *Role clarity:* Newcomers have to learn about their job's purpose and relationship to other jobs. Role clarity reflects having sufficient information about the responsibilities and objectives of one's job and having knowledge of behaviors to achieve these goals. Role clarity has been positively related to organizational commitment in studies of newcomer adjustment (Bauer and Green, 1998). Hence Kammeyer-Mueller et al. incorporated the latter relationship in their model and assumed additionally a negative correlation between role clarity and work withdrawal. With respect to the path coefficients, this hypothesis was supported.

- *Work group integration:* Developing a social sense of the new work environment is a critical antecedent of adjustment. Perceived approval from co-workers and inclusion in their activities can be a source of assistance and social support. The latter one was found to be related to organizational commitment (Fisher, 1985) and hence was incorporated into the model. This hypothesis was supported.

- *Political Knowledge:* Refers to the informal network of power and interpersonal relationships in an organization. For the model it is assumed that newcomer political knowledge is positively related to organization commitment. This hypothesis was not supported.

- *Antecedents of Newcomer Adjustment:* Kammeyer-Mueller et al. (2003) incorporated the below listed antecedent variables into their model and tested their relations to the above mentioned proximal and partially to the distal adjustment outcomes.

  - *Pre-entry Knowledge:* This affects the newcomer's ability to select jobs that match their skills and abilities and facilitates the acquisition of information regarding the new environment. Hence it is assumed that pre-entry knowledge will be positively related to task mastery, role clarity, work group integration and political knowledge. This hypothesis was supported.

  - *Proactive Personality:* The newcomers' disposition toward proactive behavior increases their acquisition of knowledge of the work environment and their willingness to modify their work role to match their preferences. Hence it is assumed that proactive personality will be positively related to task mastery, role clarity, work group integration, and political knowledge. This hypothesis was supported, except for the relation of proactive personality and clarity.

  - *Influence of Socializing Agents:* Newcomers will encounter multiple messages coming from the organization, supervisors, mentors and co-workers.

    a) Organization Influence: Institutionalized strategies involving significant formal organizational efforts have been associated with higher role clarity (Ashforth and Saks, 1996). Hence it is assumed that organizational socialization influence will be positively related to role clarity. This hypothesis was supported.

    b) Leader Influence: A strong relationship has been found between leader clarification of job and task information and role adjustment and performance efficacy for newcomers (Bauer and Green, 1998). Supervisors or mentors have been found to be important in explaining how informal political processes work (Ostroff and Kozlowski, 1992). Hence it is assumed that leader socialization influence will be positively associated with task mastery, role clarity, and political knowledge. This hypothesis was only partially supported. The hypothesized relationship with political knowledge was confirmed, but not with task mastery and role clarity.

    c) Co-Worker Influence: Research has shown that those who see co-workers as more helpful in the socialization process are more satisfied, more committed, and report greater intentions to remain (Louis, Posner and Powell, 1983). Also co-workers are significant sources of information with respect to knowledge about the workgroup (Ostroff and Kozlowski, 1992).

Hence it is assumed that co-worker socialization influence will be positively associated with task mastery, role clarity, work group integration, and political knowledge. This hypothesis was mostly rejected, only the relation to group integration was found.

- *Perceived Alternatives:* It is assumed that commitment is reduced among those with good alternatives (Moreland and Levine, 1988), but also those who believe they have poor alternatives may be reluctant to engage in work withdrawal behaviors because of the possibility of involuntary job loss. Hence it is assumed that perceived alternatives will be negatively related to commitment and positively related to work withdrawal. This hypothesis was only supported for the relation with organizational commitment, but not for the relation with work withdrawal.

Taking these hypotheses together, the above mentioned results can be summarized as follows:

- The first subset of hypotheses reflects the relationship between proximal and distal adjustment outcomes. All hypotheses were supported except for the relation of political knowledge with organizational commitment.

- The second subset of hypotheses reflects the relationship between antecedents of adjustment and proximal (9 – 12) adjustment outcomes. In this subset almost 66% of the hypotheses were supported. In particular the socialization influence variables were not related to the proximal adjustment outcomes as expected.

- When proximal outcomes were included in the model, organizational commitment is affected by pre-entry knowledge and proactive personality and work withdrawal is affected by organizational influence.

- Turnover has also been assessed as a distal outcome and it was intended to use proximal outcomes as predictors. Because of loss of data due to already occurred turnover, the antecedent variables of adjustment have been taken instead. Out of them only pre-entry knowledge and leader influence were both related negatively to turnover.

3D.3.4   Conscription versus All-Volunteer Forces

In distinction to the previous sections, the focus here is on effects of significant organizational change, which is exemplified by the transition from compulsory service to all-volunteer forces.

A significant number of NATO member countries ended/suspended conscription and transitioned to all-volunteer forces (Belgium, France, Italy, The Netherlands, Portugal, Slovenia, Spain, United Kingdom, United States, and others plan to phase it out), while other member countries keep or plan to keep conscription.

3D.3.4.1   General Aspects

The momentum of the continual debate for and against conscription increased due to the obvious policy change of about half of the 26 NATO member countries. In order to justify their decision, proponents of both parties take into account either different arguments or interpret overlapping arguments differently. In Williams' (2004) transatlantic roundtable report about *Filling NATO's Ranks: Military Personnel Policies in Transition*, the arguments of the discussion are summarized as follows (see also Klein, 1998).

According to Table 3D-1, the arguments of proponents of conscription refer to recruiting aspects, territorial defence and costs. With respect to democracy they emphasize duty and integration of the military into society. The proponents of all-volunteer forces on the other hand emphasize long term return of investment, legal aspects, expeditionary forces, military capability and efficiency.

Table 3D-1: Arguments Pro Conscription vs. Pro All-Volunteer Forces

Pro Conscription	Pro All-Volunteer Forces
Recruitment	
Conscripts represent a critical pool of potential recruits; once in the military, young people develop a taste for military service and continue as volunteers.	Rising levels of draft resistance and refusal to serve reduce the size and quality of the pool of potential conscripts.
Military Strategy	
Conscript militaries are more in keeping with a recurring requirement for territorial defence.	Voluntary forces are more compatible with expeditionary missions. This is especially true in countries whose laws prohibit the military from sending conscripts abroad.
	Voluntary forces are better suited to high-technology military operations, because individuals can be selected for their cognitive skills, trained for a longer period of time, and grow in capability with longer experience.
Costs	
Troop for troop, conscript militaries cost less than all-volunteer militaries; as a result, for the same amount of money, they can be larger than volunteer forces, and therefore generate more robust reserve forces.	After a transition period, voluntary forces are more cost-effective from the point of view of the military budget, because volunteers stay in service longer (reducing the military's requirements for training new troops) and cause fewer discipline problems. In addition, high-technology equipment allows greater substitution of capital for labor, thus allowing for a reduction in force size and military infrastructure without a loss in capability.
	Savings that result from reduced force size and infrastructure can be reinvested in military equipment, thus adding more to capability.
Social and Legal Aspects	
Compulsory service is a duty of citizenship in a democracy. Being part of a state brings collective goods, and the individuals who share in those goods should share in the duties as well.	Military downsizing reduces the portion of the eligible youth population required to serve. As compulsory service becomes substantially less than universal, concerns about the equity of conscription grow.
Conscription distributes the burden of military service across society. In contrast, volunteers are too often drawn from the lower echelons of society, because the economic and job prospects the military offers are attractive to them.	
A volunteer military will attract too many individuals with an excess of military fervor or, in the worst case, ideologues with fascist tendencies.	
Public support for the military will wane as the armed forces become less representative of society at large.	

Source: C. Williams, 2004, *Filling NATO's Ranks: Military Personnel Policies in Transition. Report of Transatlantic Roundtable*, 8-9 September 2003 Transatlantic Center of the German Marshall Fund of the United States Brussels, Belgium: p. 6 (re-arranged by author of this chapter).

Besides this debate, nations who are in transition to all-volunteer forces share the following challenges (Williams, 2004, p. 16):

- The level of military pay necessary to make the military competitive as an employer is higher than anticipated before the transition.

- Attracting high-quality recruits is more difficult than anticipated; the private sector puts up particularly stiff competition for information specialists and people with other technical skills.

- Poor working conditions and inadequate facilities scare recruits away; but improving them costs more money than anticipated.

- The costs to train longer-serving volunteers (thus capitalizing on a key advantage of volunteers) are higher than expected.

- Unanticipated costs, tight budgets, and budget cuts eat into the resources that are necessary to implement the reforms surrounding the transition (pay rises, enlistment and re-enlistment bonuses, advertising, closing bases made redundant by the lack of conscripts).

- Some uniformed leaders are not motivated to make the transition a success. The situation can be exacerbated when tight budgets and unanticipated costs prevent the improvements in equipment, infrastructure, and training that were touted as benefits to be gained from the shift to all-volunteer forces.

This list reflects obstacles to be taken into account during the transition process toward all-volunteer forces. The costs of the transition process have to be monitored carefully. Additionally, it can be expected that it will be comparatively harder to achieve recruitment goals. Hence it would be very helpful to simulate the transition in order to estimate its consequences. Accordingly, the Italian Armed Forces used a simulation program (Zanini, 2002) during their transition process in order to avoid these pitfalls. Zanini's dissertation provides an analytic framework for understanding the key policy issues and tradeoffs. By taking costs into account, it identifies transition paths that most likely lead to a balanced force. It also provides guidance on force management processes such as recruitment and identifies areas of improvement.

Every member of the Alliance retains its full sovereignty and hence defines its trade-offs among forms of military capability, social and institutional demands and preferences by itself. Being part of the Alliance, the Alliance's strategic concept also has to be considered. The Alliance is facing a new quality of threats and hence is reorienting its defence capabilities. As one part of the coping strategy, NATO's civilian leaders have expressed a preference for all-voluntary forces for all NATO countries and designated new members have been counseled in this direction (Williams, 2004). The justifying arguments for this preference are presented in the right-hand column of Table 3D-1. Taking into account the Alliance's strategic concept with respect to a national perspective, some experts emphasize arguments pro conscription, which are presented in the left-hand column of Table 3D-1.

The national (local) and NATO's (global) strategies do not necessarily contradict each other because of their overlap – but with regard to overall efficacy of the global strategy, there is room for improvement. This could be established by a mixed model, which incorporates the crucial advantages of conscription and all-volunteer forces. Accordingly Klein (1998) mentions a dual system, which consists of professional forces on the one hand and a militia for home defence on the other. By retaining the concept of conscription and its system of registration, it would be possible to reserve the option of calling up conscripts again in case of a national threat.

The next section exemplifies the transition experiences of the Royal Netherlands Army. It reflects the positive outcome of this project as well as the above mentioned challenges.

3D.3.4.2 Transition Experiences of the Royal Netherlands Army (RNLA) and Conclusions

In order to establish all-volunteer forces, in the RNLA conscription has been suspended since September 1996, but not abolished. This enables The Netherlands parliament to reintroduce conscription in case of emergency.

Van Gelooven (1996, p. 6) states "All in all, it has become clear that the new volunteers will be different from the conscript personnel of the past, not only different but also more homogeneous". After a decade of transition, Major van Aarle (2001, p. 6) summarized that: "…transition led to problems…", but: "… we have succeeded in creating armed forces that are well suited to their tasks…" In order to overcome the obstacles within the process of transition, various adjustments within the organization are necessary.

After suspension of conscription, the unlimited supply of personnel has to be replaced by recruitment of new personnel and efforts have to be undertaken to be attractive to this target group. With respect to van Gelooven (1996), research results were taken into account indicating that attraction is driven by these aspects: job content (variation, helping people), adventure, money and autonomy, but not by discipline and by being a soldier. The armed forces also should increase their value on the labor market through education or mediation. Successful recruitment and retention within the process of transition means that the armed forces should provide these opportunities (van Gelooven). This probably cannot be carried out immediately and hence drops in the manning levels of the armed forces are to be expected as in the RNLA, where the manning level has dropped to below 88% since 1997 (Moelker, Olsthoorn, Bos-Bakx and Soeters, 2005).

According to Moelker et al. (2005) the attractiveness of a job within the forces and the chance of successful recruitment are influenced by the following factors:

- Basic conditions of employment (length of contract, level of remuneration, fringe benefits, etc.);
- Unemployment rate;
- Demographic developments in the recruitment group; and
- Image of the organization as a whole.

Moelker et al. (2005) suggest the following measures to overcome the recruitment problem:

- Short contracts;
- Increased employment of women, minorities, recruits under eighteen and also, although controversial, foreigners;
- Reducing the number of recruits leaving during the time between selection and employment;
- Measures with respect to retaining personnel;
- Extended pre-recruitment measures;
- Extended military education and training;
- Lowered selection levels;
- Labor market monitoring system; and
- Marketing (armed forces portray themselves as an employer with interesting jobs, variety, challenge, possibility to take a degree, etc.).

According to Moelker et al. (2005), the educational level of volunteers has always been of concern and in fact it dropped after suspension, but not as much as expected. As a consequence, this led to more coaching-related extended training and leadership and more intensive guidance (van Aarle, 2001). Hence it is necessary to learn how to deal with the new soldiers and to avoid comparing them with the conscripts of the past. Furthermore, it is necessary to know about their way of thinking, their expectations and their informal culture (van Gelooven, 1996).

3D.3.5   Practical Implications

This section provides recommendations for improving R&R in the armed forces, separated for the different models presented above and a closing sub-section about transition from conscription to all-volunteer forces.

3D.3.5.1   Implications with Respect to the Model of Hausknecht et al. (2004)

With respect to selection, applicant reactions are related to organizational outcomes and hence shall be considered regarding the composition of the selection tools. Accordingly, the corresponding conclusions and practical implications are summarized by means of the Hausknecht et al.'s (2004) theoretical model of applicant reactions to selection as follows:

- It is favorable to implement selection tools/processes which are perceived as procedurally fair and job related, because if so, applicants:
  - View the organization favorably (more positive image perceptions of company);
  - Report stronger intentions to accept job offers; and
  - Recommend the employer to others.

- Applicants who hold favorable perceptions (e.g., procedural/distributive justice, attitudes towards test/ selection, etc.):
  - Tend to perform well on selection tools (actual and perceived); and
  - Hold themselves in higher self-regard.

- Face validity (selection tool seems to be job relevant) and perceived predictive validity (correlation between predictor and criterion) of the selection procedure were strong predictors of many applicant perceptions (e.g., procedural and distributive justice, attitudes towards tests/selection).

- Applicants perceive selection tools more favorably, when the relationship between the content of the tool and the job duties is transparent (face validity). The corresponding descending order is as follows:
  - Interviews, work samples, resumes and references;
  - Cognitive ability tests;
  - Personality inventories and bio-data; and
  - Honesty tests and graphology.

3D.3.5.2   Implications with Respect to the Models of Wanous (1992) and Kammeyer-Mueller et al. (2003)

The conclusions and practical implications concerning the models of Wanous and Kammeyer-Mueller et al. are as follows:

- The study of the entry process of newcomers is crucial with respect to the costs of voluntary turnover. In this regard, Wanous' matching model describes a dual matching process between the individual and the organization. The first match refers to the individual's capabilities/potential and the requirements of a particular job. The direct consequence of this match is on job performance, and, indirectly, on involuntary turnover. The second match refers to the individual's specific job wants and the capacity of the organizational climates to fulfill them. The direct consequence of this match is on job satisfaction, and, indirectly on commitment and voluntary turnover.

  - These above-mentioned matches between the individual and the organization have to be optimized in order to foster more effective self-selection job choices. In this respect interviews, questionnaire surveys, audio-visual techniques, booklets, oral presentations and realistic work-samples are recommended.

  - Administering personality surveys early during the selection process may be useful either to select applicants with higher pro-activity or to identify those with low pro-activity who may need more assistance.

  - Newcomer entry refers to the immediate post-entry period (first week). Stress is an issue especially for newcomers; hence the objectives of newcomer entry programs should address stress coping strategies (e.g., ROPES).

  - Socialization in summary can be divided into the following stages: (a) confronting and accepting organizational reality, (b) achieving role clarity, (c) locating oneself in the organizational context, and (d) detecting signposts of successful socialization.

  - The rate at which newcomers proceed through the various stages of socialization is determined by the amount of interaction between newcomers and insiders. With this respect it has to be taken into account that initial favorable attitudes toward the organizations decrease the longer newcomers remain in them.

  - Supervisors and co-workers are transmitters of important socialization information and should be well trained for this role (e.g., peer and supervisory mentoring programs).

  - Recruits have inflated expectations for the most important job factors. According to DeVos et al. (2003) employers should 'set the stage' (e.g., provide information about their inducements) especially in the first half year after entry (encounter stage) for what newcomers can realistically expect, because at that time they are more flexible in adapting their initial expectations. Furthermore, "employers can manage employees' perceptions of their own promises directly by providing them with concrete information and feedback about their own contribution within the work setting" (p. 555).

  - With respect to the distal adjustment outcomes (Kammeyer-Mueller et al.) organizations may take the following into account:

    a) Cooperation and coordination within work groups will induce a greater desire to fit with the organization which seems also to be true for individuals who have a clear sense of their job responsibilities.

    b) It can be assumed, that those who are better able to complete their work tasks may gain a greater sense of accomplishment from work and in turn will have less interest in avoiding work.

3D.3.5.3   Implications with Respect to Conscription versus All-Volunteer Forces

With respect to the national level, a dual system that combines professional forces and a militia for home defence seems to be a promising compromise (Klein, 1998).

It is useful to predict the consequences of transition by means of simulation programs like the one from Zanini (2002).

With respect to the organizational level, Moelker et al. (2005, p. 46) concluded for the RNLA: "…the decision to form an all-volunteer Army has to be seen in the context of a changed security situation and the new tasks of the armed forces and the discussion, that preceded that decision." They summarized the following crucial success factors with respect to the transition process (p. 46):

- Forces reduction is crucial for the transition to all-volunteer forces. In The Netherlands, costs are kept within limits by reducing personnel.

- Manning the armed forces depends on their position on the labor market. Hence the armed forces need to learn to work together, to interact with other players on the labor market and to adapt to its dynamics. Finally, the entire organization needs to adapt.

- The image of the armed forces is crucial beyond advertising in itself. For a strong position on the labor market it is necessary to monitor its supply and demand, its ideas and the behavior of the target group. This implies physical presence on the market and a national network in order to communicate with other parties on the labor market.

- The organization of recruitment and selection needs to be adapted to the new conditions.

- The length of contracts must be flexible in order to meet the needs of potential employees and the organization itself.

- Offering education is crucial for social/political acceptance and for reinforcement of recruitment as well as extended training.

3D.4   CONCLUSIONS

The main goal of the task group on recruiting and retention is to foster a true understanding of the mechanisms that influence military R&R outcomes. With respect to this, an explanation is needed as to why people join/do not join the military and why they decide to stay in or leave.

With respect to the distinct aspects in the R&R process, recruitment; selection and classification; retention and turnover – papers for 10 specific topics in this area were written and contributed to the development of the two generic military models, one for recruiting and the other for turnover (retention).

One out of these 10 topics is transition. In this chapter, emphasis was placed on the process of organizational entry together with organizational orientation and socialization, based on models which describe, analyze, and predict R&R outcomes in a comprehensive way.

Changes affecting the organization are another issue of transition. With respect to this, the pros and cons of conscription versus all-volunteer forces were discussed (Moelker et al. 2005; Williams, 2004) and translated into practical implications.

Chapter 3E – THE PSYCHOLOGICAL CONTRACT: A BIG DEAL!

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3E.1   EXECUTIVE SUMMARY

Psychological contracts are the beliefs individuals hold regarding terms and conditions of the exchange agreement between themselves and their organizations. By filling the gaps between the formal contract and all that applies to the working relationship it reduces uncertainty, shapes behavior, and gives people a feeling about what happens to them in the organization. It can be seen as the foundation of the relationship originating during the recruitment phase and further developing the first few months after entry. If the organization succeeds in meeting the beliefs employees hold regarding the working relationship, the psychological contract is in a good state leading to job satisfaction, higher levels of commitment and more intentions to remain. If on the other hand employees perceive that the organization has failed to fulfill one or more obligations comprising the psychological contract, breaches occur. A variety of studies reveal the relationships between breaches and lower job satisfaction, trust, commitment, OCB, more emotional exhaustion, higher turnover intentions and turnover behavior. The psychological contract has shown its contribution in civil settings especially in respect to retention of personnel. Implementing the concept into military settings will help explain why recruits leave during initial training, satisfaction and commitment levels drop, and (intentions to) turnover rise.

3E.2   INTRODUCTION

Recruiting and retaining qualified personnel has become increasingly challenging for many North Atlantic Treaty Organisation (NATO) countries. These challenges, in part, stem from a shrinking youth population, increased labor market competition and greater educational opportunities and are multi-dimensional, inter-related, and highly complex. In an effort to identify causes and subsequent solutions to these intricate challenges NATO established a Human Factors and Medicine (HFM) task group (TG). The TG identified 10 fundamental areas systemic to the problem, and identified viable solutions within each area that could overcome the challenges of recruiting and retaining personnel in today's competitive market place. One such area is managing individual beliefs about implicit or explicit promises regarding the working relationship, commonly referred to in literature as the psychological contract.

In this chapter the role of the psychological contract and its importance in recruiting and retaining the "right" personnel is discussed. Given the paucity of military research in this area, the summary findings draw heavily on findings from academia. The chapter starts with a short history of the psychological contract. After that attention will be given to how the contract originates and develops. The chapter continues with the contents/ dimensions of psychological contract, sorts of contracts, violations, and consequences of these violations. Furthermore the notion of a "New Deal" will be reviewed. The chapter ends with a discussion and practical implications.

3E.3 BRIEF HISTORY

The concept of a "psychological contract" was introduced in 1960 by Argyris; however, it was not until the mid 1980s and 1990s with the advent of corporate downsizing, mergers, and takeovers that the concept of the "psychological contract" was explored as a theory to explain resulting employee turnover behavior (Van den Brande, 1999).

In the early definitions of the concept, expectations from the individual as well as the expectations of the organization were incorporated. In 1989 Rousseau stated that these expectations are difficult to comprehend as a whole, but can be seen more like a multiple collective of diverse and differing expectations held by a set of actors (Anderson and Schalk, 1998). Therefore, Rousseau (1989) presented a narrower definition with the perspective of the individual as the central element: *"Psychological contracts are defined as the beliefs individuals hold regarding the terms and conditions of the exchange agreement between themselves and their organizations"* (Rousseau, 1995 pp 9). This accounts for the employees' expectations of the organization and their ideas about what they feel they owe to the organization. In addition to the individual aspect, Rousseau also emphasizes the obligatory nature of the psychological contract.

3E.4 FUNCTION

The function of the psychological contract is reduction of insecurity. Inasmuch as all possible aspects of the employment relationship cannot be addressed in a formal, written contract, the psychological contract fills the gaps in the relationship. Furthermore, the psychological contract shapes behavior. Employees weigh their obligations towards the organization against the obligations of the organization towards them and adjust their behavior on the basis of critical outcomes. Finally, the psychological contract gives employees a sense of being able to influence what happens to them in the organization (McFarlane Shore and Tetrick, 1994, summarized in Anderson and Schalk, 1998).

3E.5 BASIS

Because psychological contracts involve employee beliefs about the reciprocal obligations between themselves and their employers, they can be viewed as the foundation of employment relationships (Rousseau, 1995; Shore and Tetrick, 1994). But how do these beliefs originate? Turnley and Feldman (1999) state that individuals generally form the expectations from two sources: their interactions with organizational representatives and their perceptions of the organization's culture. During "anticipatory socialization," organizational agents (recruiters, human resource managers) make specific promises to employees about what to expect from the organization (Feldman, 1976; Van Maanen, 1976). Employees' perceptions of their organization's culture and standard operating procedures also shape their beliefs regarding psychological contracts. Through expectations formed during recruiting and early experiences in the organization, the psychological contract develops.

3E.6 DEVELOPMENT

In the first three to six months after entering the organization, the rudimentary psychological contract will be brought more into reality (Thomas and Anderson, 1998). According to Rousseau (1995), newcomers usually have an overly positive view of the labor relationship. Their initial perceptions are characterized by high expectations towards the employer and lower expectations of themselves, which matches findings from the

"realistic expectations" literature (Louis, 1980). Though there is a substantial difference. Beliefs about what the job will be like have been investigated in terms of expectations (Wanous and Collella, 1989). Beliefs about implicit or explicit promises have been investigated in terms of psychological contracts (Anderson and Schalk, 1998).

In their study Sutton and Griffin (2004), showed that measures of both (met) expectations and psychological contract (violations) are distinct and meaningful. Results demonstrated that pre-entry expectations, post-entry experiences, and psychological contract violation independently explain a significant percent of variance in job satisfaction. The results also support job satisfaction playing a key mediating role between both experiences and contract violations and turnover intentions. Furthermore, they note that psychological contract violations can be assessed by a single contemporaneous measure, while met expectations need to be assessed by two distinct measures (pre-entry expectations and post-entry expectations) (Sutton and Griffin, 2004).

Unlike pre-entry expectations, psychological contracts are formed through interaction with the employer (Sutton and Griffin, 2004). The same holds for socialization literature, but De Vos and Buyens (2002) note that socialization literature concentrates on the integration of the newcomer within the organization and the acquisition of the required knowledge about the job and the organization culture. Psychological contract literature, on the other hand, focuses on the development of a realistic perception of the work *relationship* (Rousseau, 1995; Shore and Tetrick, 1994).In both instances, reducing uncertainty is central to the process and the exchange of information between employee and organization is emphasized.

As newcomers gain more experience within the organization, they will adapt their expectations more to reality. Based on that reasoning, Rousseau (1995) states that newcomers' perceptions of organizational promises will weaken during the first months in their new jobs, while the perceptions of their own promises will increase.

3E.7   CONTENT AND DIMENSIONS

Psychological contracts are based on specific promises made by both parties and on generally accepted promises based on the general obligations of employers and employees. Even if an employer has not made specific promises in that regard, every employee appreciates clarity, fairness and good communication. Every employer appreciates employees dealing properly with confidential information and doing good work. In addition to general obligations, the psychological contract is further augmented with written agreements, such as employment contracts (Huiskamp and Schalk, 2002).

Objective employee characteristics play only a small part in both setting the terms of the psychological contract and in implementation. Context-specific differences between organizations, within organizations and among individuals are more important for the creation, development and evaluation of the psychological contract (Huiskamp and Schalk, 2002).

A thorough preliminary investigation of existing benchmarks and three studies (see also, De Vos, Buyens and Schalk, 2001; De Vos and Buyens, 2002) support conceptualizing the psychological contract as a multi-dimensional construct with five dimensions distinguishing organizational promises (see Table 3E-1).

Table 3E-1: Organization Promises

Organization Promises	
1) Career development	Offering possibilities for development and/or promotion within the organization (such as possibilities for development, chances of promotion)
2) Job content	Offering challenging, interesting job content (such as work in which employees can use their capacities, challenging tasks)
3) Social environment	Offering a pleasant and cooperative working environment (such as good communication among co-workers, good cooperation within the group)
4) Financial compensation	Offering appropriate compensation (such as remuneration commensurate with the work, conditions of employment that have favorable tax consequences)
5) Work-private life balance	Offering respect and understanding for the personal situation of the employee (for example, flexibility in working hours, understanding of personal circumstances)

Source: De Vos, Buyens and Schalk, 2001.

Along with organizational promises five dimensions for employee promises can also be distinguished (see Table 3E-2).

Table 3E-2: Employee Promises

Employee Promises	
1) Effort and performance	Willingness to make efforts to perform well for the organization (for example, making efforts for the benefit of the organization, doing good work both quantitatively and qualitatively, working well with co-workers)
2) Flexibility	Willingness to be flexible in carrying out the work that needs to be done (for example, working overtime, taking work home)
3) Loyalty	Willingness to continue working longer for the organization (for example, not accepting every job offer that comes along, working for the organization for at least several years)
4) Ethical conduct	Willingness to conduct oneself ethically towards the organization (for example, not making confidential information public, dealing honestly with resources and budgets)
5) Availability	Willingness to keep one's availability status at an acceptable level (for example, taking training courses that become available, keeping up with trade literature)

Source: De Vos, Buyens and Schalk, 2001.

Although everyone has expectations along the mentioned dimensions the focus on, and importance of, a dimension varies with the type of contract.

3E.8   SORTS OF CONTRACTS

Rousseau (1995) distinguishes between transactional and relational contracts. Two dimensions reflect the transactional psychological contract:

a) Narrow involvement in the organization, limited to a few well-specified performance terms; and

b) Short term duration, two to three years at most.

In contrast relational contracts are open-ended collaborations with only loosely specified performance terms. The ownership has significant implications for employee attitudes and workplace behavior.

In Table 3E-3, characteristics of transactional versus relational contracts are listed.

Table 3E-3: Continuum of Contract Terms

Transactional Terms		Relational Terms
Economic	**Focus**	Economic, Emotional
Partial	**Inclusion**	Whole person
Close-ended, specific	**Time frame**	Open-ended, indefinite
Written	**Formalization**	Written, unwritten
Static	**Stability**	Dynamic
Narrow	**Scope**	Pervasive
Public, observable	**Tangibility**	Subjective, understood

Source: Rousseau, 1995.

Transactional contracts can be characterized as easy-to-exit agreements with relatively high turnover. Lower levels of organizational commitment and weak integration into the organization allow for high member rotation and freedom to enter new contracts. With high affective commitment, strong member-organization integration, and stability built on the traditions and the history of the relationship, relational contracts exemplify many emblematic characteristics of paternalistic relationships. Relational obligations include mutual loyalty and long-term stability, often in the form of job security (Rousseau, 1995).

3E.9   VIOLATIONS

Violations or breaches of the psychological contract occur when an employee perceives that the organization has failed to fulfill one or more of its obligations comprising the psychological contract (Rousseau and Parks, 1993).

According to Rousseau (1995), breaches can take three forms: inadvertent, disruptive or reneging (see Table 3E-4).

Table 3E-4: Forms of Breaches

Inadvertent	Able and willing *(divergent interpretations made in good faith)*
Disruption	Willing but unable *(inability to fulfill contract)*
Reneging	Able but unwilling *(deliberate breach of contract)*

Source: Rousseau, 1995.

Whether the victim understands the source of the breach to be unwillingness or inability to comply has a tremendous impact on how breach is experienced and what the victim's response is (Bies and Moag, 1986).

3E.9.1   Causes of Violations

Although contracts can be breached in innumerable ways, there are a number of common forms. Recruiters may "over-promise" a job's opportunity for challenge, growth, or development. At the same time; however, eager job seekers may read their own interpretation into a promise. Managers, co-workers, or executives who say one thing and do another can all engender breaches. A common cause of breaches for many employees involves a change in superiors. When one's boss or mentor is promoted, terminated or retires, old deals may be abrogated. Similarly, changes in human resource practices, even with constructive intent can appear to break old commitments. Then the different contract makers express divergent intentions. A mission statement can convey that the organization rewards employees based on merit while the compensation system is based on seniority. Different contract sources may each convey mutually exclusive promises (Rousseau, 1995).

3E.9.2   Framework Responses on Violations

A framework for understanding situational constraints on employees' responses to breaches of psychological contracts is provided by the exit, voice, loyalty, and neglect (EVLN) typology. This typology was originally developed by Hirschman (1970) and subsequently expanded upon by other researchers (e.g., Farrell, 1983; Rusbult, Farrell, Rogers and Mainus, 1988; Whitey and Cooper, 1989). This framework suggests that employees will respond to breaches of psychological contracts with:

- Increased exit (leaving the organization altogether);

- Increased voice (taking initiative with superiors to improve conditions);

- Decreased loyalty (decreasing the number of extra-role or "organizational citizenship behaviors" they engage in); and

- Increased neglect (putting in half-hearted effort, more absenteeism and lateness, less attention to quality.

This framework also suggests that different responses to breaches of psychological contracts may be more likely to occur in different situations (Turnley and Feldman, 1998). A study conducted by Turnley and Feldman supported the idea that breaches of psychological contracts have a pervasive negative effect on employees' exit, voice, loyalty, and neglect behaviors. In general, breaches of psychological contract were most strongly related to measures of exit and loyalty and somewhat more weakly (although still statistically significantly) to measures of voice and neglect.

The situational factors moderated the relationship between breaches of psychological contracts and exit, but did not moderate the relationships between breaches of psychological contracts and voice, loyalty,

or neglect. A possible explanation of why people do not engage in voice or neglect behavior is that the situation may not allow them to act out their anger without injuring themselves further.

3E.9.3   Relationship with Job Satisfaction, Commitment and Turnover

More in general, many studies revealed the relationship between breaches, attitudes and workplace behavior. A meta-analysis between the relationship of psychological contract breach and organization – bonding, – commitment, turn-over intentions, job satisfaction and performance revealed that the less an organization meets the expectations of its employees, the more significant the consequences (Wanous, Poland, Premack and Davis, 1992). Schalk et al. (1995) concluded that a poor state of the psychological contract is related to lower commitment to the job and to the organization, less identification with the organization and higher turnover intentions. Further Robinson, Kraatz and Rousseau (1994) concluded that the occurrence of breaches was negatively related to trust, job satisfaction, and intentions to remain and was positively related with turnover.

A longitudinal study conducted by Robinson (1996) revealed a negative relationship between psychological contract breaches and "organizational citizenship behavior", performance, intentions to stay with the employer and a positive relationship with turnover. Inasmuch as psychological contracts are formed on the basis of trust, breach may lead to strong emotional reactions and feelings of betrayal (Robinson and Rousseau, 1994). Less severe breaches also have consequences; however, such as higher turnover (Guzzo et al., 1994; Robinson and Rousseau, 1994), lower trust and job satisfaction (Robinson and Rousseau, 1994), lower commitment to the organization (Guzzo et al., 1994), and less Organizational Citizenship Behavior (OCB: Robinson and Morrison, 1995).

Bunderson (2001), to wind up with, argued that professional employees are more likely to respond to breaches of *administrative* role obligations, with feelings of dissatisfaction, turnover intention and actual turnover, whereas breaches in *professional* role obligations are more likely to result in lowered organizational commitment and job performance.

3E.9.4   Procedural Justice

Psychological contracts are closely related to organizational justice perceptions, specifically individual assessment of procedural fairness (Cropanzano and Prehar, 2001). Managers in organizations undergoing change, should, therefore consider employee perceptions of procedural justice, since these play a role in employee evaluations of psychological contract breach (Robinson, 1995; Turnley and Feldman, 1998).

3E.9.5   Health

Gacovic and Tetrick (2003) conclude in their study that while increased job demands are related to employees reporting more emotional exhaustion, when an organization lives up to its promises, employees experience less emotional exhaustion and are more satisfied with their jobs. Therefore, they suggest that perceptions of organization failure to fulfil obligations, or psychological contract breach, may be an important source of emotional exhaustion and job dissatisfaction.

3E.9.6   Transactional versus Relational

Robinson et al. (1994) state that psychological contracts became more transactional after the breach. The employee withdraws from the relationship and will pay more attention to financial and other economic

aspects. Herriot and Pemberton (1996) agree with this, Stating that breaches of transactional contracts lead to explicit negotiations, or adjustment of own investment or quitting the job. Emotions play an important role in the case of breaches of relational contracts. Disappointment and distrust may develop, and as a result of this the contract may become more transactional. At the core of the change may be the re-evaluation downwards by the employee of what they owe to the organization relative to what it owes to them.

3E.9.7   Downsizing

Work force reductions can range from forceful in nature, i.e., involuntary reductions, to the milder approaches, such as resignation incentives and job sharing (Sutton and D'Aunno, 1989) – but even under circumstances where departures are voluntary, downsizing is considered as a destabilizer of status quo ante.

A stream of research, both laboratory and field, has provided documentation of the harmful effects downsizing can have on "survivors". These effects have been described in terms of lower morale (e.g., Armstrong-Stassen, 1993), high stress (e.g., Leana and Feldman, 1992), and a "syndrome" marked by anger, envy, and guilt (e.g., Noer, 1993). Perceived fairness of the downsizing is considered a key mediating variable (e.g., Brockner, 1992), as is the effectiveness of the communication of information (e.g., Bridges, 1987).

Brockner et al. have studied the "fairness" of layoffs from a procedural justice perspective and shown a link between perceived fairness of the layoffs and survivor commitment to the organization (e.g., Brockner et al., 1994). Among the fairness factors that Brockner examines, is the connection with existing corporate culture. Organizations, which have traditionally managed to avoid layoffs, are likely to be perceived by employees as breaching the psychological contract and therefore as more unfair when they do resort to layoffs.

Parks and Kidder (1994) suggest that the changes are likely to create breaches of psychological contracts among the remaining employees. In turn, these employees are likely to reduce their commitment to the organization and to become poorer organizational citizens. Just when organizations need their employees to become more flexible and to work even harder, many employees may be less willing than ever to give their all for the good of the organization (Parks and Kidder, 1994).

3E.10   THE "NEW DEAL"

Until the last decade, the majority of organizations were described as hierarchical, bureaucratic, and the employment relationship as paternalistic. The organization's structure and employees´ current and future place in it were clear. In exchange for loyalty, commitment, and acceptable levels of performance, employees received security, regular advancement opportunities, annual pay increases, reward for outstanding or loyal performance in the form of higher paid costs, additional benefits, and investment in training and development (Capelli, 1997; Pascale, 1995; Sims, 1994).

To control fluctuating demands for labor and increase the flexibility of the workforce, there has been a shift from permanent jobs to contractors, leased employees and temporary workers. As organizations focus less on long term performance, employees are recruited and retained for particular skills, often for only a short time (Herriot and Pemberton, 1996; Pascale, 1995).

The traditional working relationship characterized by a permanent, full-time job with regular working hours will therefore in the new labor condition be replaced by a big variety of contracts (Van den Brande et al., 2002). Theoreticians/Scholars and practitioners speak about this so-called changing working relationship in a sense of "the new employee" (De Korte and Bolweg, 1994), "a new protean career" (Hall, 1996; Hall and

Moss, 1998), "the boundaryless career" (DeFillippi and Arhur, 1994; Arthur, 1994) and "a new deal" (Herriot and Pemberton, 1994). For the psychological contract this means that the old key features (security, continuity, and loyalty) will be replaced more and more by (business-like) exchange aimed at employability for the near future (Anderson and Schalk, 1998). In the new psychological contract (Gasperz en Ott, 1996) the employer would value aspects like multi-deployability en mobility, as for the employees the broadening of competencies is important, with the aim at jobs elsewhere. The employee switches then from job security in the current organization to work security on the labor market.

Evidence suggest that the presumed "quantum shift in the balance of the reciprocal agreements between employers and employees" (Anderson and Schalk, 1998) is only partly the case. Huiskamp en Schalk (2002) concluded from their results that there were only few indications of the upcoming of a new psychological contract in The Netherlands. Researchers like Ebadan and Winstanley (1997) and Stevens (1995) found that workers of all age still had long term employment plans with their current employer. It further has been suggested that many organizations that demand changes in working practices have not changed other aspects of their culture, which the "new deal" requires and which might encourage the acceptance of employability. Rajan (1997) found that organizations had not clearly articulated the new values they are operating on. The carry over a mixed "baggage" of old and new culture and thus give out conflicting messages. The conclusion of a study that involved over 400 participants from 40 different organizations by Shape (2000) was that employability as a key feature has become a reality for only the minority, being the more privileged, highly educated and more ambitious group. Van den Brand et al. (2002) concluded likewise in their study that the transition from the traditional psychological contract to so called "new deals" was only the case for a small group of highly educated professionals and managers.

3E.11   SUMMARY AND PRACTICAL IMPLICATIONS

Psychological contracts are the beliefs individuals hold regarding terms and conditions of the exchange agreement between themselves and their organizations. By filling the gaps between the formal contract and all that applies to the working relationship it reduces uncertainty, shapes behavior and gives people a feeling about what happens to them in the organization. The relevance of Psychological Contract is clearly indicated by the various studies conducted as described in the foregoing.

3E.11.1   Basis

The basis of the psychological contract is already formed before individuals enter the organization. Expectations are formed from two sources: their interactions with organizational representatives and their perceptions of the organization's culture. During "anticipatory socialization," organizational agents (recruiters, human resource managers) make specific promises to employees about what to expect from the organization (Feldman, 1976; Van Maanen, 1976). Employees' perceptions of their organization's culture and standard operating procedures also shape their beliefs regarding psychological contracts. Through expectations formed during recruiting and early experiences in the organization, the psychological contract develops.

3E.11.1.1   Practical Implication

It is important that individuals, prior to and during organizational entry, receive accurate information. Not only should attention be paid to job contents, but also what the working relationship is like: what the individual may expect from the organization and what the organization expects to receive from the individual. The following table presents some topics that should be addressed during the entry process.

Table 3E-5: Managing the Psychological Contract

Topics to be addressed during the Entry Process
Specify expectations regarding performance
Specify review process and timeframe
Describe training (use examples)
Describe expected length of employment (e.g., how long in first job, typical length of employment)
Explore candidate expectations (reality check)
Check with candidate how accurately you have understood what he or she expects
Convey behavioral expectations (e.g., interpersonal task norms such as individual initiative or teamwork)

Source: Rousseau, 1995.

3E.11.2   Development

In the first three to six months after entering the organization, the rudimentary psychological contract will be brought more into reality (Thomas and Anderson, 1998). According to Rousseau (1995), newcomers usually have an overly positive view of the labor relationship. As newcomers gain more experience within the organization, they will adapt their expectations more to reality. Based on that reasoning, Rousseau (1995) states that newcomers' perceptions of organizational promises will weaken during the first months in their new jobs, while the perceptions of their own promises will increase.

This, however, was not found in a study conducted in military context. Thomas and Anderson (1998) studied the development of the psychological contract of new recruits in the British Army. Instead of a decrease with respect to employee expectations they found a significant increase. Within the first eight weeks the recruits heightened their expectations regarding job security, social and leisure time, effect on the family and accommodation. The authors were unable to determine what caused the increase in expectation. They suggested that it is possibly a result of the experiences that personnel have during the first weeks in respect to the high expectations that the army has of the recruits' contribution. Another possible explanation is that the recruits realized that the employer offers more possibilities in a number of areas than they had counted on initially. After the first few weeks, as a result, they have raised the level of their expectations in respect to those aspects (Thomas and Anderson, 1998).

Another study conducted in a military training context, stressing the importance of the development of the psychological contract, concerns a study amongst 556 Spanish newly hired professional soldiers. The decision to remain or leave the army and other attitudinal and behavioral outcomes, proved to be a function of the psychological contract breach during the training period, as far as two years afterwards (Topa and Palaci, 2005).

3E.11.2.1   Practical Implication

The rapid development of newcomers' psychological contracts during organizational socialization has implications for employers (Thomas and Anderson, 1998). Previous research demonstrated that relative stability of outcomes is achieved early in the socialization process (Ashforth and Saks, 1996; Bauer and Green, 1994), and that such outcomes are predicted by the psychological contract (Guzzo, et al., 1994). Based on this evidence, Thomas and Anderson (1998) recommend that employers attend to the dimensions included in employees' psychological contracts from the most rudimentary stage onwards, to encourage the

inclusion of realistic and desirable employer and employee obligations (Hiltrop, 1995; Robinson, 1995). Negotiation and renegotiation may be particularly important in developing a match between what both employees and employers want and offer.

3E.11.3   Content/Dimensions

A thorough preliminary investigation of existing benchmarks and three studies (see also, De Vos, Buyens and Schalk, 2001; De Vos and Buyens, 2002) support conceptualizing the psychological contract as a multi-dimensional construct. Five dimensions are distinguished for organization promises (career development, job content, social environment, financial compensation, and the work-personal life balance) and five dimensions for employee promises (effort and performance, flexibility, loyalty, ethical conduct, and availability).

3E.11.3.1   Practical Implication

In a survey of 1,331 employees in 27 organizations in The Netherlands, Huiskamp and Schalk (2002) asked respondents to describe the obligations they felt they owed to the organization and what obligations they felt the organization owed them. Furthermore, an evaluation was included of the degree to which agreements were fulfilled (see also, Schalk and Rousseau, 2001). It was found that employees felt obligated primarily to do good work, protect confidential information, providing good service and working together well. To a lesser degree, employees felt responsible for working overtime, not supporting competitors and doing non-mandatory tasks. Obligations that clearly score low were informing the organization that employees were looking for another job, and accepting another position within the company or accepting a transfer.

Employees found that employers had primary obligations for more 'soft issues.' Employees thought that employers had a strong obligation to take clear and fair measures, provide open and direct communication and provide a suitable salary and appreciation. This was more important to them than aspects of security, challenging and stimulating work, possibilities for promotion and compensation for exceptional performance. Training and development and a good working environment both received an average score.

The psychological contract appeared most fulfilled in the areas of good working environment, job and income security and training and development. The psychological contract was least fulfilled in the areas of open and direct communication, possibilities for promotion, and clarity and fairness. Huiskamp and Schalk (2002) note further that the level of meeting employers' obligations is good primarily in relation to 'traditional' aspects such as good working environment, job and income security and training and development. The psychological contract is least well fulfilled in 'modern' aspects such as open and direct communication and possibilities for promotion.

Replicating the aforementioned study in military organizations will shed light into questions as: do soldiers value some obligations as being more important and differ soldiers in respect to this from (non-commissioned) officers. And to what level, and on which dimensions, is the psychological contract fulfilled. There are, though, some studies that have been conducted in the military in which the contents were subjected: Performance Management and the Psychological Contract in the Australian Federal Public Sector (2002) and Exploring the Psychological Contract of the Canadian Armed Forces (1999).

3E.11.4   Sorts of Contracts

Based on the job characteristics, duration and specification, contracts can be divided in transactional and relational. A short-term duration and a rather narrow involvement in the organization limited to a few well-

specified performance terms characterize transactional contracts. Whereas relational contracts are open-ended with loosely specified performance terms, and compared to transactional contracts are more affective and stable (Rousseau, 1995).

3E.11.4.1   Practical Implication

Armed forces often offer two types of contracts: fixed-term contracts of various lengths and contracts for indefinite service (career personnel). Following the distinction between transactional and relational contracts, the fixed term contractors would have a more transactional contract and the permanent (career) contractors would have a more relational psychological contract. This implies that depending on the kind of contract (fixed or permanent) employees differ in the way they value aspects of the working relationship and what they feel the organization is obliged to them and reversibly what they feel are obliged to the organization. Characteristics of the different contracts and the way owners view their relationship with the organization are put out in Table 3E-6.

Table 3E-6: Characteristics of Different Contracts

Transactional	*Relational*
Little organizational loyalty	High organizational loyalty
Employees develop marketable skills	Employees develop company-specific-skills
Unstable employment	Stable employment
Flexibility/easy exit	Willing to commit to one company
Less willing to take additional responsibilities	High intent to stay with organization
Reward system focuses on short term	Members highly socialized

Source: Rousseau, 1995.

3E.11.5   Violations

Although there are significant differences in attitudes and workplace behavior; if expectations are being fulfilled, both transactional and relational contractors will produce productive behavior. But even with the best intentions from both the employer and employee, relations can break down and the psychological contract can be violated. Breaches occur when employees perceive that the organization has failed to fulfill one or more obligations comprising the psychological contract. A variety of studies reveal the relationships between breaches and lower job satisfaction, trust, commitment, OCB, more emotional exhaustion, higher turnover intentions and turnover behavior (e.g., Robinson, Kraatz and Rousseau, 1994).

3E.11.5.1   Practical Implication

Although contracts can be breached in innumerable ways, there are a number of common forms where organizations should be aware of.

To avoid psychological contract violation, employers need to fulfill the promises that they make regarding issues such as training and development, supervision and feedback, promotion and advancement, long-term job security, change management, power and responsibility, and work environment. Many of these issues are explicitly or implicitly addressed during the selection and recruitment phases (Sutton and Griffin, 2004).

Table 3E-7: Sources of Violation by Contract Makers and Systems

Sources	Violations
Contract Makers	
Recruiters	Unfamiliar with actual job, over-promise
Managers	Say one thing do another
Co-workers	Failure to provide support
Mentors	Little follow-through, few interactions
Top management	Mixed messages
Systems	
Compensation	Changing criteria
Benefits	Reward seniority, low job security
Career paths	Dependent on one's manager
Performance review	Not done on time, little feedback
Training review	Skills learned not tied to job
Documentation	Stated procedures at odds with actual practice

Source: Rousseau, 1995.

The content of the contract should, and does, evolve through formal and informal interaction between the two parties and places high demand for good communication skills on both employee and employer. Over time, it is likely that the separate psychological contracts that the employee and employer hold will differ, and this will necessitate the renegotiation of terms to avoid the perception of contract breach that may lead to a range of unwanted outcomes (Coyle-Shapiro and Kessler, 2000b).

3E.11.6 Responses on Breaches

A framework for understanding situational constraints on employees' responses to breaches of psychological contracts is provided by the exit, voice, loyalty, and neglect (EVLN) typology. This typology was originally developed by Hirschman (1970)

	Constructive	Destructive
Passive	**Loyalty**	**Neglect**
Active	**Voice**	**Exit**

Figure 3E-1: EVLN Typology as Reponses to Violations.

This framework also suggests that different responses to breaches of psychological contracts may be more likely to occur in different situations (Turnley and Feldman, 1998). In general, breaches of psychological contract were most strongly related to measures of exit and loyalty and somewhat more weakly (although still statistically significantly) to measures of voice and neglect. A possible explanation of why people do not engage in voice or neglect behavior is that the situation may not allow them to act out their anger without hurting themselves further.

A study conducted by Turnley and Feldman (1998) supported the idea that breaches of psychological contracts have a pervasive negative effect on employees' exit, voice, loyalty, and neglect behaviors. Turnley and Feldman (1998) suggest that psychological contract violations may result in increased exit, increased neglect of in-role job duties, and a reduced willingness among employees to defend the organization against outside threats. Thus the negative consequences of psychological contract violations are likely to extend beyond just the hurt feelings of employees; psychological contract violations may result in behaviors that are damaging to organizations as well.

3E.11.6.1 Implication

The EVLN typology for understanding situational constraints on employees´ responses to breaches of psychological contracts poses questions regarding responses to breaches in the military, even more during deployments. Because of the hierarchical structure and contractual obligations within the military, there is only limited space for active responses (e.g., voice and exit). Consequently responses are more likely to be passive (e.g., loyalty and neglect). Especially within the military the "neglect" response can have serious consequences.

3E.11.7 Transformation to All-Volunteer Armed Forces and Downsizing in General

A stream of research, both laboratory and field, has provided documentation of the harmful effects downsizing can have on "survivors". These effects have been described in terms of lower morale (e.g., Armstrong-Stassen, 1993), high stress (e.g., Leana and Feldman, 1992), and a "syndrome" marked by anger, envy, and guilt (e.g., Noer, 1993). Perceived fairness of the downsizing is considered a key mediating variable (e.g., Brockner, 1992), as is the effectiveness of the communication of information (e.g., Bridges, 1987).

Hickok (1995), for example, documented symptoms of survivor illness at an Air Force installation that had, up to the point of the research, experienced only voluntary departures. During the downsizing Hickok (1995) reported mentions of increased conflict were significantly greater than the more positive mentions of pulling together. That during periods of organizational decline work relationships can become more testy is also a finding of Mohrman and Mohrman (1983), who reported "backstabbing, placing of blame, and overt failure to cooperate".

3E.11.7.1 Implication

In economical lean years, besides companies, also the government is constrained to employ retrenchments. In most cases the defence budget is not spared. Besides retrenchments defence organizations can be transformed to all volunteer armies. In both cases the organization will be confronted with downsizing. In the case of transformation to an all-volunteer army it will mostly concern career personnel. After the announcement and during the transition there will be a heightened perception of job insecurity – but also after the operation is over, feelings and attitudes of the survivors can be altered.

3E.11.8 A New Deal?

To control fluctuating demands for labor and increase the flexibility of the workforce, there has been a shift from permanent jobs to contractors, leased employees and temporary workers. As organizations focus less on long term performance, employees are recruited and retained for particular skills, often for only a short time (Herriot and Pemberton, 1996; Pascale, 1995).

Consequently for the psychological contract this means that the old key features (security, continuity, loyalty) will be replaced more and more by (business-like) exchange aimed at employability for the near future (Anderson and Schalk, 1998). In the new psychological contract (Gasperz en Ott, 1996) the employer would value aspects like multi-deployoability en mobility, as for the employees the broadening of competencies is important, with the aim at jobs elsewhere. The employee switches then from job security in the current organization to work security on the labor market.

3E.11.8.1   Implication

Based on Hiltrop (1995) and further developed and extended by Anderson and Schalk (1998) Table 3E-8 presents the presumed shifts in the balance of the reciprocal 'agreement' between employers and employees.

Table 3E-8: Past and Emergent Forms of the Psychological Contract

Characteristic	Past Form	Emergent Form
Focus	Security, continuity, loyalty	Exchange, future employability
Format	Structured, predictable, stable	Unstructured, flexible, open to (re)negotiation
Underlying basis	Tradition, fairness, social justice, socio-economic class	Market forces, saleable, abilities and skills, added value
Employer's responsibilities	Continuity, job security, training, career prospects	Equitable (as perceived) reward for added value
Employee's responsibilities	Loyalty, attendance, satisfactory performance, compliance with authority	Entrepreneurship, innovation, enacting changes to improve performance, excellent performance
Contractual relations	Formalized, mostly via trade union or collective representation	Individual's responsibility to barter for their services (internally or externally)
Career management	Organizational responsibility, inspiring careers planned and facilitated through personnel department input	Individual's responsibility, inspiring careers by personal reskilling and retraining

Source: Anderson and Schalk, 1998.

Studies conducted until now (e.g., Van den Brand et al., 2002) conclude though that the transition from the traditional psychological contract to so called "new deals" is only the case for a small group of highly educated professionals and managers.

The notion of a new psychological contract as a consequence of economical, political and social changes is a feasible one. However until now there is only some evidence for a changed psychological contract concerning a high potential group (i.e., young officers). Contemporary and future *value* research may be at the basis of exploring new relevant features. The younger employees who are now entering the job market (i.e., potential soldiers) may have other career expectations compared to employees who are working right now.

3E.12   CONCLUDING REMARKS

The psychological contract is a very subjective concept which influences employees' beliefs and behavior in the workplace. From the recruitment stage of an employee's work to retirement or resignation, it can have a profound effect on the attitudes and well-being of an individual. Although it is an unwritten contract it has a central role in work behavior by better specifying the dynamics of the employment relationship. It is clearly an important ingredient in the business relationship between employers and employees and can be a powerful determinant of workplace behavior and attitudes. The military would gain a great deal when taking into consideration the psychological contract and its abundant implications.

Table 3E-9: Overview Practical Recommendations of the Research Reviewed			
Topic	**What the research says**	**Practical explanation of the research**	**Recommendation(s) to address the issue**
Basis	The basis of the PC is already formed before organizational entry.	Expectations are formed by interactions with organizational representatives and by perceptions candidates have of the organizational culture and the standard operating procedures.	1) During the entry process attention needs to be paid to specifying expectations and describing what the candidate may expect. 2) Explore the candidate's expectations (reality check).
Development	During organizational socialization the PC rapidly develops and becomes more stable.	During the first three till six months (mostly General Military Training) the employees' perceptions of the mutual promises will crystallize and remain effective for the upcoming years.	3) The organization should attend to employees PCs from the most rudimentary stage onwards to encourage the inclusion of realistic and desirable employer and employee obligations. 4) Negotiation and renegotiation may be important in developing a match between what the employee and employer want.
Content	The PC can be conceptualized as a multi-dimensional construct with both five dimensions for organization promises and five dimensions for employee promises.	Employees have clear expectations on five areas of the working relationship being; career development, job content, social environment, financial compensation, and work-personal life balance. The employee on the other hand feels obliged to return effort and performance, flexibility, loyalty, ethical conduct, and availability.	5) Make sure that employees are fairly met on the five organization areas. In return employees feel obliged to meet the organization on the employee areas. 6) Ensure that these areas of the working relationship are attended during consultations and being covered in surveys.

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
Sorts of contracts	Based on job characteristics, duration and specification contracts can be divided in transactional and relational. Short term duration (2 – 3 years) and well-specified performance terms characterize transactional contracts Whereas relational contracts are characterized by open-ended contracts with loosely specified performance terms.	Transactional contractors (fixed-term contractors) are more focused on instrumental aspects of the job like reward systems and acquiring marketable skills. Whereas relational contractors (career personnel) are more focused on non-instrumental aspects and include mutual loyalty.	7) Personnel policies aimed at fixed term contractors should well provide in instrumental aspects of the job. For career personnel also non-instrumental aspects are important.
Violations	Perceived failure by the employee to fulfill one or more obligations comprising the PC will result in contract breach.	Breaches have strong relationships with lowered job satisfaction, lowered commitment, and higher turnover (intentions).	8) To avoid breaches, pay attention to common sources of violations as well for contract makers (e.g., recruiters) as for systems (e.g., career paths) (see Table 3E-7). 9) Try to keep informed about contract fulfillment of your personnel and leave room for renegotiation.
Responses on violations	The EVLN typology is a framework for understanding employee's responses to breaches.	Dependent on situational constraints employees respond to breaches by exit, voice, loyalty or neglect.	10) Make sure that there is always a possibility for the employee to respond with voice. 11) This is even more important during deployments because of the constraints to respond in another manner (exit) and the severe consequences it can have (neglect).

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
New deal	To control for fluctuating labor demands and to increase the flexibility of the workforce, there has been a shift from permanent jobs to temporary contractors.	For the PC this means that old key features (security, continuity, loyalty) will be replaced more and more by business-like exchange aimed at employability. Evidence until now though has only been found for a smaller group of highly educated professionals and managers.	12) If the organization can't provide in old key features, effort should be invested in providing opportunities for the employee to broaden competencies with the aim of finding a job after the contract. 13) Contemporary and future value research is needed to be sure that the organization is able to meet the requirements to be an attractive employer and to be able to recruit en retain enough qualified personnel.

Chapter 3F – VALUES RESEARCH

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3F.1   EXECUTIVE SUMMARY

Values play a crucial role in social life regulation. Accordingly, values have a strong influence in the labor world, particularly (what matters here) at the time of making a decision to join or leave an organization, such as the Armed Forces. First, to put things in perspective, a review of values theories is outlined, emphasizing particularly the so called cross-cultural theories of values. These theories highlight that a deep change is taking place in social values, with strong implications for the Armed Forces. Traditional military values would co-exist with modern values and have to undergo the necessary accommodation/assimilation with respect to evolving social values. This will bring about additional challenges for commanders. Then, the relevance of values for recruitment and retention is addressed. Finally, some implications are included.

3F.2   INTRODUCTION

This paper will address the important role that values play in the social, personal, and work life of individuals, specifically when they are making a decision to enter or leave an organization (e.g., the armed forces). First, a review of the multiple theories that exist about values will be made in order to put the issue in perspective. Then, we will address more deeply the most influential and applicable theories about values. These theories are supported with substantial empirical evidence, based upon data from thousands of individuals. They also share a purpose of explaining the impact of values in contemporary societies. We could place them under the heading of cross-cultural theories. Hofstede, Schwartz and Inglehart appear to be the most representative authors developing such cross-cultural theories.

We will finally focus on the shift of values in contemporary society – values which will progressively appear in recruits, a shift which is also taking place in the military in general. This shift brings about a dramatic change in traditional military values, which should co-exist with modern values. This should not be overlooked if we are to take the necessary steps to attract and maintain the military strength needed, both in quantity and quality.

3F.3   A REVIEW OF THEORIES OF VALUES

Thomas and Znaniecki (1918 – 1920) in their study *The Polish Farmer* take a step forward in order to remove sociology from the prevailing biological influence based on the instinct theory, which inspired psychoanalysis. They focus on the concept of attitudes and their relations with values. They define an attitude as "the process of individual consciousness determining the actual or potential activity of an individual in the real world." These authors contribute the cognitive aspect to the attitudes (i.e., they are purposeful). Values connect attitudes with social structure. Attitudes are intra-subjective, whereas values are inter-subjective. This concept of values being related to activity is very close to the modern social psychology which links values to goals (i.e., values are motivated).

The theorist of functionalism in sociology, Talcott Parsons (Parsons and Shils, 1951) assumes Kluckhom's concept of values which defines them as "an explicit or implicit concept of an individual or group about what is desirable, which in turn influences the selection of existing ways, means and goals of action." According to this concept, values instigate behavior apart from being hierarchical and organized. Parsons differentiates between values and norms, the former being abstract and a reference for action whereas the latter prescribing what has to be done or not in specific situations. Critics claim that this concept lacks empirical support and, as theory develops, values become more and more abstract. Values are deductively imposed, although they may not be observable, they may be inferred from situations or carefully deducted by the theorist. Not until the 1990s was Parsons' causal assumption proved that values are on top of the cultural control and they control norms which in their turn control behavior.

Within the field of psychology, Allport et al. identified six types of values: theoretical, economic, esthetic, social, political and religious values. The administration of his questionnaire to people of different trades yielded different professional profiles concerning the relevance given to the values.

Maslow (1954) developed a theory of hierarchical human needs. Based on that theory, Inglehart would many years later set his model about materialistic and post-materialistic values.

Rokeach (1973) contended that values are cross-situational beliefs that are hierarchically organized and ground our behavior. Values were not descriptive or evaluative beliefs, but prescriptive beliefs. They were organized according to their relevance and guide us in our decisions. The most important among them made the core of one's personality and grounded one's self-concept. The author distinguished two types of values, depending of their purpose: terminal values (corresponding to the needs of human beings), and instrumental values (a means for attaining terminal values). Terminal values consisted of personal and social values. Instrumental values consisted of moral and competence values. Self-realization, happiness and inner harmony are among the personal values. Family security, national security, equality, etc., are among social values. Efficiency, imagination, initiative, etc. are examples of competence values. He hypothesized a functional relationship between values, attitudes and behavior, which makes the basis for his technique of value change – the self-confrontation. The *Rokeach Value Survey* measures 18 terminal values and 18 instrumental values.

In the 1970s, a number of theories emerged trying to connect values with the social structure. MacClelland tried to establish the relationship between social structure – whether family or labor, and the values, both antecedent and consequent of that structure. He focused on a single value, the achievement motivation. He found some relationship between achievement motivation and religious ideology in line with the theory of Weber about the link between religion and the development of capitalism. He also contended a relationship between family socialization an achievement motivation; parents with higher achievement motivation had higher expectations about their children success and brought them up in a higher independence.

Kohn (1969) advocated a relationship between social class and socialization in family values. Upper classes stressed values such as self-direction whereas lower classes emphasized conformity values. He identified a relationship between four job dimensions: self occupational direction, job strain, risks and extrinsic reinforcements, and organizational status. He also identified three personality dimensions: intellectual flexibility, self-direction and a feeling of wellbeing or uneasiness.

In the 1980s and 1990s, cross-cultural theories emerged. At a cultural level, values were used to depict societies as entities, making up shared standards that have proved useful for solving common problems. At an individual level, values were used to depict priorities orienting people, motivational grounds that explained individual differences. Misinterpretation of both levels of analysis may give rise to what Hofstede calls the

"ecological fallacy," consisting of taking for granted that an event at a cultural level invariably takes place at an individual level.

Hofstede (1980) found that societies had solved the dilemma between individual autonomy and the adaptation to groups, whether by giving priority to individual autonomy (individualism), or to norms of groups in which individuals take part (collectivism).

Schwartz (1994) stated that there were two kinds of collectivism, one, like Triandis' (1995), supported conservation values, tradition, security and obedience; and another one represented by universalism values, equality, social justice, a world in peace, honesty and the like. He also distinguished two types of individualism, one concerning competence (including values such as success, capability, ambition or independence), and another called intellectual and affective autonomy (including values such as exciting life, varied life, creativity, curiosity, open mind, etc.).

Triandis (1995) extended the concepts of individualism and collectivism to include two dimensions: horizontal, with a stress on equality in the group; and vertical, which stressed hierarchy and compliance with respect to authority. At an individual level, the author distinguished between ideocentrism, personal individualism; and alocentrism, personal collectivism. Ideocentric people privilege values of independence and self-realization whereas alocentric people privilege security, good relationships and harmony within the group. The latter are much more dependent on the context. While values have been connected to social identity, Triandis differentiated three types of self: a private self, an individual evaluation of his/her own features and behavior; a public self, people's view of others; and a collective self, self-perception mediated by groups where we belonged and with which we identified ourselves. The three types co-exist in individuals, and they update according to the definition of the situation; in alocentric persons prevailing the updating of public and collective selves and in ideocentric dominating the private self.

Both Hofstede (1980) and Triandis (1995) contended that economic development as measured by the GDP was a precedent of individualism, a concept that Inglehart would develop broadly in his theory of the value shift from materialistic to post-materialistic taking place in contemporary societies. We would go back to these strongly influential theories about values.

3F.4   VALUES, ATTITUDES AND BEHAVIOR

Attitudes are evaluative orientations toward objects, whether physical or social. Attitudes have three components: cognitive, evaluative and behavioral. The evaluative dimension refers to the affect or disaffect toward the object. Attitudes develop as a help to understand the reality, to orient behavior and to justify our actions. According to Katz (1960) they served four functions: utilitarian, defence of self, value expression and knowledge.

Rokeach (1973) held that values were the core component of personality, whereas attitudes and behaviors were more peripheral. He thought there would be a stronger relation between values, attitudes and behavior among individuals with a better articulated self-concept. According to Rokeach, the self consisted of values. He was a pioneer in the systematic survey of values, subject to empirical measurement. He also thought that values were cross-situational beliefs while attitudes and beliefs were specific to an object or situation. Values were desirable goals ranked according to their relevance for individuals and they guided attitudes and behavior. This is especially the case in individualistic cultures, whereas in collective cultures behavior seems to be better explained by group norms -and to a lesser extent also by values.

Since people are not always aware of values guiding their behavior, they must be confronted with relevant values in order to make them act in accordance to those values. This procedure, coined as self-confrontation, seems to be useful to change some attitudes and behaviors, such as racism, overweight, smoking, or teaching style. This technique has proved effective to modify value priorities (relevance). It also results in significant changes in attitudes and behaviors (e.g., it is recommended for increasing school performance).

Research by Snyder and De Bono (1989) showed that the relationship between values, attitudes and behavior was mediated by a construct called self-watchfulness (i.e., the concern about the image other people hold about us). The authors considered this personality trait to be an indirect measure of attitude role. Individuals scoring low in self-watchfulness; in other words, not caring very much about what others may think of them, normally base their behavior on their values, feelings and attitudes, while individuals who score high in self-watchfulness adapt their behavior to their inter-personal environment not to look out of place in social situations. Therefore, attitudes of self-watchfulness low scorers are more likely to mirror their values, whereas attitudes of high scorers may just reflect social adaptation, a utilitarian role.

Some authors focus on the relative importance of attitudes and subjective norms in explaining behavior. Attitudes would influence the intention to act, while subjective norms would directly influence behavior. Other studies link attitudes with personal norms (i.e., a moral duty, or what a person believes he or she must do at a particular time or altruistic or helping behavior). Values seem to indirectly influence behavior through the activation of the personal norm, a sort of moral obligation or responsibility in the action.

Schwartz (1996) contended that values, as conscious goals, represented the responses of individuals and societies to three universal requirements: individual needs as biological organisms, as agents of social interaction, and as members of groups. Values can be grouped in ten motivational types, which in their turn group in two bipolar dimensions: self-enhancement vs. self-transcendence and openness to change vs. conservation.

The comprehensive model by Kristiansen and Hotte (1996) holds that relation between values, attitudes and behavior is moderated both by self-concept, moral development and moral orientation variables. Self-concept refers to the fact that people are socialized to be independent or dependent on others. Moral development refers to the cognitive development. Kohlberg (1984) distinguishes three levels of moral development: pre-conventional moral development (what the child is concerned about is obedience, punishment avoidance and self-satisfaction), conventional moral development (adolescents and most adults are concerned about being accepted, rule compliance and conventions and social roles), and post-conventional moral development (stage achieved only by 10 to 20 percent of adults, where people are concerned about personal standards and values irrespective of their accordance with social standards). Moral orientation can adopt two forms: orientation toward justice, rights and duties; and orientation toward the care of others, based on responsibility and relations, not on the basis of abstract rules, but of on everyday experience of perceived problems of others.

Beside attitudes, social norms and personal norms, Kristiansen and Hotte hypothesized three types of social norms: relevant norms of significant persons such as family or friends, relevant societal norms and contextually-relevant norms.

A typology of individuals would result from a combination of self, moral development and moral orientation. The first type refers to the consistency between values, attitudes and behavior in individuals with independent self, and a post-conventional justice reasoning. Values would guide their personal norms and in their turn these would guide their attitudes. Both personal norms and attitudes would determine the intention and the behavior in the end. A second type consists of individuals with dependent self and conventional justice

reasoning. Their attitudes and behavior would not be based on their values, but in relevant personal norms and societal norms which would determine their intention and hence their behavior either directly or through attitudes. A third type refers to individuals with inter-dependent self and a moral reasoning oriented toward the care of others. Values would not guide their behavior either. These individuals would follow the norms, particularly those coming from significant persons and context rules which would influence their behavior through personal norms and attitudes.

3F.5   CROSS-CULTURAL THEORIES

3F.5.1   Dimensions of Cultural Variation

Hofstede (1980) studied job-related values with thousands of IBM employees in 40 countries to find four factors on which to base a comparison between cultures:

- Power distance: The extent to which power legitimacy in institutions and organization is accepted.

- Uncertainty avoidance: The uneasiness or intolerance experienced by members in a society about uncertainty or ambiguity, which would lead them to support beliefs encouraging certainty and institutions promoting conformity.

- Masculinity vs. femininity: Reflected in the preference for achievement, assertiveness or success versus the preference for personal relations, support of the underprivileged or quality of life.

- Individualism vs. collectivism: Showing a preference for social environments where individuals have to care for themselves or their close families, compared with those who prefer group harmony, accomplishment of goals or show loyalty in exchange for protection.

3F.5.2   The Structure and Content of Values

Based on Kluckhohn (1951, cited in Ros and Gouveia, 2001), Schwartz (1994) defines values as desirable, trans-situational goals ranging in importance as guiding principles in people's lives. Schwartz distinguishes two generic categories of values depending on whether the focus is on the individual (basic individual values), or on the culture (cultural values).

Ten types of basic individual values were hypothesized. What differentiates between values is the motivational goal expressed. As mentioned elsewhere, values represent, under the form of conscious goals, responses to three universal demands: the needs of individuals as biological organisms, the need of coordinated social interaction, and the need of group smooth functioning and survival. These ten value types are the following: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security. These value types encompass specific individual values (e.g., power covers the following values: social power, authority and wealth). Value types hold a mutual relationship of compatibility and conflict, spatially reflected in the proximity or distance respectively, as shown in the following figure.
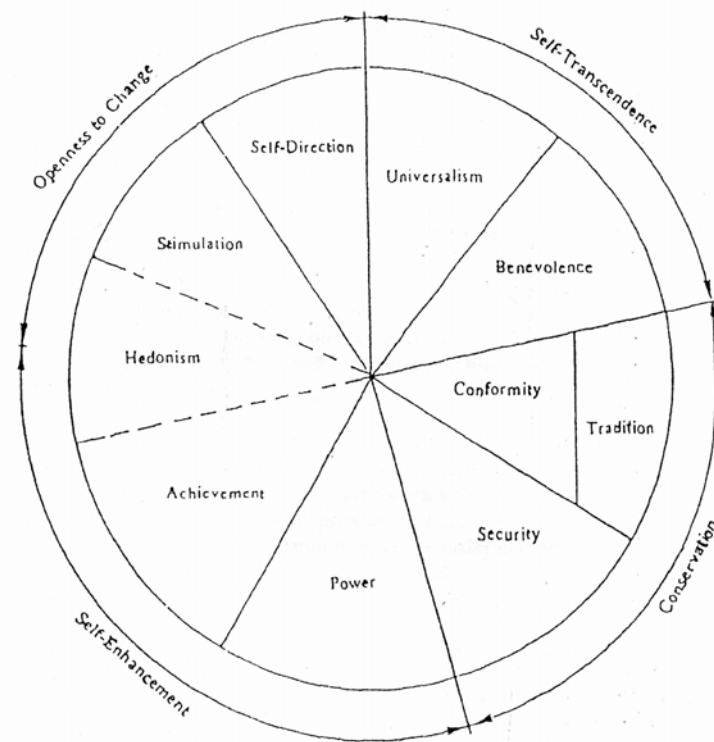
Figure 3F-1: The Structure of Relationships between Value Types (Ros, Inglehart, and Surkiss, 1999).

The value structure is organized into two sets of opposing higher order value types, arrayed along two bipolar dimensions: openness to change vs. conservation, and self-transcendence vs. self-enhancement.

Schwartz also distinguishes another set of value dimensions at a culture-level. Society or culture is the appropriate analysis unit against which to test their validity. Schwartz argues that current cultural theories addressing cultural values, such as Inglehart's or Triandis', handle limited culture dimensions – such as materialism vs. post-materialism or individualism vs. collectivism, rather than capturing a full range of potentially relevant value dimensions. Cultural values represent the implicitly or explicitly shared abstract ideas about what is good, right and desirable in society, providing the basis for the specific norms telling people how to behave in different situations. The ways through which societal institutions operate and the goals they advocate reflect the cultural value priorities (the aggregation of individuals' value priorities).

Cultural value dimensions reflect the basic problems that societies must face in order to regulate human activity. Schwartz hypothesized seven value types which allowed a comparison of cultures with respect to three issues confronted by all societies:

a) The nature of the relationship between an individual and his/her group (individualism vs. collectivism dimension, which the author labels *conservatism* vs. *intellectual autonomy/affective autonomy*[1];

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[1] The value type *conservatism* places the cultural stress on the maintenance of the status quo, propriety and restrains actions or inclinations against the traditional order (includes the values of social order, tradition, family security, and wisdom). *Intellectual autonomy* opposes conservatism and emphasizes the individuals pursuing their own ideas and intellectual directions (curiosity, broadmindedness and curiosity). *Affective autonomy* is a value type, opposed to conservatism that focuses on individuals independently pursuing affectively positive experience (pleasure, exciting life, varied life).

b) The guarantee of responsible behavior in order to preserve the social fabric (an issue expressed by two value types organized in the polar dimension *hierarchy* vs. *egalitarianism*[2]); and finally

c) Their relationship with the natural and the social world reflected in two polar dimensions, *mastery* vs. *harmony*[3].

Dynamic relationships of opposition and compatibility between the seven cultural value types are hypothesized to lead the comprehensive structure of the cultural value systems. The administration of a survey (Schwartz Value Survey or SVS) measuring 56 values to 122 samples in 49 different nations, provided empirical evidence for the use of cultural-level value types as a framework to compare national cultures. The structure of seven value types seems to efficiently capture the relationships between national cultures, cultural differences between nations and broader regions; Western Europe, Eastern Europe, an English-speaking region, the Far Eastern region and, although represented by very few nations, an Islamic region, a Latin American region, and an African region.

The following figure includes the structure of the seven value types and the values within each of them.
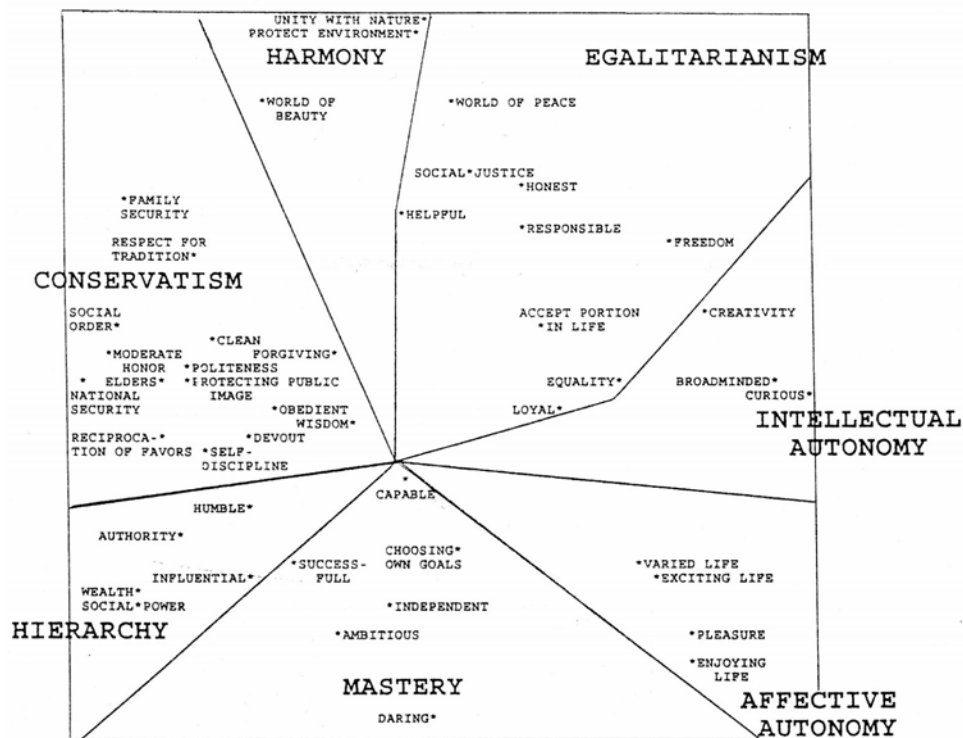
Figure 3F-2: Cultural Level after Performing SSA (Similarity Structure Analysis) (Schwartz, 1999).

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[2] *Hierarchy* puts the cultural emphasis on the legitimacy of an unequal distribution of power, roles and resources (social power, authority, humility, wealth). On the contrary, *egalitarianism* encourages the welfare of others, transcending own interests (equality, social justice, freedom, responsibility, honesty).

[3] *Mastery* centers on actively mastering and changing the world and holding control, putting the cultural emphasis on getting ahead through self-assertion (ambition, success, daring, and competence). On the opposite pole, *harmony* works on adapting to the environment (unity with nature, protecting the environment, and attaining a world or beauty).

3F.5.3 Materialism vs. Post-Materialism

Based on Maslow's hierarchy of needs, Inglehart (1977, 1991 and 2000) advocated that materialist values were owned by those who had lived under insecure conditions and had experienced scarcity. Needing security and stability, they prioritize order, stability, and economic and military power. On the contrary, individuals who had lived under conditions of security adopted post-materialist values, including social relations, self-appreciation and actualization. Inglehart would later discover another dimension: modernization and post-modernization. Together with materialism and post-materialism they explain 51 percent of cross-national variance both in values, attitudes and religious, social, political, and economic behaviors.

A great body of evidence shows that deep changes are taking place in world views that are reshaping economic, political and social life. The most important body of that evidence comes from the administration of the World Values Surveys (WVS), applied in three following waves (1981, 1990 and 1995) on all continents covering 65 societies and representing over 75 percent of the world population. A forth application took place in 1999 – 2000. Strong links have been found between individual beliefs and the characteristics of their societies. This survey identified a pattern of systematic shift in values and motivations in advanced industrial societies, changes that mirror economic and technological changes.

Inglehart's research was guided first by two hypotheses: a scarcity hypothesis, individual priorities reflect the socioeconomic environment (things that are in short supply are very much valued); and a socialization hypothesis, the relationship between socioeconomic environment and value priorities depends greatly on the conditions prevailing during pre-adult years. The advanced industrial societies have got such high levels of income that most people do not suffer hunger and economic insecurity any more. This has led to a progressive shift towards values of belonging, self-expression and participation (i.e., post-materialist values). After a prolonged period of increasing economic and physical security, significant differences are found between the value priorities of older and younger groups, since they have been shaped by different experiences in the formative years. An inter-generation value shift has taken place.

The shift from materialist to post-materialist values is only one aspect of a broader shift from modern to post-modern values happening in all advanced industrial societies. During the past few decades a wave of post-modern values has changed the social, political, economic and sexual norms of developed countries around the world. When survival is taken for granted, it greatly influences one's worldview. Post-modern values emphasize self-expression instead of deference to authority and tolerance of differences. While modern industrial societies stressed economic growth and achievement, post-modern values prioritize environment protection and cultural issues. Hierarchical, centrally controlled bureaucratic institutions of the industrial era are becoming less acceptable in post-modern era. Women have traditionally played a role of child-rearing, whereas in post-modern society sexual norms are changing in the sense of releasing women from that burden and giving them equal job opportunities among other advances. Religious orientations are also changing their role, there seems not to be as much need of being provided with a sense of certainty in an insecure environment. The practice of institutional religion is increasingly disappearing, to be privately confined.

Below, we will discuss further the explanatory power of Inglehart's model about the evolution of values in advanced societies, including values prevailing in the armed forces. These may evolve with a different tempo, but in the end are pervaded and influenced by the evolution of societal values.

3F.6 THE SHIFT OF VALUES IN CONTEMPORARY SOCIETIES

Values are the foundations, the distal reference, of human behavior, the basis of "social culture", beliefs and norms of behavior. As mentioned above, the WVS (based on assumptions of Ingelhart, 2000) demonstrates

that economic and social changes that have taken place over the last few decades have deeply transformed advanced industrial societies. On one hand, there appear to be differences between countries depending on their level of economic development, their dominant religion and other cultural characteristics. On the other hand, a global community is emerging, including the globalization (convergence) of values, a cultural shift that is not linear and which moves in a new direction.

For almost a century, social scientists have been discussing about the relationship between culture, systems of values and beliefs and also art and technology; and economic and political systems within a particular society. Marx argued that the economic system determined both the political system and the culture. On the contrary, Max Weber contended that it was the culture what explained both the economic and the political systems. Currently, none of these deterministic models can be held, since there appear to be reciprocal relations between the three big social subsystems.

WVS data collected in 1990 and 1995 suggested that societies followed a shift process along two dimensions: *traditional* vs. *secular/rational* orientation toward authority, and *survival* vs. *self-expression* values (materialism vs. post-materialism). There was a cross-national polarization in both axes; any particular society could be located on a global map of cross-cultural variation according to both dimensions.

Concerning the traditional/secular-rational dimension, pre-industrial societies exhibited relatively low tolerance for abortion, divorce and homosexuality, tended to emphasize male dominance in economic and political life, deference to parental authority and the importance of family life (the family was crucial to survive, a reason why they had large families, and they were relatively authoritarian, religion played a relevant role in their lives and they also held a marked national pride). Advanced industrial societies featured just the opposite characteristics. The survival/self-expression dimension reflected a set of characteristics such as interpersonal trust, tolerance, subjective well-being, political activism and self-expression that emerged in post-industrial societies with high levels of security. At the opposite edge, people in societies shaped by insecurity and low levels of well-being tended to emphasize economic and physical security, and felt threatened by foreigners, ethnic diversity and cultural change.

A central component of this latter dimension is the polarization between materialist and post-materialist values. These values were the expression of the intergenerational shift from the emphasis on economic and physical security to the emphasis on self-expression, subjective well-being and quality of life. Birth cohorts in advanced industrial societies have undergone this cultural shift over the last 25 years. These individuals have grown up at a time when survival is taken for granted. These values were associated with a growing emphasis on environmental protection, gender equal rights and increasing demand for political and economic participation.

Figure 3F-3 shows a global cultural map with the location of 65 societies across the two dimensions resulting from a nation-level factor analysis. The vertical axis represents the polarization between traditional authority and secular-rational authority, associated with the process of industrialization and the horizontal axis represents the polarization between survival values and self-expression values linked to the rise of post-industrial society. Boundaries around groups of countries are based upon Huntington cultural zones (Huntington 1993, 1996 cited in Inglehart and Baker, 2000).
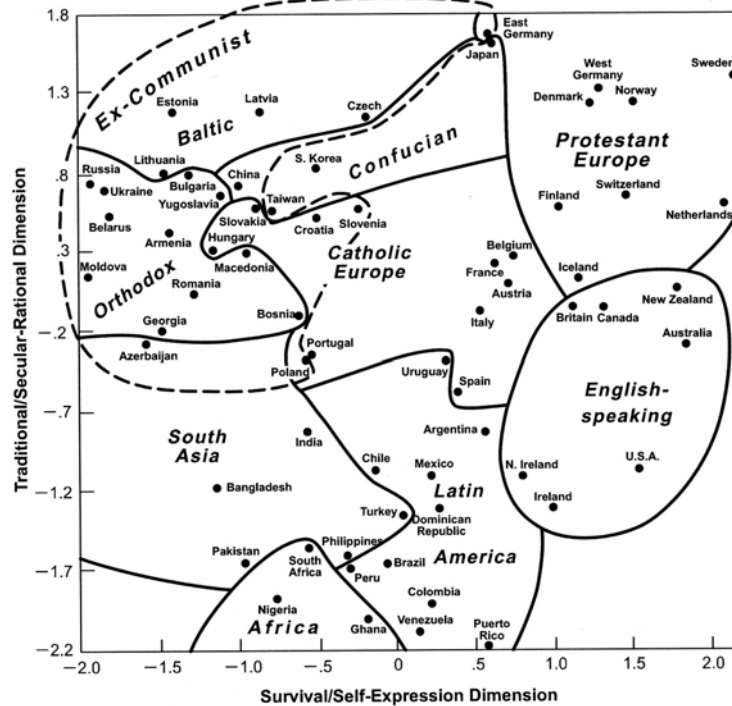
**Figure 3F-3: Location of 65 Societies on Both Dimensions of Cross-Cultural Variation.
WVS: 1990 − 1991 and 1995 − 1998 (Inglehart and Baker, 2000).**

Economic development seems to have a powerful impact on cultural values. As can be seen, the value systems of rich countries differ systematically from values of poor countries. Economic development seems to drive societies in a common direction, regardless of their cultural heritage. The traditional/secular-rational dimension is associated with the transition from agrarian societies to industrial societies. The survival/self-expression dimension is tied to the emergence of an economy of service.

Religious traditions appear to have an enduring impact on the contemporary value systems as Weber argued. Communism left a clear print on the value systems of countries subject to that regime. The colonial influence is apparent in the existence of a Latin American cultural zone and an English-speaking region. The major exception to this trend is the United States which holds a much more traditional value system than any other advanced industrial society. On the traditional/secular-rational value dimension, the United States ranks far below other affluent societies with levels of religiosity and national pride comparable to those of developing societies. The United States ranks among the most advanced societies along the survival/self-expression dimension, but even here it does not lead the world, Sweden and The Netherlands are closer to the cutting edge of cultural change.

Societies with a common cultural heritage generally fall into common clusters and their locations simultaneously reflect their level of economic development, occupational structure, religion and other major historical influences. Modernization theory contends that as societies develop economically their cultures tend to shift in a predictable direction.

Clearly, it is not the current influence of churches that shapes the values of industrially developed societies, but rather the impact of living in societies historically shaped by the once-powerful Catholic, Protestant or

other beliefs. This thesis is corroborated by the fact that differences between Catholics, Protestants or Muslims within given societies are relatively small. Furthermore, the Catholic Church has been traditionally the prototype of a hierarchical, centrally controlled institution which undermined interpersonal trust. On the other hand, Protestant churches were relatively decentralized and more open to local control, which produces a growing interpersonal trust. This could partially explain the differences in location in the global map of both types of societies. Once established, the cross-cultural differences linked to religion have become part of the national culture, conveyed by education and mass media. Despite globalization, the nation remains a key unit of shared experience and its educational and cultural institutions shape the values of its members. The persistence of distinctive value systems suggests that culture is path-dependent.

In a nutshell, the value system of any society is not only systematically influenced by the economic development: its gets also a pervasive and enduring influence from the religious and/or the ideological heritage, whether Catholic, Protestant, Confucian, or Communist. A combination of economic indicators (GDP percentage of people employed in industrial or service sectors, etc.) and cultural indicators (particularly religious heritage) explain a higher amount of variance than economic indicators alone.

As for the value differences across generations, the higher the life expectancy, the greater these differences. Younger groups hold stronger secular-rational worldviews than older groups. In developing societies both young and old people hold traditional values almost at the same level.

During the industrialization phase there was a decline in the prevalence of religious values. This does not necessarily happen in advanced industrial societies where two contrasting trends are observed: on the one hand, a decline in the attendance to religious services and on the other hand the persistence of religious beliefs and the rise of spirituality. Even in the United States, a society exceptionally resistant to secularization, data show a modest decline in church attendance.

To summarize, according to Inglehart's hypothesis drawn from the late WVS data (which represents the cutting edge of research on values in contemporary societies) values do change, but they reflect at the same time a particular society's cultural heritage. Modernization theorists are partly right when they hold that with the rise of industrial societies there is a cultural shift away of traditional values, and with the rise of post-industrial societies there is a shift away from absolute norms and values toward a higher tolerance, trust and self-expression. But at the same time, values seem to be path dependent, the history of Protestant, Catholic, Orthodox, Islamic or Confucian traditions has created cultural areas with distinctive value systems that are enduring and pervasive. Economic development tends to boost societies in the same direction, but rather than a convergence it seems to be a movement in parallel trajectories shaped by their cultural heritages. Hence, modernization will not necessarily produce a homogenized world culture in the foreseeable future.

The modernization theory needs some changes:

- Modernization does not follow a linear path. Despite the cultural shift in advanced industrial societies, mainly as a result of the economic development, an economic collapse can reverse the effects of modernization as illustrates the case of the former Soviet Union.

- The secularization thesis is an oversimplification: there is evidence that it applies mainly to the industrialization phase, but for instance, religious concerns persist and even widens.

- Cultural shift appears to be path dependent. Although economic development brings pervasive cultural changes, they co-exist with a cultural heritage with enduring effects.

- Taking for granted that the cultural change in industrially advanced societies follows the "American pattern" is misleading. Despite the United States' immense economic and industrial status, its people hold much more traditional values and beliefs than those in other equally advanced societies. Nordic countries exemplify the closest adherence to Inglehart's modernization theory model of shifting values.

- Modernization is probabilistic rather than deterministic. Even though economic development tends to shape societies in a predictable direction, the process and path are not unique – there are many factors involved, and changes are contingent on the historical and cultural context.

- Nevertheless, the core assumption of the modernization theory remains true – economic development is associated with a shift in prevailing values and beliefs.

Finally, the miserable terrorist attacks in New York on 9/11 2001 and Madrid on 3/11 2004 are among the most terrible and massive ever happened, showing that beside their regular evolution, societies are also subject to shocks that bring about tremendous impacts. Inglehart's model foresees that the cultural evolution of advanced societies could stagnate or even revert if economic development worsened dramatically; this was the case of the former Soviet republics – but there are reasons other than economic ones, such as the above mentioned shocks that could lead to an increase of insecurity and alter or even stop cultural evolution. If threats continue, reactions to them (i.e., a limitation of rights) will have an adverse impact on human values evolution. Insecurity may turn the latter to an unexpected direction.

3F.7 MODERNIZATION AND VALUE SHIFT IN THE MILITARY

How will the cultural shift in contemporary societies affect the armed forces, traditionally anchored in a set of values and norms which clash with some tenets of modernization? Seemingly, unless the military makes the necessary accommodation to the societal values, it will suffer a significant damage in their operational capacity.

This becomes especially relevant for problems encountered in personnel management particularly in recruiting and retention. Thus, a relevant number of recruits may have values that are quite different from those held in the military. For example, Elshaw (2001) refers to a number of traits that would define millennium kids: realistic and individualistic, self-disciplined (authority must justify its right to be in charge), rational decision-maker, job satisfaction, responsibility, recognition or would reject long working hours.

Therefore, the armed forces will have to show a certain degree of tolerance of (accommodation to) these values. Likewise, the military will solve the problem of high attrition rates not only by giving people incentives that they might want, but also by making the necessary adjustments in culture (e.g., values) to prevent conflicts resulting in turnover.

Accommodation (integration) and assimilation (adapting candidates' values to the military values) in the piagetian sense are two valuable and complementary approaches to attract, recruit and retain people. The former preserves a great amount of candidate culture and the latter results in the candidate cultural loss and homogenization (Norton and McKee, 2001:10). In view of the heterogeneity characterizing the current society (there are multiple cohorts), the integration strategy seems to pay off better than the assimilation one.

As other traditional institutions, the armed forces are not impermeable to changes. In fact, a dramatic change is under way, forced by social changes and globalization – a major feature of our time. Even though most of today's conflicts continue to be local, their management and possible solutions need to be addressed globally.

The armed forces have to make the necessary cultural adjustments to prevent or alleviate the clash with societal values, but at same time, they must preserve the key elements of the military culture in order to accomplish their mission.

In the next paragraphs we will briefly review some of the core values, the ethos driving military life, traditionally characteristic of the military are listed in next section. These core values have been challenged by social changes, making them evolve consequently. Some scholars contend that the armed forces are changing towards what could be called a post-modern military.

3F.7.1   The Military Ethos

In spite of some differences owing to specific cultural traits, most armed forces share a code of military ethic as a general guide of behavior. This code consists of a catalog of values or military virtues which must be adopted by the armed members. These values will shape their attitudes and will concrete in norms of conduct.

The military is an institution that holds very traditional moral values. These core values shape the military ethos. The most outstanding core values seem to be patriotism, duty accomplishment, courage, discipline, comradeship and abnegation (e.g., Berrio, 1997). This ranking of core military values matches up with results of surveys on motivation of armed forces candidates.

3F.7.2   The Post-Modern Military

Janowitz (1960, 1971) conducted an in-depth study of military officers from three different countries; the United States, the United Kingdom, and Germany. He suggested the following five basic features of the contemporary military profession, strongly influencing the military values.

- **Changing organizational authority.** A swing has occurred from authority and discipline based on domination to a greater reliance on manipulation, persuasion and group consensus – a shift that has first taken place in the society. The concern of command is not longer the enforcement of rigid discipline, but rather the maintenance of high levels of initiative and morale. This has been an adaptive change, since modern warfare requires highly skilled and motivated soldiers.

- **Narrowing skill differential between military and civilian elites.** New tasks, new skills, shared with civilian leaders. Service members carrying out such technical tasks have direct civilian equivalents. The percentage of personnel involved in "typical" military jobs has fallen dramatically, especially in the navies and air forces. The commander skills have changed even more – commanders have absorbed roles of organization, management of moral, negotiation and public relations.

- The Officer recruitment base has widened from a traditionally narrow source and a relatively high social status to a broader socially representative source.

- **Significance of career patterns.** Top leadership may divert from a prescribed career, once of a more technical type, to a skilled management of interpersonal relations, strategic decision making and political negotiation.

- **Trends in political indoctrination.** There is a shift from the traditional military emphasis on self-image and concept of honor shift to an emphasis on initiative and innovation, from ultra-nationalism and ethnocentrism to a less ethnocentric stand, and from a disciplinarian mind to a discourse of human factors in combat and large-scale organization.

Moskos (2000) applied Inglehart's theory of modernization of society to the military organization of developed Western democracies. He noted that the military organization was also moving from modern to

post-modern forms. The modern military emerged in the 19th Century, associated with the rise of the nation-state. There was a combination of conscription and professional officer corps, it was war-oriented in mission, masculine in makeup and ethos and sharply differentiated in structure and culture from civilian society. This format shifted to a volunteer, multipurpose in mission, increasingly androgynous in make up and ethos and greater permeability with civilian society.

Similarly, Moskos distinguished three types of military during the history (since the advent of conscription army):

- The modern military, from the 19th Century (the French Revolution) to the end of the WWII. It implies the concept of soldier citizen.

- The late modern military, prevailing until the early nineties and parallel to the Cold War. It is represented as a mass conscription and it involves a strengthening of military professionalism in the officer ranks, mainly determined so far by lineage.

- The post-modern military, the driving force of which was the collapse of communism in the USSR and Eastern Europe. There was a feeling that the threat had vanished. The globalization – of economy, trade, communication and other human activities, undermines largely the traditional basis of national sovereignty.

The post-modern military has undergone five major changes:

a) An inter-penetrability of civilian and military fields, both structurally and culturally;

b) A decline in differences within the armed services based on branch, rank and combat vs. support roles;

c) A shift of military goals from war fighting to non-traditional military missions;

d) A subordination of military forces in international missions to supranational command; and

e) An emergence of supranational military entities (such as Eurocorps).

New roles of the military are the separation of belligerents, the resettling refugees, the delivery of food and medical supplies, and the provision of security for humanitarian organizations. Moskos believes that the cultural shift in advanced societies has permeated the military organization, resulting in such deep-rooted changes. In short, postmodernism has subverted absolute values such as 18th Century faith in reason, 19th Century faith in the nation-state and 20th Century confidence in science and technology, ending in this era's deep relativism.

The so called "revolution of military affairs" (the impact of information technologies on the armed forces) has brought a greater agility, precision and potency of operations, along with dramatic force reductions and a growing shift of the emphasis on from the rank to the emphasis on the competence. There is also a growing convergence of military and civilians, who work more frequently together and NGOs assume more martial attitudes. A post-modern motivation has even emerged – a desire to have a meaningful personal experience rather than the patriotism or other occupational incentives.

The post-modern military has brought about major changes in relevant military aspects with respect to. Table 3F-1 summarizes these changes.

Table 3F-1: Armed Forces in the Three Eras. The United States (Source: Moskos, 2000)

Forces Variable	Modern (Pre-Cold War)	Late Modern (Cold War)	Post-Modern (1990-)
Perceived threat	Enemy invasion	Nuclear war	Sub-national (ethnic violence, terrorism, etc.)
Force structure	Mass army conscription	Large professional army	Small professional army
Major mission definition	Defence of homeland	Support of alliance	New missions (peace-keeping, humanitarian)
Dominant Mil Professional	Combat leader	Manager or technician	Soldier-statesman, soldier-scholar
Public attitude tow. Mil.	Supportive	Ambivalent	Indifferent
Media relations	Incorporated	Manipulated	Courted
Civilian employees	Minor component	Medium component	Major component
Women's role	Separate corps/ excluded	Partial integration	Full integration
Spouse and military	Integral part	Partial involvement	Removed
Homosexuals	Punished	Discharged	Accepted
Conscientious objection	Limited or prohibited	Routinely permitted	Subsumed under civilian service

3F.7.3   The Relevance of Values in the Military

If by values we mean deep-rooted beliefs that influence people's behavior, then we will be able to understand the goals, expectations and priorities of different population cohorts and hence improve the recruitment process (Norton and McKee, 2001). On one hand, individuals normally will compare their values against the perceived values of the armed forces before they apply. On the other hand, the military will assess applicant values to make sure they fit military values and priorities.

Norton and McKee (2001) give an original recommendation: using a method of negative recruitment and selection – a falsification theory, as they put it. One cannot prove a theory, merely disprove it. Looking at the values that a subject lacks will provide a better understanding of the limits of his/her behavior and at the same time some knowledge will be provided of the values the individual does have. Knowing people's values will not enable us to predict their behaviors as there are many other factors involved – but knowing values individuals do not have will provide an indication about behaviors they will not exhibit.

Knowing people's values will also help understand and manage differences and create mutual understanding and tolerance of diversity. This will enable us to manage the growing diversity of the recruiting pool (with different genders, ethnicity, religions, beliefs, needs, etc.). A progressive accommodation of diversity in values, beliefs and behaviors is unavoidable if the armed forces are to achieve their manpower needs. The source of diversity is twofold – it can be generation- or cohort based.

In a nutshell, it could be said that on one hand, knowing people's values will enable us to get an insight into the hearts and minds of individuals, will make it easier to satisfy their needs, and in the end will increase our

ability to attract and retain personnel. On the other side, core military values, essential to keep the armed forces operational, need to be promoted. Achieving a balance between both aims is a huge challenge.

3F.8   THE RELEVANCE OF VALUES TO RECRUITMENT

Values relate to choices and behavior by influencing the weight of information about those values and hence the attractiveness of choice alternatives (Verplanken and Holland, 2002). As the self mediates between values and behavior, only values that are central to the self will influence behavior. Only in this case will values acquire motivational characteristics.

Despite the fact that recruiting messages convey very relevant information about organizational values, few studies have been conducted on information persuasiveness during recruitment. In a study, Judge and Bretz (1992, cited in Highhouse et al., 2002) found that organizations relying on four core values – achievement, concern for others, honesty and fairness- had a greater impact on perceptions of job attractiveness. Information about those values had a stronger influence on judgment than information about pay and promotional opportunities.

Nevertheless, the study by Highhouse et al. (2002) demonstrated that attracting job seekers by promoting organization values might not be as simple as suggested. Potential applicants would prefer evidence that was more representative and verifiable (statistical evidence) transmitted via the company's promotional materials, but were more influenced by anecdotal influence when it came from outside sources. Companies would attract more potential applicants if they took into account the compatibility between the type of their recruitment messages and the source they use to carry them.

Schneider's ASA model (attraction-selection-attrition) (Schneider, 1995) advocates that people's preferences for any particular organization depends largely on their implicit estimation of their personal characteristics and the attributes of the organization. People find an organization attractive on the basis of their judgments of the congruence between that organization's goals and their own personalities. In other words, candidates' perceived fit results from their appraisal of the match of own characteristics and needs to organizational characteristics and supplies (Kristof, 1996). People tend to seek jobs which values fit their own.

As far as it concerns attraction/recruitment, the construct person-organization fit is normally substantiated in two ways: whether as the match between individual personality and organizational climate or as value congruence (Kristof, 1996). For example, Friedman and Rosenman (1974, cited in Kristof, 1996) in a study with graduate and professional students found that type A individuals (characteristically ambitious, competitive, impatient, high achieving and hostile) preferred organizations with high performance standards, spontaneity, ambiguity and toughness. Likewise, students were more inclined to seek jobs in organizations where value orientation matched their own.

In the late 1980s the focus of selection research moved from person-job fit to person-organization fit (congruence), from hiring the best people for a job to hire those who met organizational demands (people normally mean to leave an organization not just a job). This is a reason why managers stick to interviews, despite their lack of reliability and validity; they think interview is the best means to guarantee candidates fit the organization. Nevertheless, it seems that it is perceived rather than actual value congruence what predicts interview outcomes. This also applies to recruitment/selection, where perceived fit is more relevant than actual fit – perhaps because of the short time available both for candidates and organization to get mutually acquainted with their values, goals and personalities.

3F.9 THE RELEVANCE OF VALUES TO RETENTION

Relevance of values to retention has received more attention in research than recruitment. Most studies focus on person-job/organization fit. Values have been found to impact individual outcomes such as commitment, satisfaction, etc., which in their turn influence directly retention (for a revision see Sümer, 2004).

3F.9.1 Person-Organization Fit, Goal Congruence

According to ASA model (Schneider, 1995) the outcome of the three phases of the process (attraction-selection-attrition) will determine the kind of people in the organization and consequently the organization's nature, structure, processes and culture. The organization recruits and hires candidates with the desired attributes. On the other hand, employees would leave the organization if they perceive they did not fit. Two central assumptions of the model are the role of organization founders and top managers in determining organizational goals, and the homogeneity of personality attributes within the organization as a result of the ASA cycle, hence reducing turnover.

Chatman and colleagues (cited in Schneider et al., 1995) found that P-O fit predicted the following organizational outcomes: individual adjustment, satisfaction, commitment, tenure, turnover and performance – although Meglino el al., 1989 did not find evidence for the latter. Similar outcomes may be predicted when congruence exists between employee values/goals and supervisors' (Meglino, Revlin and Adkins, 1989; Vancouver and Schmitt, 1991). These authors found the strongest value congruence at the lowest level of the organization (i.e., between supervisor and subordinate, resulting in increased job satisfaction and organizational commitment).

Vancouver and Schmitt (1991) also compared the differential impact of member-constituency congruence (i.e., peer agreement) and supervisor-subordinate congruence (similar to leader-member exchange, LMX) on job/organization attitudes (i.e., satisfaction, commitment and intention to quit). Member-constituency congruence was stronger.

Whenever an organization decides to build a team, Hui, Cheng, and Gan (2003) recommend that values, personality and attitudes of all potential members are considered. As for the moderating role of collectivism in supervisor-subordinate fit, these authors found that similarities in personality can be rewarding for collectivists.

The most extensively studied cultural dimension of work-related values is individualism-collectivism (I-C). Parkes and Bochner (2001) tested implications of I-C for person-culture fit and for affective work-related outcomes. In a cross-cultural study they focused on the empirical consequences of I-C for a variety of work practices, attitudes, motivation and behavior.

For example, they found that the employee-employer relationship is calculative in individualistic cultures, tasks are given priority over relationships, and competition and achievement are encouraged. Quite the opposite, in collectivistic cultures the employee-employer relationship is more family-like and relationships are given priority over tasks. As for affective work-related outcomes, collectivism appears to instigate stronger commitment with an organization and lower turnover rates, but apparently also lower overall job satisfaction. Looking at the interaction between organizational and cultural fit, it seems that both individualistic employees in individualistic organizations and collectivist employees in collectivist organizations show greater job satisfaction, organizational commitment and tenure.

Locke (1976, cited by Taris and Feij, 2001) hypothesized that the relationship between organizational supplies and job satisfaction varied as a function of work values. Based on this assumption, they distinguished three categories of values:

a) Intrinsic values (appreciation of immaterial aspects of work that led to self-expression, such as job variety and autonomy);

b) Extrinsic values (a preference for material or instrumental work aspects such as salary or promotion); and

c) Social work values (e.g., the way employees value being in good terms with co-workers and superiors).

By organizational supplies are meant those aspects of work environment that satisfy the three work values.

Warr (cited in Taris and Feij, 2001) applied the so called vitamin model to work values. He found that until a certain level was attained, increments of all kinds of job elements (intrinsic, extrinsic aspects and social relations) favored employee job satisfaction, psychological well-being, and intentions to stay. Beyond this level, satiation point, the effects on work outcomes would not have further effect (extrinsic work aspects) or might even reverse (intrinsic work aspects and social relations would lead to lower mental health and satisfaction). Although work values may have some direct effects on work outcomes, they will primarily be moderators of the effects of organizational supplies on work outcomes. From the study by Taris and Feij, it follows that rewards supplied by the organization result in positive work outcomes, especially when the employee values those rewards – but excessive amounts of supplies may have a detrimental effect on job satisfaction and increase intention to quit.

An integration of P-O fit research was attempted by Kristof (1996). This author makes a distinction between supplementary and complementary fit, respectively when the individual owns characteristics that are shared by other members in the organization or he/she adds characteristics that the organization lacks. Kristof also differentiates between needs-supplies and demands-abilities. In the first case, P-O fit occurs when an organization fulfills individual needs, desires or preferences, whereas in demands-abilities P-O fit takes place when a person has the abilities to meet organization demands.

Three stages in employment practices affect or are affected by P-O fit. During organizational entry P-O fit contributes to organizational homogeneity (as ASA model predicts), determining also job search, choice behaviors and selection decisions. Then, organizational tenure and socialization practices normally lead to increased levels or supplementary P-O fit. Finally, long-term outcomes attributed to P-O fit take place, including turnover, work attitudes, pro-social behaviors and work performance.

3F.9.2   Organizational Commitment

Finegan (2000) cites Porter et al. (1970) definition of commitment: a strong belief in and acceptance of organizational goals and values, a willingness to exert considerable effort on behalf or the organization and a definite desire to maintain organizational membership. Organizational commitment seems to be associated with absenteeism, extra role behaviors (e.g., citizenship behavior), turnover intentions and actual turnover.

Vancouver and Schmitt (1991) measured commitment trough goal congruence between principals and teachers. They found that when organization values were assessed from the individual view the relationship between P-O fit and commitment was stronger than when they were assessed from collective judgments.

Commitment is a multidimensional construct. According to Meyer and Allen (cited in Wasti, 2003) commitment has three components: affective commitment (an emotional attachment to the organization), normative commitment (a sense of individual obligation towards the organization) and continuance commitment (an individual feeling of the losses happening if he/she left the organization). Affective commitment is linked with higher productivity, more positive work attitudes and higher probability of getting engaged in extra role activities, whereas continuance commitment has poor links with performance indicators and job satisfaction.

Finegan (2000) suggested that values should be addressed in clusters and not just as a large, single continuum. Different values or value clusters may have different effects on commitment. A factor analysis of 24 values yielded a four factor solution consisting of a first factor (labeled humanity) covering values such as courtesy, consideration, cooperation, fairness, forgiveness and moral integrity; a second factor (called adherence to convention) consisting of values such as obedience, cautiousness and formality; a third factor (coined bottom-line), encompassing factors such as logic, economy, experimentation and diligence; and a fourth factor (named vision) which included the values of development, initiative, creativity and openness.

Unlike prior research on P-O fit, Finegan analyzed not only the interaction between a person and an organization, but also the independent contribution of each. His research showed that the perception of organization's values was more important for determining a person's level of commitment than personal values or the P-O value match. Value profiles predicting affective and normative commitment were different from value profiles affecting continuance commitment. The former were better predicted by humanity and vision values, whereas the latter were associated with convention and bottom-line values.

It seems quite reasonable that an organization projecting an image of courtesy, consideration and fairness, or an image of development, initiative, creativity and openness, will get their employees emotionally involved. On the contrary, an organization emphasizing adherence to convention (i.e., valuing obedience, cautiousness and formality) will get their employees affectively committed to a very lower extent. Values of this kind will hardly inspire employee loyalty, unless they are held moderately. Likewise, people who perceive that business is the only issue valued by their organization would probably like to work elsewhere.

Therefore, what seems to matter is not only the kind of values that are held or emphasized by a particular organization, but also the extent to which values are held (i.e., a combination of value type and amount).

A conclusion from these studies could be that an organization should emphasize values that inspire affective commitment; humanity and vision values over and above values associated with continuance commitment; adherence to convention and bottom-line values.

The relevance of organizational affective commitment for the development of turnover intentions was corroborated by Wasti (2003), who found that this relationship remained true even irrespectively of values. However, commitment to top management, supervisor and workgroup seemed to be stronger predictors of job satisfaction and citizenship behavior.

3F.10   CONCLUSIONS AND IMPLICATIONS

Unlike attitude-behavior relationship, extensively studied and which seems to be direct and clear, values-behavior relationship is normally complex and indirect. This said, most studies conclude that values are key determinants of behavior -normally distal determinants, a background reference of behavior. Closer determinants of behavior are beliefs, attitudes, norms, needs, interests and other individual and context-dependent values. Moreover, while attitudes and behavior are more peripheral, values seem to be a core

component of personality (Rokeach, 1973). This author also contended that values anchored behavior and were prescriptive beliefs while attitudes were evaluative beliefs.

Snyder and De Bono (1989) found that relationship between values, attitudes and behavior was mediated by self-watchfulness; the concern about the image other people hold about us. Likewise, a consistency between values, attitude and behavior would exist among individuals with independent self; values would guide their personal norms and these would guide their attitudes (Kristiansen and Hotte, 1996). Individuals with dependent self would lack this consistency.

A number of theories have extensively studied values; the most important of them are cross cultural theories (Hofstede, 1980; Schwartz, 1994; Triandis, 1995; and Inglehart, 2000). According to them, values determine and/or guide behavior at an individual and collective level. Hofstede (1980) held that cultures differ on the base of four characteristics: power distance, uncertainty avoidance, masculinity vs. femininity, and individualism vs. collectivism. Schwartz (1994) assumed that values differ according to the motivational goal they conveyed. He defined values both at the individual and cultural level. At the individual level values are defined as desirable, cross-situational goals that guide people's lives. At the cultural level values represent the implicitly or explicitly shared abstract ideas about what is good, right and desirable in society, setting the ground for the specific norms telling people how to behave.

Inglehart (1977, 1991 and 2000) advocated the existence of a shift in the modern world from materialist values (featured by societies which have lived under insecure conditions, experiencing scarcity) to post-materialist values (exhibited by societies which members have lived in security). The former emphasize order, stability and economic and military power, the latter prioritize social relations, self-appreciation and actualization. In parallel with this shift, Inglehart hypothesizes that a shift from modern to post-modern values is happening among advanced industrial societies. Post-modern values emphasize self-expression instead of deference to authority, along with tolerance of differences. Post-modern values also involve a decreasing acceptance of hierarchical institutions and a change of women's role, the role of religion, etc. Note the implications of these changes for the armed forces, an institution adhering traditional values.

Moskos applied Inglehart's theory to the military advocating that a value shift was also taking place in the armed forces, moving from modern to post-modern forms. This has important implications for the armed forces as globalization and international missions move forward; new military missions are at the same time cause and effect of this shift.

Thus, the armed forces need to hold a difficult balance between the preservation of traditional military core values (ethos) on one side and the accommodation to societal changes; to the changing values of youth. That is to say, armed forces need to keep a balance between the processes of assimilation and accommodation, if they want to compete – and even survive – in the complex modern world. They need to preserve the core military values, without which no mission could be achieved. The inculcation of core values becomes a critical tool for building up cohesion and morale, discipline, esprit de corps, etc., essential for the accomplishment of operational goals – but at the same time, satisfying the needs, expectations, goals and diversity of soldiers becomes also a key issue.

Nevertheless, owing to the armed forces special characteristics, bureaucratic nature (as a big organization) and resistance to change, a gap between societal values and military values seems to be unavoidable, although the impending process of convergence (e.g., Moskos, 2000) make this gap narrower. The crucial issue is to keep this value gap adequately bridged, otherwise the armed forces would have to pay a high price in terms of manpower shortage. In sum, the armed forces must be permeable enough to social values in order to overcome major problems in manpower.

How do values translate into people's decisions to enter or leave an organization such as the armed forces? To what extent do values influence recruitment and retention processes?

In recruiting, research shows that the weight of value information influences job attractiveness (Verplanken and Holland, 2002). As the self mediates between values and behavior, only values central to the self will have a real influence on behavior, will become motivational. Particularly, organizations relying on four core values: achievement, concern for others, honesty, and fairness; appear to have a stronger impact on perceptions of job attractiveness over and above pay and promotion opportunities (Judge and Bretz, cited in Highhoues et al., 2002). Nevertheless, this relationship is not as simple as it may seem, other variables such as information representativeness, verifiability, and nature (promotional materials vs. anecdotal information). Companies would attract more potential applicants if they took into account the compatibility between the type of recruitment messages and the source of information used to convey the messages.

Another important contribution to the relevance of values for recruitment (and also retention) comes from Schneider's ASA model (Schneider, 1995). According to this model, people's preferences towards an organization depend largely on their implicit estimation of the congruence (compatibility) between their personal characteristics and the organizational attributes and goals. Candidates perceived fit results from their appraisal of the match of their own characteristics and needs to the organizational characteristics and supplies (Kristoff, 1996). People seek a job in organizations whose values fit their own. Note that it is perceived rather than actual value congruence what predicts organizational outcomes; in recruitment/selection perceived fit is crucial because of the short familiarity with organizational values.

Another important remark is that hiring the people who best meet organizational demands (apart from job requirements) should be preferred to focusing only on hiring the best people for the job; a reason why managers still stick to interviews despite their low reliability and validity.

As for the involvement of **values in retention**, apart from the contribution of the above mentioned ASA model, person-organization congruence plays a key role. Value congruence is an important ingredient of P-O fit. For example, Chatman and colleagues (cited in Schneider et al., 1995) found that P-O fit predicted individual adjustment, satisfaction, commitment, tenure, turnover, and performance although evidence is not so clear for the latter, congruence which mattered particularly for the relationship between supervisor and subordinate and for peer relations.

On the other hand, collectivism seems to be a moderator of P-O fit; sharing personality characteristics can be rewarding for collectivists (Hui, Cheng and Gan, 2003). Individualism-collectivism is actually the most extensively studied cultural dimension of work-related values. In the end, it appears that individualistic employees show higher satisfaction, commitment and tenure in individualistic organizations, as do collectivists in collectivist organization.

Similarly, Locke (cited in Taris and Feij, 2001) found that the relationship between organizational supplies and job satisfaction changes as a function of work values (whether intrinsic, extrinsic, or social). Likewise, the Warr vitamin model (cited in Taris and Feij, 2001) holds that increments of all kinds of job elements (intrinsic, extrinsic or social) favor job satisfaction, psychological well-being, and intentions to stay until a certain level is attained; beyond which advantages may go neutral (in the case of extrinsic elements) or even revert (in the remainder two sorts of job elements).

Finally, commitment – to which values make an essential contribution – as a strong belief in and acceptance of organizational goals, is of paramount relevance for retention. When commitment is missing, absenteeism,

turnover intentions, and actual turnover are likely to increase. Commitment is also cause and effect of P-O fit (they reinforce each other).

Commitment is a three-dimensional construct (for further details see Sumer's paper where it is addressed extensively) consisting of affective, normative, and continuance components. The important fact to remark here is that not all dimensions affect or are affected equally by organizational outcomes and other variables. The most relevant dimension for organizational outcomes; hence, especially relevant for retention, is affective commitment. Finegan (2000) advocated the need to consider clusters of values instead of a single value continuum. A factor analysis yielded a four factor solution: humanity, adherence to convention, bottom-line, and vision. Different values or value clusters may have different effects on commitment. For instance, a value profile predicting affective and normative commitment, humanity and vision, was different from that affecting continuance commitment, convention and bottom-line values.

Accordingly, provided that core military values are preserved, the armed forces should not disregard emphasizing values which inspire affective commitment (i.e., humanity and vision values) over and above values associated with continuance commitment, adherence to convention and bottom-line.

Chapter 3G – GENDER AND MINORITY ISSUES

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3G.1   EXECUTIVE SUMMARY

A literature review was conducted on the relationship between gender and minority issues and recruiting and retention of military personnel, using literature gathered by the NATO Task Group (TG) on Recruiting and Retention of Military Personnel. Empirical research findings rather than descriptive or anecdotal information have been included in this review.

In order to assess the need for recruiting and retention strategies for minority group members and women, and to develop these strategies if required, research has been conducted to investigate the current representation of these groups in military occupations. This research has often been driven by legislation and policy and is aimed at determining how well women and/or minority group members have integrated into military occupations.

A diverse work force may become an environment for harassment and discrimination against women and minority group members. Attempts have therefore been made to assess the extent of racial and sexual harassment and discrimination in the military, which can provide insight into potential recruiting and retention barriers. The existence of such behaviour highlights the need for policies and programs aimed at addressing increased gender and cultural diversity. Other research has examined the effects of such programs and shown that they can improve behaviour and attitudes towards gender and cultural diversity in the workplace.

Gender and minority issues also play a role in recruiting for the military. Research in this area has been conducted on advertising and marketing, applicant attraction and job choice, and selection and classification measures. In regards to advertising and marketing, research findings indicate that marketing campaigns for the military can be modified to acknowledge gender differences in the importance given to benefits related to joining the military. Acknowledging these differences in marketing campaigns could enhance propensity for military service. Propensity to join may also be enhanced if differences in applicant attraction and job choice by gender and race are acknowledged. Finally, ensuring selection measures and procedures are unbiased helps ensure that qualified women and minority group members are not discriminated against being selected for the military.

Finally, gender and minority issues are linked to retention through Equity Theory and Equal Opportunity Fairness (EOF). A model of motivation attempting to identify the source of individuals' expectancies and link effort with performance and job satisfaction has been developed. In this model, job satisfaction is determined by employees' perceived equity of rewards received. Greater satisfaction is associated with greater equity in reward distribution. Future effort-reward probabilities are also influenced by past experience with performance and rewards. Additional research indicates the importance of EOF on job satisfaction and organizational commitment, two factors that have been empirically linked to dysfunctional turnover in other research. Both Equity Theory and EOF demonstrate the link between perceived fairness in the workplace and retention. It is therefore important to ensure that processes in the workplace and organization are fairly distributed to all personnel, regardless of gender or race.

Research findings have provided empirical evidence indicating that gender and minority issues relate to recruiting and retention of military personnel. These findings should be acknowledged in policies and procedures of the organization.

Practical recommendations are made based on findings in the literature. These recommendations include suggestions for continued and future research. Recommendations are also made to incorporate research findings into advertising and recruiting processes in the military and to ensure the psychometric properties of selection measures and the criteria for reward distribution are unbiased.

3G.2   INTRODUCTION

Demographic shifts in society have a direct influence on the work force. These shifts must be acknowledged when developing strategies to recruit and retain personnel in all organizations, including the military. Two significant demographic shifts towards an increasingly diverse society and work force are taking place in most western countries. First, there has been an increase in female employment leading to gender integration issues in the labour force. Second, there has been a steady growth of minority members in the work force. This has led to increasing diversity in culture, language, and belief system, in the work place.

Reflecting the demographic shifts mentioned above is important for militaries to meet recruiting targets and to retain military members. Social and cultural differences can impede a military's ability to recruit, integrate and retain women and minority group members in particular. It is also necessary to ensure that equal opportunities are provided to all members of society who possess the necessary skills to enter careers in the military.

3G.3   PURPOSE AND STRUCTURE OF THE PAPER

The aim of this paper is to review research on how gender and minority issues relate to recruiting and retention of military personnel. Empirical research findings rather than descriptive or anecdotal information have been included in this review. First, the paper will describe some research efforts that assess the representation of women and minorities in military occupations as well as military members' behaviour and attitudes towards gender and cultural diversity in the military. Second, research related to gender and minority issues and recruiting will be discussed. Specifically, this research examines gender and minority issues in relation to advertising and marketing, applicant attraction and job choice and selection and classification. Third, research related to gender and minority issues and retention will be examined, specifically as these issues relate to Equity Theory and Equal Opportunity fairness. Finally, practical recommendations will be made based on the findings presented.

3G.4   ASSESSING REPRESENTATION OF WOMEN AND MINORITIES IN MILITARY OCCUPATIONS

In order to assess the need for recruiting and retention strategies for women and minorities, and to develop these strategies if required, research has been conducted to investigate the current representation of these groups in military occupations. Two examples of this type of research were conducted in Canada and the US. Research in these two countries has been driven by legislation and policy change and is aimed at determining how well women and minority group members have integrated into military occupations.

3G.4.1 Designated Group Members in the Canadian Forces (CF)

In November 2002, an Order in Council was passed bringing the Canadian Forces (CF) under the Employment Equity Act (EEA). The EEA recognizes four designated groups: women, Aboriginal peoples, visible minorities and persons with disabilities. The CF must develop an Employment Equity (EE) Plan under the EEA. The EE Plan is aimed at ensuring that all people are treated fairly and judged on both merit and capability, in order to support cohesion and teamwork (Holden, 2004). The EEA requires the CF to fulfil a number of obligations in developing an EE Plan. These obligations include:

1) A survey of the workforce determining occupations, ranks and salaries of designated group members (DGMs);

2) An analysis of the workforce to determine whether any DGMs are underrepresented in any military occupations and ranks by comparing it with the Canadian workforce population;

3) An employment systems review of policies and practices to identify any barriers DGMs may encounter through a qualitative analysis of data collected through consultations with CF members (Ajilon, 2004);

4) Consultation with representatives on EE issues and informing CF personnel about EE;

5) Preparation of goals, policies and measures;

6) Production of an annual report on progress; and

7) Maintenance of EE records (Holden, 1999).

A number of recommendations have been made based on research conducted in this area in Canada. These recommendations focus on the following areas with regard to CF-wide EE issues: leadership and accountability for EE, establishing and maintaining EE networks, EE / diversity training, generic human resource systems and processes ensuring representation of DGMs, realistic job previews, role models mentors and buddies to facilitate integration to the CF, getting the EE word out with readily available information, and barrier free access and universal design to ensure adequate work conditions for those who require it (Ajilon, 2004).

3G.4.2 Representation of Women in the U.S. Military

Similar to the efforts in Canada, there have been efforts in the US to assess the representation of women in the US military. In the past, a career in the US military was somewhat restricted and limited for women, but in 1992, policy changes altered this situation by opening up a number of occupations to women. In the late 1990s, the US General Accounting Office (GAO) published two reports that questioned whether men and women had equal opportunities to work in the occupations in which they specialised (US General Accounting Office, 1998; US General Accounting Office, 1999). A recent study further investigated gender integration in the military occupations that became open to women in the early 1990s (Hareel et al., 2002). This research was conducted in two steps. First, a broad statistical analysis of the representation of women in occupations opened to them in the early 1990s was conducted. This quantitative analysis identified occupations that had low female representation. As opposed to the Canadian approach of comparing internal representation to the external labour force, representation in a US military occupation was compared to the representation in the military service in which the occupation existed. The second step of the research was a qualitative analysis that built on the first step. It focused on ten specific occupations in detail. These occupations represented a cross section by service, rank, nature of work, level of gender integration in the occupation, and level of representation in the occupational class. This analysis determined whether the level of representation of women in the occupations examined likely resulted from time elapsed, systemic barriers, or individual choice.

A number of recommendations and policy implications were made based on findings of this research. First, female representation needed to be acknowledged and understood by occupation. Second, the assumption that female personnel were not interested in jobs with seemingly less appealing work environments was false. Counselling was recommended for incoming personnel on the various occupations open to them and it was recommended that accurate information be available to the public detailing information about opportunities for women in the US military. Finally, opportunities needed to be made available to women in those occupations that were still being closed to them (Hareel et al., 2002).

Since the occupations analysed were only opened to women in the early 1990s, assessment of female performance and retention of women in these occupations would have been premature (Hareel, et al., 2002). However, it was recommended that analysis on gender and accession, training, assignment, selection and retention should be conducted. Furthermore, it was recommended that research on the role of individual experiences and decision-making processes in occupation selection, assignment and retention should be conducted. Finally, researchers stated that service models that limit female accession as a result of assignments closed to women should be validated (Hareel et al., 2002).

3G.5 BEHAVIOUR AND ATTITUDES TOWARDS CULTURAL AND GENDER DIVERSITY

A diverse work force may become an environment for harassment and discrimination against women and minority group members. Attempts have, therefore, been made to assess the extent of sexual and racial harassment and discrimination in the military, which can provide insight into potential recruiting and retention barriers. In addition, a number of policies and programs have been put in place in different nations' militaries to address increased gender and cultural diversity. Efforts have been made to assess the changes in the behaviour and attitudes of personnel after implementation of these policies and programs. The examination of bullying behaviour in the UK's Royal Air Force (RAF) is an example of this research.

3G.5.1 Sexual and Racial Harassment and Discrimination in the UK Military

3G.5.1.1 Sexual Harassment, Sexual Discrimination and Bullying (SHSDB)

A study was conducted to assess sexual harassment, sexual discrimination and bullying (SHSDB) in the RAF (Coleby and Vincent, 2002). Both quantitative and qualitative data were collected. Those who indicated they had experienced RHRDB were asked to describe their experiences.

Results indicated that, although 95% of respondents were aware of the complaints procedure regarding SHSDB, only 44% were aware of how it worked. The majority of respondents indicated that policies and procedures regarding SHSDB and attitudes of personnel had improved in the past five years, while 11% believed that the situation had deteriorated. Almost three quarters of respondents believed sexual harassment and bullying were occurring in the RAF, while half of respondents believed sexual discrimination was occurring in the RAF. A small number of people indicated experiencing SHSDB, with significantly more females than males reporting the experience (Coleby and Vincent, 2002).

Based on the findings of this study, it was recommended that new recruits be informed of equal opportunity policies. It was also recommended that exit interviews be conducted to determine what role SHSDB played in performance and retention of RAF personnel (Coleby and Vincent, 2002).

3G.5.1.2   Racial Harassment, Racial Discrimination and Bullying (RHRDB)

A second study was conducted to determine the extent of racial harassment, racial discrimination and bullying (RHRDB) in the RAF (Jarman, 2002). This study was similar in design to the Jarman (2002) study on SHSDB and included quantitative and qualitative analyses. Those who indicated they had experienced SHSDB were asked to describe their experiences.

Results of the study indicated that 95% of respondents were aware of the RAF complaints procedure dealing with harassment. However, only 50% were aware of how the procedure worked. The majority of respondents indicated that policies and procedures related to RHRDB and attitudes of RAF personnel had improved over the past five years. A small number of respondents indicated they had experienced RHRDB. However, more ethnic minorities than White personnel indicated they had experienced RHRDB. Experiences of racial harassment were most common in the workplace with male perpetrators. The perpetrators tended to be RAF personnel at a higher rank than the individual experiencing RHRDB. Overall, ratings were mixed regarding satisfaction with the action that was taken on RHRDB complaints (Jarman, 2002).

Recommendations from the analyses included informing new recruits about equal opportunity policies and training supervisors regarding RHRDB. It was also recommended that exit interviews be conducted to determine what impact RHRDB had on performance and retention (Jarman, 2002).

3G.5.2   Behaviour and Attitude Change Towards Gender and Cultural Diversity

Different countries have varying policies and programs aimed at addressing increased gender and cultural diversity in the military. One such example is the Sexual Harassment and Racism Prevention (SHARP) training program that has been implemented in the CF. SHARP is aimed at changing attitudes that underlie harassment and racist conduct and is designed to provide sensitization, leadership and mediation toward harassment issues in the Canadian Department of National Defence for both military and civilian employees.

Pike, MacLennan and Perron (2003) conducted a study measuring CF members' attitudes towards multiculturalism and employment equity, using three scales: the Multicultural Attitude Scale (MAS) (Berry and Kalin, 1989), the Military Equal Opportunity Climate Survey (MEOCS) (Knouse, Landis and Dansby, 1996), and the Mixed Gender Opinion Questionnaire (MGOQ) (Davis, 1998). The MAS is an attitudinal scale for research on multiculturalism. The scale was designed for a civilian population so it was slightly modified for a military population. The MEOCS was adapted from the US military to measure observation of workplace behaviours related to cultural diversity and gender equality issues. The MGOQ assesses attitudes toward gender issues specific to employment equity in the CF.

Data collected in this study was compared to baseline data collected in 1996. Results indicated an improvement in CF members' behaviour and attitudes towards gender and cultural diversity. The largest improvements were in the reduction of overt behaviours being observed on Racism/Sexism and Harassment (Pike et al., 2003).

3G.6   GENDER AND MINORITY ISSUES IN RELATION TO RECRUITING

Gender and minority issues have been studied in relation to recruiting. Specifically, research in this area has been conducted on advertising and marketing, applicant attraction and job choice, and selection and classification measures.

3G.6.1   Advertising and Marketing

Social marketing aims at influencing the voluntary behaviour of people towards a social end (Marshall and Brown III, 1999). Therefore, military recruitment campaigns can be considered social marketing programmes for an all-volunteer military. Marketing for a career in the military must consider the needs and wants of potential recruits. These needs and wants may differ for men and women and for members of minority groups. One study, which indicated gender differences in the importance men and women gave to benefits to joining the military, was conducted in the US by Marshall and Brown III (2003), using telephone interview surveys.

Findings indicated differences between young men and women in the importance they gave to various benefits from joining the military. Women considered the following more important than men: training, belonging to a team, making life-long friendships, home loan benefits, guaranteed medical care, selecting the place they would serve, travel opportunities, social respect, and prestige. Men considered combat and firearms training more important than women. Male and female ratings did not differ for the following benefits: adventure, having a disciplined lifestyle, good pay, and retirement possibility after twenty years (Marshall and Brown III, 1999).

The findings of this study suggest that marketing campaigns for the military could be modified to acknowledge gender differences in the importance given to benefits related to joining the military, and acknowledging these differences could enhance propensity for military service (Marshall and Brown III, 1999).

3G.6.2   Applicant Attraction and Job Choice

Gender and minority issues are also related to applicant attraction to a job and job choice. Chapman et al. (2005) conducted a meta-analysis[1] examining relationships between various predictors with job/organisation attraction, job pursuit intentions, acceptance intentions, and job choice. Six hundred and sixty seven coefficients were meta-analysed from 71 studies. The role that moderators played in the relationship between predictors and outcomes was also investigated, including the moderating effects of applicant gender and race. In particular, specific recruiting activities by an organisation may not work equally for men and women, so research investigated this as well as race as a moderator of applicant attraction (Chapman et al., 2005).

Findings indicated that, in general, the characteristics of an attractive job seem to be similar across gender and race. However, the attractiveness of a job was determined more by job characteristics like location and pay for females than for males (Chapman et al., 2005). Race was a moderator between applicant perceptions of the recruiting process and intentions to accept a position. In addition, treatment during the recruiting process was weighted heavily for minorities (Chapman et al., 2005).

3G.6.3   Selection and Classification Measures

There has been an effort in different nations' militaries to ensure that selection measures are unbiased against women and minority groups to ensure qualified applicants are not screened out during selection. An example of efforts in this area is research conducted in Canada on the CF Aptitude Test (CFAT). The CFAT is a standardised test of general cognitive ability and has three subscales, Verbal, Spatial and Problem Solving. The test is used to select and classify applicants into the CF.

Research was conducted to assess whether the CFAT was biased against a specific designated minority group in the CF, Aboriginal Peoples. An item bias analysis was conducted on the CFAT (Vanderpool 2003a), and further examination assessed whether the CFAT was adversely impacting the Aboriginals (Vanderpool, 2003b). Multivariate analysis determined whether there were any group differences in performance on the

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[1] A meta analysis combines the results of many studies dealing with the same topic. Data from the studies is synthesised quantitatively.

CFAT between Aboriginal Peoples living in special access and remote communities and CF recruits. Logistic regression was used to determine if items on the CFAT displayed Differential Item Functioning (DIF). DIF is a statistical technique that assumes examinees that have similar amounts of an underlying trait that is being measured should perform similarly on different items of the test regardless of the group they belong to. Results indicated that, although the CFAT is not biased against Aboriginals, group differences in performance suggest it may be an unfair test for Aboriginals (Vanderpool, 2003a).

Research was also conducted assessing whether the CFAT was adversely impacting Aboriginals in selection for the CF. Adverse impact refers to a situation in which group differences in test performance result in a disproportionate treatment of members in a designated minority group, such as Aboriginals (Clauser and Mazor, 1998). Selection ratios were calculated for Aboriginals who would have been eligible for enrolment in the CF based on their CFAT scores and compared to the actual selection ratio for Anglophone Non-Commissioned Member applicants. The "four fifths rule," which holds that adverse impact occurs when the selection rate for a minority group is less than four fifths that of the comparison group (Catano, Cronshaw, Wiesner, Hacket and Methot, 2001), was used to determine whether the CFAT was adversely impacting Aboriginals. Results indicated that the CFAT did have an adverse impact on Aboriginals (Vanderpool, 2003b), so it was suggested that an alternate selection procedure for Aboriginal Peoples applying for a career in the CF might increase the number of qualified Aboriginal Peoples accepted into the CF (Vanderpool, 2003b).

3G.7   GENDER AND MINORITY ISSUES RELATED TO RETENTION

Gender and minority issues have been studied in relation to retention. Specifically, research in this area has focussed on the principles of Equity Theory and Equal Opportunity Fairness. This research has focussed on input – outcome ratios based on perceived fairness in reward distribution.

3G.7.1   Equity Theory

Equity Theory holds that individuals are concerned with the relationship between their efforts or input and the outcomes they receive in exchange compared to others' input – outcome ratio. Examples of input for an employee are experience and education. Salary and recognition are examples of outcomes for employees. Employees want equitable treatment regardless of gender and ethnic background. Employees also want greater rewards for increased effort and improved performance compared to employees working with less effort and lower performance. Effort and performance at different levels is influenced by an individual's goals and objectives. The perceived significance and importance of an outcome will also vary by individual (Ramlall, 2004). Tension is created when employees believe that their input – outcome ratio is not equal to others (Robbins, 1993).

Equity Theory is based on three principle assumptions (Carell and Dittrich, 1978). First, people have beliefs about what an equitable return for their contributions is. Second, people compare their input-outcome ratio to others. Finally, when a person perceives inequality between their input-outcome ratio compared to that of others, the person would be motivated to take action. These actions can include an employee reducing their input to that which they think is fair for the output they receive or attempting to increase their output, for example by requesting a higher salary. An employee could also quit that particular job and seek other employment (Champagne and McAffee, 1989). An organisation should therefore develop reward systems that are perceived as fair and equitable in line with employee beliefs (Ramlall, 2004).

Porter and Lawler developed an expectancy model of motivation attempting to identify the source of individuals' expectancies and link effort with performance and job satisfaction (Kreitner and Kinicki, 1998;

Ramlall, 2004). In their model, employees exhibit greater effort when it is linked to a valued reward. Furthermore, employees with higher ability attain higher performance for a given level of effort than less able employees. Job satisfaction is determined by employees' perceived equity of rewards received. Greater satisfaction is associated with greater equity in reward distribution. Finally future effort-reward probabilities are influenced by past experience with performance and rewards (Ramlall, 2004). Therefore, if women and minority group members perceive a bias in reward distribution, their job satisfaction could be decreased. Figure 3G-1 displays Porter and Lawler's Expectancy Model (as cited in Ramlall, 2004, p. 62).
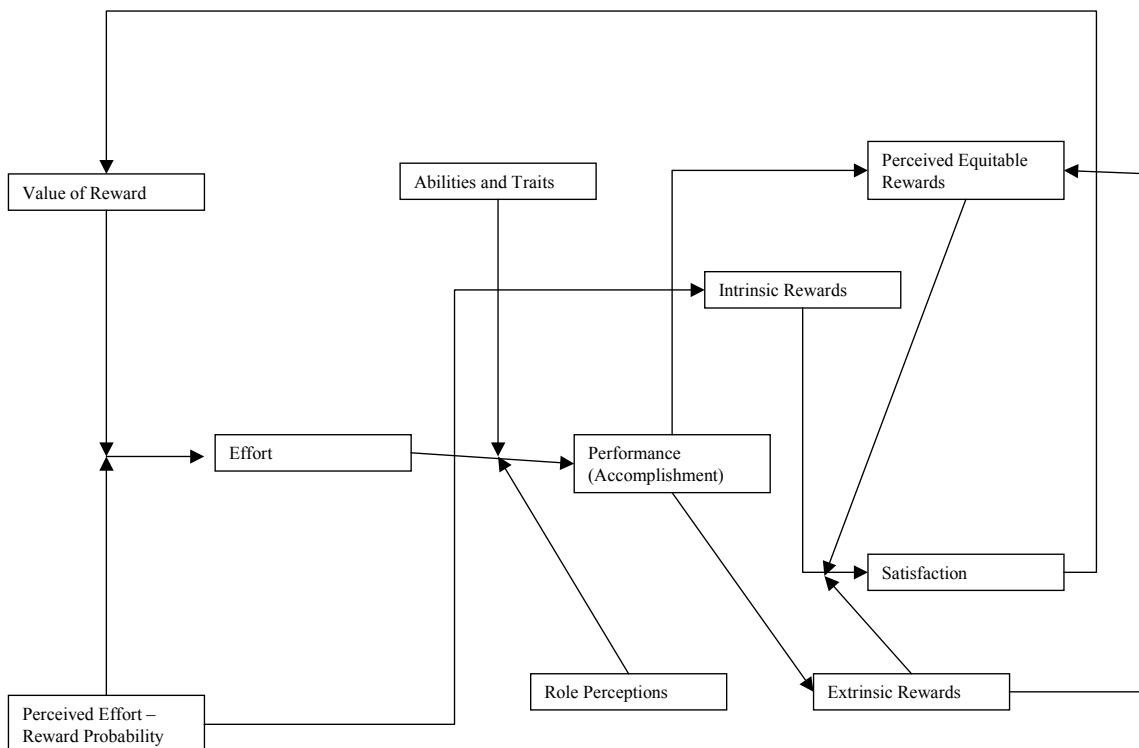
Figure 3G-1: Porter and Lawler's Expectancy Model of Motivation.

3G.7.2   Equal Opportunity Fairness

Equal Opportunity Fairness (EOF) has been linked to dysfunctional turnover under the Organisational Justice Theory (McIntyre et al., 2002). Organisational Justice Theory indicates two primary aspects of justice, Distributive Justice and Procedural Justice. Distributive Justice is related to whether outcomes in the workplace are distributed fairly. Procedural Justice is related to whether there are fair processes throughout an organisation to allocate outcomes (Thibault and Walker, 1975). Both Distributive Justice and Procedural Justice are related to whether outcomes are allocated equitably based on the input or investment of the individual receiving the outcome. This implies that workers have attitudes regarding Equal Opportunity (EO) and EOF.

EO and EOF can be divided into two categories, work group and organisational. Work Group EOF (WGEOF), EO, and EOF can be divided into two categories, work group and organisational. Work Group EOF (WGEOF) refers to the immediate work environment of colleagues and supervisors. Organisational EOF (OEOF) refers

to the larger organisation and practices within the organisational system such as hiring, promotion, pay and social recognition (McIntyre et al., 2002).

Research in the area of EO and EOF demonstrates links between these concepts and the retention of personnel. McIntyre et al. (2002) conducted a study to understand how attitudes toward EOF relate to perceived work group efficacy (PWGE), job satisfaction (JS), and organisational commitment (OC). OC refers to the level that an employee identifies with an organization and its goals (Mowday, Steers and Porter, 1979). JS differs from OC as JS represents a less stable response to the job and many aspects of the job while OC represents a more global, stable attitude (Morrow, 1983; Porter, Steers, Mowday and Boulian, 1974). PWGE refers to "the degree to which organisational members perceive their primary work group as productive and effective in accomplishing its mission" (McIntyre et al., 2002, p. 302).

The McIntyre et al. (2002) study focused on the Distributive Justice perspective in that perceived fairness was measured by respondents' reactions and attitudes. McIntyre et al. (2002) "hypothesized that military respondents' perceptions of OEOF positively influence their perception of WGEOF, which directly and indirectly lead to PWGE, JS and ultimately to OC" (p. 311). Data for the study was retrieved from the MEOCS database that represented all US military and civilian personnel in the Department of Defense. Individual items of the MEOCS were examined for content, and 21 items were selected to measure OEOF and WGEOF. The study was conducted in two steps. First, the measurement model was developed and tested. Second, the hypothesized causal model was developed and tested, using Structural Equation Modeling.

Results indicated support for the hypotheses. In the first step of the study in which the measurement model was developed and tested, four factors emerged. EOF reflected a combination of OEOF and WGEOF. The remaining components corresponded with JS, OC, and PWGE. Results from the second step of the study in which the structural model was tested revealed support for the hypothesized paths. The strongest effects were OEOF affecting WGEOF directly and JS affecting OC directly. Other strong effects were WGEOF affecting PWGE directly and PWGE affecting OC directly. All other effects were moderate.

Findings of McIntyre et al. (2002)'s study demonstrate factors that may influence recruiting and retention of military personnel. Figure 3G-2 provides a summary of results based on individual hypothesized effects, with standardized structural coefficients. All paths were found to be statistically significant. This study demonstrated that OEOF attitudes are linked to OC and JS. WGEOF may affect OC directly and mediate through PWGE and JS. Literature has also linked OC to retention in that individuals with low OC are more likely to leave an organization than individuals with higher OC. The multiple causal pathways to OC indicated in this study suggest that WGEOF attitudes could serve as points where personnel's OC could be increased and, in turn, reduce dysfunctional turnover. Training for supervisors on WGEOF skills could be helpful in this regard. Examining EOF attitudes and WGEOF in particular, may also help resolve issues with OC, JS and PWGE. This study also confirms a strong relationship between JS and OC (McIntyre et al., 2002).
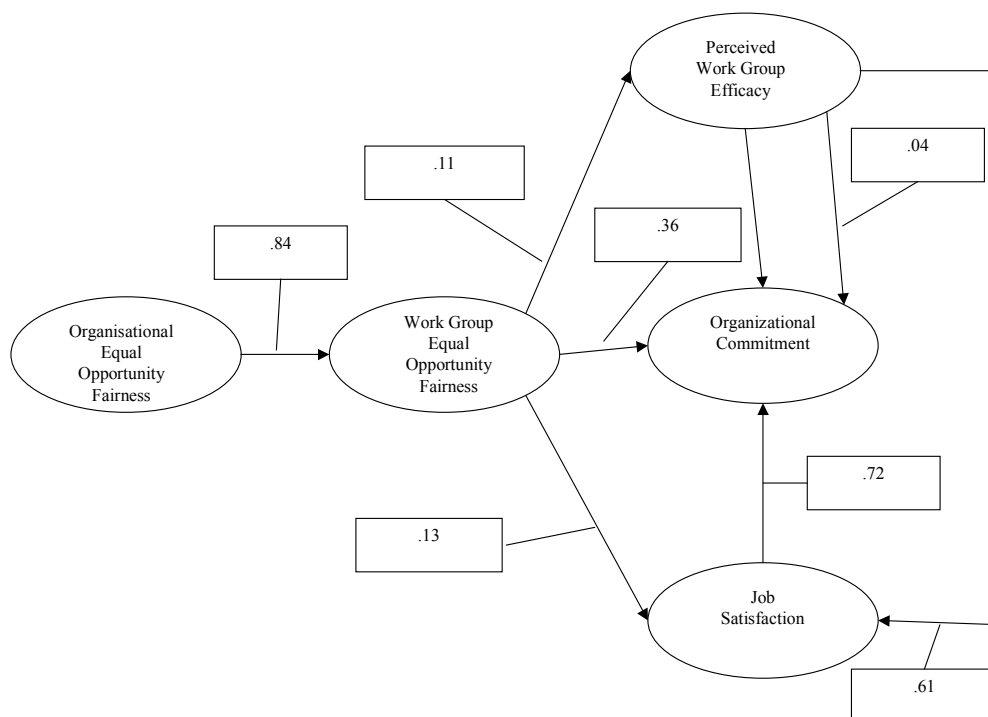
Figure 3G-2: McIntyre et al.'s (2002) Revised Model (p. 310).

3G.8   CONCLUSION

Western societies are increasing in diversity. Understanding the demographic shifts towards a more diverse society is important so these shifts can be acknowledged in recruiting and retention strategies for military personnel. It is also important to monitor attitudes and behaviour towards gender and cultural diversity in the military.

Research on gender and minority issues related to recruiting indicate gender differences in the importance given to benefits associated with joining the military. These differences could be reflected in advertising campaigns and may increase propensity to join the military. Research has also suggested that race and gender may contribute to applicant attraction and job choice. This needs to be taken into account in recruiting efforts and processes. Selection and classification measures have also been examined for bias and adverse impact. Ensuring selection and classification measures are not biased helps increase the likelihood that all qualified individuals from minority groups have an opportunity to be selected into the military.

Research on gender and minority issues related to retention indicate that perceived equity in the workplace is linked to retention. Therefore, it is important to ensure equity in the military to reduce dysfunctional turnover. Gender and minority issues can be linked to retention through application of Equity Theory and Equal Opportunity Fairness. Porter and Lawler developed an expectancy model of motivation attempting to identify the source of individuals' expectancies and to link effort with performance and job satisfaction. In their model, job satisfaction is determined by employees' perceived equity of rewards received. Greater satisfaction is associated with greater equity in reward distribution. McIntyre et al. (2002) indicated multiple causal

pathways to Organizational Commitment. Their research displays the importance of Work Group Equal Opportunity Fairness in influencing Occupational Commitment, Job Satisfaction, and Perceived Work Group Efficacy. All these factors may be linked to dysfunctional turnover. Therefore, through its indirect link, Work Group Equal Opportunity Fairness may also be important in managing dysfunctional turnover.

3G.9   PRACTICAL RECOMMENDATIONS

The following recommendations are made based on the findings of this literature review. These should assist militaries in ensuring that gender and minority issues are addressed with regards to recruiting and retention:

1) Monitoring of how well women and minority groups are represented in military occupations is being done in some nations. Other nations could benefit from this kind of research.

2) Further research is required to examine attitudes and behaviour toward gender and cultural diversity. This research will help identify potential barriers to the employment of women and minority group members in the military.

3) As diversity in the work force increases, continued policy and program development aimed at addressing this change is needed. These policies and programs should be geared to provide any support needed to the integration of women and minority group members into the military.

4) There are differences in how various groups value different benefits to joining the military. It is necessary to ensure that advertising campaigns for recruiting acknowledge these differences. As such, highlighting the benefits of the job that are important to members of different groups is important in attracting those individuals.

5) Race has been found to be a moderator between applicant perceptions of the recruiting process and intentions to accept a position. Therefore, it is important to ensure that recruiting processes are continuously monitored to ensure candidates have a positive perception of the process. Communicating the importance of an applicant's perceptions of the recruiting process to recruiters would also be useful.

6) The psychometric properties of selection and classification measures must be assessed to ensure they are free of bias to increase the likelihood that all qualified individuals from minority groups have an opportunity to be selected into military occupations.

7) Perceived equity in the work place is essential to positively influencing job satisfaction and organizational commitment. Therefore, the use of unbiased criteria for reward distribution to employees as well as accountability of management for decision-making regarding rewards in the work place should be practiced.

Chapter 3H – COMPENSATION: U.S. NAVY RESEARCH INITIATIVES AND APPLICATIONS

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3H.1   ABSTRACT

Historically, the U.S. Navy has used selective re-enlistment bonuses (SRB) to induce retention in critical skill groups. While SRBs have been shown to be effective, the effectiveness is limited and can be relatively costly. Retention bonuses are paid to all eligible individuals in critical skill groups, even if the individual's intention would be to re-enlist absent the bonus. Similarly, individuals in a given skill group all receive equivalent bonus amounts. This standardized approach to bonus awards ignores the 'true' compensation level required to induce the desired retention behavior. Further, the SRB program has had limited success in filling jobs in undesirable locations.

Alternatives to the SRB program include a flexible market based incentive system. Beginning in 2003, the U.S. Navy, in a limited test case basis, implemented Assignment Incentive Pay (AIP). AIP uses a simplified modification of a first price auction and has been shown to have success in filling positions in historically undesirable locations. Advances to AIP currently under development include the Distribution and Incentive System, (DIS). DIS incorporates an advanced optimization technique that considers the Sailor's bid and Navy costs in the job assignment process.

In this paper we discuss (1) the use and effectiveness of the U.S. Navy's SRB program, advances in modeling and estimating the impact of SRB on re-enlistment behavior, (2) experimental results of the feasibility of a multi-attribute auction in assigning military personnel to jobs, and (3) based on preliminary basic research results couched in choice theory, the net benefits of a flexible compensation plan is discussed.

3H.2   INTRODUCTION

Compensation policy and elements are updated and published by the Department of Defense (DoD) every four years.[1] Active duty personnel are entitled to three elements of "regular military compensation," basic pay, basic allowance for quarters (BAQ), and basic allowance for subsistence (BAS). The United States Congress authorizes annual adjustments to regular pays. However, BAQ and BAS reflect the variability in the cost of living by locale and therefore, vary by location. Depending on several factors, such as whether Officer or Enlisted, duty type, and skill group, military personnel can be eligible for other types of compensation.

3H.3   CURRENT COMPENSATION[2]

Compensation benefits consist of cash and non-cash benefits. Direct cash benefits consist of basic pay and allowances with indirect cash benefits being defined the tax-exempt portion of cash benefits.[3] The average

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[1] See *Military Compensation Background Papers,* Fifth Edition, September 1996.

[2] Current compensation information derived from Congressional Budget Office estimates, published January 2004.

[3] For example, allowances are federally tax-exempt.

military member receives approximately 43% of his total compensation package in cash. The remaining 57% of compensation is in the form of non-cash benefits and consists of health care, deferred retirement payments, housing and subsidized goods. Of the proportion of non-cash benefits approximately 9% is deferred for retirement pay. However, only one third of officers and 15% of enlisted personnel will collect retirement pay.[4]

The Congressional Budget Office (CBO) estimates that the average active duty member receives an annual compensation package estimated at $99,000.00 for 2002. The CBO estimates does not differentiate between officer and enlisted compensation, which reasonably one would expect to observe a great degree of variability. Ignoring non-cash benefits and assuming that the average annual level of compensation of an active duty member is $43,000.00, cash bonuses designed to encourage retention can substantially increase a member's annual cash compensation. For example, bonuses for enlisted personnel range from $1800.00 to as high as $45,000.00 for an additional four years of service. The average dollar payout under the Navy's selective re-enlistment bonus program for FY2000 – 2003 is given in Table 3H-1. Similarly, Officer bonus awards for critical skill groups are authorized at $65,000.00 and higher for additional years of obligated service.

Table 3H-1: Average SRB Award by Paygrade

	Re-enlist Avg SRB Amount			
Dim Fiscal Year				
Dim_Paygrade	**2000**	**2001**	**2002**	**2003**
All Dim_Paygrade	$27,013.36	$26,487.21	$25,600.36	$22,033.40
E-2	–	–	–	$1,858.88
E-3	$16,433.75	$17,729.22	$16,481.23	$12,344.91
E-4	$24,965.71	$25,130.32	$23,898.44	$19,322.76
E-5	$29,839.60	$27,780.06	$26,370.97	$21,699.58
E-6	$26,930.01	$28,827.33	$29,430.72	$30,091.91
E-7	$16,062.12	$19,564.49	$23,001.23	$24,729.64
E-8	$18,284.16	$22,380.24	$22,027.16	$23,134.63

The use of bonuses as a retention tool is particularly effective during cycles of economic expansion. The private sector, notably the technology and aviation sectors compete directly with DOD for certain skills. Unlike DOD, the private sector is not constrained with respect to increases in basic pay and in tight labor markets the private sector can raise pay to attract highly skilled military personnel. In an effort to mitigate the flow of personnel from DOD to the private sector, DOD frequently uses bonuses to retain skilled personnel.

Several different types of incentives can be classified loosely as bonuses and can be classified into two general categories: Selective Re-enlistment Bonuses (SRB) and auctions. In the remainder of this document an overview of the SRB and auction programs are discussed. In addition, innovative advances in current compensation research efforts being undertaken in the United States Navy are discussed.

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[4] Eligibility to collect retirement requires a minimum time in service of 20 years.

3H.3.1   Selective Re-enlistment Bonus

Bonuses are used by DoD to sustain targeted levels of personnel by skill group and pay grade.[5] Bonuses are typically used to obtain a targeted level of junior personnel within community (skill group) with the objective of ensuring sufficient future manning levels in the junior and senior ranks/pay grades. For the enlisted communities bonuses are directly paid to a skill group, independent of pay grade. In contrast, officer bonuses are targeted by rank and skill group.

3H.3.2   Enlistment

Typically, the Navy offers monetary incentives in order to induce re-enlistment or retention behavior in critical or undermanned skill groups. The level of monetary incentives varies across periods and Enlisted Management Communities, (EMCs).

Individual eligibility for Selective Re-enlistment Bonuses (SRB) is contingent on re-enlistment eligibility and if the individual re-enlists for a minimum of two years. Individual bonus amounts are calculated using a combination of the SRB multiplier, individual's base pay and the number of years the individual re-enlisted. The individual receives one-half of the total SRB in a lump sum payment upon re-enlistment with the remainder paid out in monthly increments over the re-enlistment contract.

The average retention rate by zone for the period for FY1996 – 2004 is given in Table 3H-2. Holding end strength requirements constant, a number of factors, such as projected retirements and quits, the U.S. Navy sets a required retention rate by Zone.[6] The retention rate for Zone A and B is approximately 36% and 50%, respectively. The Navy uses SRB to mitigate anticipated retention shortfalls by Zone and skill groups. For example, for the period from FY1996 – 2002 Zone A projected retention rates were far below the necessary critical level. In response, the Navy not only expanded their SRB program to capture a greater number of skill groups, but also increased the overall average SRB award.

Table 3H-2: Fiscal Year to Date Retention Rates by Zone U.S. Navy

Dim_Time_Period

LOSYear	1996	1997	1998	1999	2000	2001	2002	2003	2004
Zone A	24.30%	23.50%	23.80%	23.90%	27.80%	35.20%	34.50%	38.90%	37.30%
Zone B	56.00%	55.60%	53.00%	54.80%	58.30%	65.50%	69.50%	70.70%	67.80%
Zone C	78.00%	77.00%	74.80%	76.50%	78.80%	81.90%	83.60%	81.70%	84.00%
Zone D	70.80%	82.80%	85.80%	80.90%	94.40%	95.80%	96.60%	96.40%	96.00%
Zone E	18.10%	17.50%	16.40%	17.00%	18.10%	22.10%	25.90%	18.60%	25.20%

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[5] The amount of monetary incentive offered in any given time period to any given EMC is largely driven by projected end strength requirements.

[6] Zones can be thought of as years of service, with individuals in Zone A have six or less years of service, individuals in Zone B having 7–11 years of service, and Zone C individuals having 12–16 years of service. Typically, SRB is targeted to Zone A and Zone B.

3H.3.3   Officer

Similar, to enlisted personnel, the Department of the Navy targets key officer communities to meet projected end-strength targets. As of FY04, Surface Warfare Officers are offered a $50K bonus given at the end of their second division tour of duty for additional obligated service at the department head level. Bonuses are offered to individuals in medical, nuclear, and aviation sub-specialties. Unlike the enlisted community, however, officer bonuses are geared towards rank and subspecialties and are relatively much more effective in shaping manning requirements.

3H.3.4   Estimating the Effect of SRB on Retention – Enlisted Personnel

The traditional approach to estimating the effect of retention to a change in compensation (bonus) is the Annualized Cost of Leaving Model (ACOL), formalized by Warner and Goldberg (1984). Simply described the ACOL model calculates the difference between military and civilian pay discounted to the present. An individual will stay in the military if the pecuniary returns to staying exceed the returns of leaving. Incremental increases to SRB, increases to the military pay side of the equation, gradually increases the cost of leaving, and hence induce the intended effect of increasing retention. The parameter estimates obtained from the ACOL models provide an indicator of the average sensitivity of retention behavior to a change in SRB, or an elasticity measure.

While the ACOL formulation is theoretically correct and represent the right approach, the underlying statistical assumptions and data limitations result in under/over estimation of the effect of change in SRB on retention. For example:

- The different ACOL calculators (see the ACOL theoretical and applied literature) use different underlying assumptions. Therefore, using the same data and same discount factors, different calculators/models yield different ACOL values.

- Most models use a discount factor of only 10 – 20 percent. This may result in an under-estimated (predicted) value of the SRB effect. Example: A one unit increase in SRB for the Weapons Control group (1995 – 2002) yields a 0.3 percentage point (ppt) increase under ACOL with a 10 percent discount factor, a 1.1 ppt increase under ACOL with a 20 percent discount factor, and a 3.4 ppt increase under ACOL with a 40 percent discount factor (or 3.6 ppt under the same model, but with three choices: leave, extend, re-enlist).

- Most of the ACOL studies employing the basic five to seven variables, as well as unemployment, have very poor statistical performance. (See Hansen and Wenger, 2002, for a detailed comparison and discussion of the different ACOL models.)

- Non-linearity issues in the data, the model, and in individuals' behavior *are not taken into account*. For example, if under an ACOL (20%) binary model, an increase in SRB by a unit (to all entitled personnel) results in a 1.1 ppt increase in re-enlistment, the current models use this estimate to forecast the personnel behavior of an increase larger than one unit in SRB. Example: If the Navy wants to increase re-enlistment (for a certain group, say Weapons Control) by 3.3 percent, then the current models suggest increasing SRB by 3 units to entitled personnel (e.g., 3 times 1.1). In doing so, these models do not take into account two major issues: non-linearity in the functional form of the econometric model, and (more important) the *decreasing marginal effects* of the SRB. Taking these two effects into consideration will yield better estimates (even under the ACOL model).

- Terminology. In the ACOL literature, the experiments are written as an increase in SRB by a unit to *all personnel*. This is misleading as the ACOL calculator "allows" an SRB (or SRB change) only for

the entitled personnel by Navy criteria (e.g., LOS 2 – 14 years, Zones A – C, certain grades, only if an individual re-enlist for at least 3 years, etc.).

- In some cases the observed number of individuals receiving SRB payments is so small (approximately 1% – 1-.5%), so the experiment is based on practically irrelevant estimates, resulting in biased estimates.

In addition, since the seminal work of Warner and Goldberg (1984) who introduced the notion of Annualized Cost of Living (ACOL) all models build on that approach under the assumption of normality, thereby using the Maximum Likelihood (ML) probit (Normally distributed errors) model. Violations of the ML assumptions can produce biased and inefficient parameter estimates. If SRB levels set by Navy policy makers are based on ill behaved data and or biased parameter estimates, underpayment or overpayment of SRB is the likely end result. Underpayment of SRB leads to missed retention goals, whereas overpayment leads to increased cost over and above the minimal threshold necessary to meet desired retention targets.

3H.3.5 Model Improvements

Navy Personnel Research, Studies, and Technology is currently engaged in an effort to address the data issues noted above and take advantage of recent advances in statistical estimation. The basic set of objectives of the research is to examine the different models with recent data and to develop the necessary tools that will help the policy makers in their decision process involving Navy personnel. Specifically, in this study the objectives are:

1) Study the impact of SRB and other pay increases on retention.

2) Study the impact of unemployment on retention.

3) Advances in statistical estimation, in particular in Information Theoretics are used to compare and contrast the Generalized Maximum Entropy (GME) non-ACOL model with the ML ACOL model. GME falls under the class of Information Theoretic models.

The models developed include ACOL-based models and new non-ACOL based models. These models are all members of the Information-Theoretic class of estimation methods and are generalization of the traditional Maximum Likelihood Logit. The basic model is built such that it accommodates for the unbalanced (different time periods for different enlisted personnel) nature of the existing data. The main advantages of these new Information-Theoretic models are that they are more flexible, use fewer assumptions, include the traditional maximum likelihood method as a special case, and allow the users to incorporate prior information and any other type of soft data.[7]

To achieve this set of goals, a detailed study of four Navy skill groups is done. These skill groups are Weapons Control, Sensor Operations, Administration, and General Seamanship. These groups were chosen because they represent the broad spectrum of Navy personnel. For each of these groups, the ACOL and non-ACOL models were used to investigate the above three objectives for the group as a whole, for subgroups (such as Zone A, B, and C) as well as over time. Further, all estimations were repeated for different choices (binary: leave, re-enlist; three-choice: leave, extend, re-enlist; four-choice: leave, short-extension, long extension, and re-enlist). For the ACOL models used here, all analyses were repeated for different discount factors (5% through 40%) and for different sets of variables. This detailed set of estimations was needed in order to compare and contrast our estimates with all other recent (and less recent) studies (i.e., Hansen and

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[7] For a more detailed description of Information Theoretic Models see Golan and Perloff.

Wegner, 2002; Asch and Warner, 2001; Goldberg, 2001). For brevity, only the results form the Weapons Control group are discussed.[8]

3H.3.5.1   Weapons Control

We demonstrate our approach with the main results obtained for the Weapons Control group (1995 – 2002) consisting of 66,509 individuals. The independent variables used (in addition to the intercept) are Gender, Race, Number of Children, AFQT Score, Base Pay, Total Allowance, Education Dummies (No High School and Above High School), Sea Duty, Dollar Amount SRB, Zone Dummies, Expected Civilian Wage (Golan, 2003), Lag Real Interest Rate, Lag Value of NASDAQ index, and Unemployment Rate.

The Tables and Figures below present the results of the SRB experiments studied and developed here. Table 3H-3 presents the basic results for the full sample. *The normalized values (lower and upper bounds as reflected by zero and infinitely high discount factors) are the values recommended to use.* Table 3H-4, presents a comparison across different model scenarios: the binary and the three-choice multinomial, as well as Zone A, B, and C for the infinitely high discount factor. The main results observed here are that:

1) An analysis of small increments of SRB is more accurate since the ppt are not linear;

2) There is a major difference in ppt between a multinomial and binary models (that use the same right hand side variables); and

3) Individuals in different zones behave differently.

**Table 3H-3: Weapons Control – SRB Experiments for GME 3
Categories Model (Full Sample 66,509 Observations)**

	Base Case	SRB+0.5	SRB+1	SRB+1.5	SRB+2	SRB+2.5	SRB+3
Implied Elasticities (0)		0.45	0.40	0.36	0.33	0.30	0.28
Prob Leave	0.4615	0.4008	0.3554	0.3224	0.2982	0.2802	0.2664
Prob Extend	0.2032	0.2118	0.2135	0.2115	0.2075	0.2025	0.1971
Prob Re-enlist (infinity)		0.3580	0.3842	0.4078	0.4289	0.4478	0.4647
Prob Re-enlist (0)	0.3353	0.3875	0.4311	0.4661	0.4943	0.5173	0.5364
% Change Re-enlist (infinity)		6.8%	14.6%	21.6%	27.9%	33.6%	38.6%
% Change Re-enlist (0)		15.6%	28.6%	39.0%	47.4%	54.3%	60.0%
Mean $SRB	1,244	1,677	2,129	2,582	3,034	3,486	3,938
Normalized % Change Re-enlist (infinity)		6.3%	12.2%	17.7%	22.7%	27.3%	31.5%
Additional Re-enlisted Personnel		3,458	7,715	11,506	14,964	18,090	20,817
Normalized % Change Re-enlist (0)		12.3%	23.0%	31.7%	38.8%	44.7%	49.5%

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[8] A complete review of the results can be obtained from Navy Personnel Research, Studies, and Technology, 5720 Integrity Drive, Millington, TN 38055-1000.

Table3H-4: Weapons Control – SRB Experiments for GME Binary and 3 Categories and by Zones

	SRB+0.5	SRB+1	SRB+1.5	SRB+2	SRB+2.5	SRB+3
Normalized % Change Re-enlist (infinity) 3-Choice	6.3%	12.2%	17.7%	22.7%	27.3%	31.5%
% Change Re-enlist (infinity) Binary	1.8%	6.4%	10.8%	15.0%	19.0%	22.8%
% Change Re-enlist (0) 3-Choice	15.6%	28.6%	39.0%	47.4%	54.3%	60.0%
% Change Re-enlist (0) Binary	8.0%	15.9%	23.3%	30.2%	36.5%	42.2%
Normalized % Change Re-enlist (0) 3-Choice	12.3%	23.0%	31.7%	38.8%	44.7%	49.5%
Normalized % Change Re-enlist (0) Binary	6.7%	13.4%	19.8%	25.6%	NA	NA
Normalized % Change (infinity) Zone A 3-Choice	4.7%	9.3%	13.8%	18.2%	22.3%	26.3%
Normalized % Change (infinity) Zone B 3-Choice	9.8%	18.7%	27.5%	35.8%	43.5%	50.7%
Normalized % Change (infinity) Zone C 3-Choice	24.6%	44.8%	60.6%	72.8%	82.3%	89.7%

Table 3H-5 provides a detailed analysis of the traditional ACOL model (call it "Base") and the more detailed model (call it "extended") that includes more information on both the individuals and the macro state of the economy. Both types of models are presented for the binary and three-choice models and are based on the ML-Logit. (Probit analyses were done and yielded very similar results, so it is not presented here.).

Table 3H-5: Re-enlistment Percentage Point Increase for SRB Increase of One Unit for the Basic and Extended ACOL Models: Weapons Controls (1995 – 2002): 66,509 Observations

Groups	Basic						Extended Binary			Three Choices		
	Binary			Three Choices								
	10%	20%	40%	10%	20%	40%	10%	20%	40%	10%	20%	40%
Full Sample	0.4	1.2	3.9	0.9	2.3	4.9	0.3	1.1	3.4	0.3	1.2	3.6
1996	0.3	0.9	3.1	0.5	1.8	4.1	0.1	0.7	2.6	0.1	0.6	2.5
1997	0.5	1.5	4.6	1.2	3.1	6.0	0.3	1.1	3.7	0.3	1.3	4.0
1998	0.4	1.1	3.7	0.9	2.4	5.1	0.2	0.7	2.9	0.2	0.9	3.4
1999	0.4	1.3	4.2	0.9	2.2	4.9	0.4	1.2	3.8	0.4	1.5	4.2
2000	0.3	1.1	3.8	0.9	2.2	4.4	0.4	1.2	3.3	0.4	1.4	3.4
2001	0.4	1.2	4.0	1.0	2.4	4.8	0.4	1.3	3.5	0.5	1.7	3.9
2002	0.3	1.0	3.4	1.0	2.3	4.3	0.4	1.2	3.1	0.5	1.6	3.5
Zone A	6.3	10.3	11.5	5.9	9.9	11.5	4.3	7.3	8.6	4.2	7.3	8.6
Zone B	6.2	9.4	13.6									
TOS 4	6.5	13.7	22.0									
TOS 5	0.2	1.2	5.8									
TOS 6	0.3	1.0	3.5									

1) TOS is the Terms of service (4, 5, 6 years).

2) The Base Pay Elasticities are 0.2 (ACOL with 10% discount), and 0.4 for ACOL with 20% discount.

The main results here are that (1) the ppt increases as the discount factor increases, (2) the three choice model yields (on average) higher ppt than the binary models, (3) the basic model ("Base") yields higher ppt values than the more general model ("Extended"), and (4) that different subgroups (e.g., Zone A) behave differently.

Additional experiments comparing ACOL formulation with models controlling for individual pay components (non-ACOL) show that in all of the cases, the non-ACOL GME has good performance relative to the ACOL ML models. The GME non-ACOL has better in-sample performance as well as superior out-of-sample performance.

3H.3.6   Unemployment Effects

As noted earlier, economic factors are a key influence on retention behavior. To see this effect the models controlled for unemployment and examined the effect of retention to changes in unemployment. In general, over the sample period (1995 – 2002) enlisted personnel became less sensitive to the unemployment rate. This result is consistent throughout subsets of the data, across models (ACOL, non-ACOL, ML, GME, etc.), and across the different unemployment measures (general, by education, and others). Table 3H-6 shows these results for the Weapons Control group.

Table 3H-6: Weapons Control – Unemployment Analysis

Evaluated at			1995 – 1996	1997 – 1999	2000 – 2002
Mean Charac.	Unemp.	GME – 3 categories	-2.17*, -.61, 3.27*	–	-.43*, -.12, .14*
	Unemp. Education	GME – 3 categories	-.54*, 1.42*, -.24	-.19, .63*, -.33*	-.41*, -.08, .12*
	Unemp.	Binary GME-1	3.2*	–	.29*
	Unemp.	Binary GME-2	1.9*	–	.07*
	Unemp.	Binary ML ACOL-20	3.53*	–	0.41*
	Unemp.	Binary ML ACOL-40	3.55*	–	0.40*
Mean over individuals	Unemp.	GME – 3 categories	-, -.31, 3.57*	–	-.3*, .01, .28*
	Unemp. Education	GME – 3 categories	-.45*, 1.51*, -.15	-.14, .69*, -.28*	-.28*, .05, .25*
Mean AFQT			72.4	74.7	76

Notes: * significant

    Binary GME-1: 0 – leave and extend; 1 – re-enlist

    Binary GME-2: 0 – leave; 1 – re-enlist and extend

There are probably a number of explanations for this result and more is needed from those who are familiar with the changes in rules and policies such as downsizing certain professions, however one observation is notable here: the mean quality (AFQT) of enlisted personnel (only for Weapons Control) increased during that period, which may explain part of the reduction in sensitivity toward unemployment (higher quality personnel are, on average, less sensitive to unemployment). Other explanations, observed in the other data sets include a dramatic increase in SRB (from approximately 0.3 in mid 90s on average for the Sensor Operation group) to approximately 0.9 in 2001–2. This reflects a substantial average increase of SRB payments.

To summarize, the individuals may be very sensitive to the unemployment rate (or the lag unemployment), but the macro-economic and political conditions as well as the wage/bonus increases/changes over time, make it hard to prove. Below are the main observations.

1) First, an analysis of the whole period (1995 – 2002) by groups reveals that except for the Administration group, all unemployment elasticities (with respect to Re-enlistment) are positive.

2) For all groups the sensitivity to unemployment declines over time (or becomes statistically insignificant).

Both general unemployment and unemployment by education yield similar results.

3H.3.7 Conclusions on SRB Model Improvements

The main objectives of the research were to investigate the sensitivity of enlisted personnel to SRB and other pay components, as well as to investigate the sensitivity of the personnel to the basic economic conditions. Using data from 1995 through 2002, these effects were studied for four basic skill groups: Weapons Control, Sensor Operations, General Seamanship, and Administration. A comparison of different scenarios of the Maximum Likelihood (ML) ACOL models with the Information Theoretic non-ACOL GME method was examined. The main results of that research are:

1) The sensitivity of personnel to SRB payments is skill specific and in all cases the enlisted personnel became less sensitive to the SRB payment over the period analyzed.

2) In all cases, enlisted personnel became less sensitive to unemployment levels and to other macroeconomic indicators over time.

3) In cases (skill groups) where we don't observe many individuals that received SRB, the SRB experiments should be done differently than in those cases where a significant portion of the enlisted personnel received SRBs. We provide such an analysis for the General Seamanship skill group.

4) The non-ACOL GME method yielded superior estimates and forecasts for all cases.

5) The ML-ACOL models are very sensitive to the discount factor used and to other specifications.

Spin offs of the SRB program include Targeted SRB. Where SRB has been successful in shaping the force by skill group, the tool does not ensure that the right individual is in the right job. Targeted SRB is tied to skill and location. Bonuses are paid to eligible individuals who agree to hard to fill locality assignments or locales that have skill group shortages. Unfortunately, data and/or metrics of effectiveness on this program are not available.

3H.3.8 Auctions

Relatively new incentive programs in use by the U.S. Navy are auctions. The main advantage of auctions over SRB is the individual elicitation of the actual dollar value needed to induce retention. With SRBs it is possible that given the fixed nature of the bonus that the bonus offer is insufficient to elicit the desired retention behavior. Similarly, the SRB bonus offer may be set such that individuals who re-enlisted in response to the bonus would have stayed for some lesser amount. In the first, case the direct impact is manning shortages and in the second case the Navy incurs a pecuniary cost.

Auctions elicit the valuation that the individual requires to re-enlist. And unlike a fixed SRB policy, auction rules can be designed to allow payouts to be reflective of the average private sector valuation of a given job, hence, mitigating the ability of the private sector's ability to use pay to compete for skilled labor.

Beginning in FY03 Assignment Incentive Pay (AIP) was launched by the Navy to increase "volunteerism" for hard to fill locations. Certain locations, such as Sigonella, Italy, were experiencing skill shortages by pay grades. Forced moves of individuals to historically undesirable locations, especially those at higher pay grades with the option to retire, resulted in a high quit (retirement) rate, exacerbating shortages at senior levels. In FY02 the United States Congress authorized funding of AIP. AIP is tied to locale, paygrade and skill type.

Each period the Navy sets a maximum incentive pay or price that it is willing to pay to eligible individuals to voluntarily accept a hard to fill assignment. The maximum price varies by locality, pay grade and skill. The Navy's reserve price, the maximum amount the Navy is willing to pay an individual for accepting a hard

to fill position, is known to the individual. Eligible Individuals who are in their rotation window can bid on a job up to the Navy's reserve price. Individual's bids reflect the additional monthly pay the individual would require to accept a hard to fill position, hence the Navy's reserve price and likewise bids can be considered incremental pay to monthly salaries.

AIP auction rules are similar to those of a first-price sealed bid auction. Sealed bids are accepted for a given time period, with the job being awarded to the lowest bidder. The winning bidder receives a bonus equal to his bid for each month that the individual remains in the hard to fill job. As of April 2004 the Navy's reserve price ranged from $50.00 to $1200.00. The lowest received bid was $0.00 with the average bid being $310.00.

A much more advanced auction under development is the Distribution Incentive System (DIS). DIS is being designed to consider not only the individual's preferences for a given job, as revealed by the individual's bid, but Navy constraints and or policies. DIS assigns a weighted fitness score in determining the auction winner.

Unlike AIP, which assigns winners strictly based on lowest bid, DIS is designed to optimize over individual bids, productivity evaluations, PCS costs, and readiness requirements. DIS uses an advanced algorithm to minimize the next cost of assignments subject to Navy manpower readiness constraints. As of this writing DIS is being beta tested on university subjects for parameter validation.

A precursor to DIS was the Job Market Labor Allocation Model (JMLAM).

3H.3.9   Job Market Labor Allocation Model (JMLAM)

Rather than the traditional single unit auctions, where a single unit of a good or service is brought to a market, the use of multi-object auctions are steadily becoming the preferred auction mechanism for goods and services that are either complements or substitutes, (Matsui and Watanabe, 2003). The multi-object/unit auctions have been used to auction off Federal Communications Commission (FCC) licenses, transportation services, and delivery routes (Matsui and Watanabe, 2003). A key feature of multi-unit objects is that they allow the buyer to submit a single bid on a combination of objects of the buyer's choosing. This type of auction mechanism allows for complementary (substitutes) goods to be sold as a single unit, thereby, increasing the value of the bundle to the buyer.[9] The primary difficulty with multi-unit objects is evaluating the winner of a given auction. For N buyers in the market over M goods there are [N! / r!(N-r)!] possible combinations of objects. The ability of the seller to evaluate each buyer's bid is likely to be computationally intractable.

Numerous auction algorithms have been used to determine winners in multi-unit auctions. Typically, optimization algorithms used in multi-unit auctions are designed to maximize the auctioneer's revenue, maximize allocative efficiency and/or determine location specific prices, (McCabe, Rassenti, and Smith, 1991). Examples of the use of such algorithms can be found in the FCC spectrum, airline slots, gas pipeline networks, and sales routes auctions, (Ledyard, Olson, Porter, Swanson, and Torma, 2002; McCabe et al., 1991).

Another difficulty inherent in multi-unit objects is that buyers do not necessarily bid their true valuation for each item in the bundle ((Matsui and Watanabe, 2003). In other words, the buyer must determine his or her valuation for each possible bundle combination. Determination by any buyer of the value of a given bundle of objects is likely to be cognitively prohibitive in particular as the possible bundle combinations grows in relation to the number of objects. Various methods are discussed in the literature to overcome the difficulty of

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[9] Complementarity is defined as a bundle of items that are worth more than the sum of their parts. Substitutability is defined as a bundle that is worth less than the sum of its parts, (Hudson and Sandholm, 2002).

preference elicitation and elicitation of the buyer's marginal valuation of a bundle, (Hudson and Sandholm, 2002; Conen and Sandholm, 2001). Our research, however, does not focus on solving the problem of preference elicitation.

In an effort to shed some insight into alternative methods to allocate labor across jobs, we explore the feasibility of using a multi-unit auction approach. The auction environment is designed to allow multiple sellers (sellers of labor) and a single buyer (buyer of labor) to negotiate bids over multiple attributes. A seller sells a single unit of the hypothetical good or service (analogous to a unit of labor) by submitting bids on one or more attributes.[10] Unlike the general case in multi-unit auctions, sellers cannot, per se, submit bids on a subset of the available objects, but must bid on the bundle (attributes) at hand. Sellers, however, can choose the desired level for each attribute. Likewise the buyer, using a scoring rule (see Annex A) must evaluate the bids as a bundle.

In an effort to mimic some of the constraints faced in the military labor market, the experimental auction allows for (1) forced market convergence, that is a hypothetical job must be filled, (2) control of a seller's value, where seller value can be defined as a measure of the marginal productivity (marginal cost) of a seller. The results reported from this research effort report findings from base case experiments.

3H.4   RESEARCH OBJECTIVE

Unlike the private sector, the Navy cannot offer individually tailored compensation packages. Institutional constraints mandate that the Navy pay Sailors of equivalent paygrade and length of service equivalent wages. The Navy can, however, negotiate, that is offer incentives, on various job attributes, such as bonuses, reduced sea-shore rotation, and promotion points, for example.

An efficient means of negotiation is to couch the Sailor (seller) – Navy (buyer) negotiation process in an auction environment. The Navy labor market, however, has unique constraints that require modifications to any proposed auction approach. These constraints include the requirement that jobs cannot go unfilled and auction accessibility by participants.[11]

Using a first price sealed bid auction approach; this paper explores the bidding behavior of subjects in a multi-attribute market setting. The proposed auction is designed to examine bidding behavior and market outcomes in a controlled experimental environment that mimics Navy constraints and the effects of possible policy proposals.

The Job Market Labor Allocation Model (JMLAM) is designed to provide a bidding environment where a buyer and multiple sellers can submit offers and or counteroffers on the attributes of a hypothetical good/service. The model is designed to allow flexibility for experimental testing of Navy constraints and possible policy impacts. Experimental parameters can be set by the experimenter to examine the effect of bidding behaviors under varying constraints and or rules.

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[10]   An attribute is the terminology used to refer to a form of compensation with each attribute being a component of a bid.

[11]   Given the worldwide dispersion of military personnel and the relatively short duration of a member's rotation window an online auction is necessitated. Bandwidth and security issues restrict web access, thereby preventing sailors from participating in a real time online auction.

It is important to note that for purposes of experimental testing, observing of bidding behavior, and market outcomes, jobs are assigned generic names and the incentive attributes are referred to as "attributes." This is done in order to prevent individuals from bringing in egalitarian, altruistic, or other preferences from everyday social life into the experiment.

The JMLAM user interface is simple in design, (see Figure 3H-1 below) and allows the auction participants to view bidding history and earnings information, and participate in one or more auctions in a given time period. The history screen provides information to the seller that may help the seller in formulating future bids. The option of participation in multiple auctions is analogous to a Sailor bidding on multiple assignments.[12]

US Navy JMLAM

User: B1
Login time: 12/28/02 7:14:12 PM
Role: Buyer

| My Auctions | Offer Review | Earnings | History | Instructions | Logout |

Buyer Offer Review

Session ID: 3
Auction ID: 8
Auction Type: First Priced
Status: Auction In Progress
No. Of Openings: 1
Remaining Openings: 1

Time Remaining: 0 seconds
Job ID: Cryptographer
Job Title: Cryptographer
Location: Langley, VA
Current Round: 4

Round Details

Round ID	User ID	A1 (Max = 1000)	A2 (Max = 500)	A3 (Max = 50)	Manual Select	Bid Rank	Bid Score	Weight
5	BUYER_OFFER	100	10	1				
4	BUYER_OFFER	100	10	1	[]			
4	S2	500	50	4	[]	1	100	0.9999
4	S1	500	50	5	[]	2	99.970	1
3	BUYER_OFFER	100	10	1	[]			
3	S1	500	50	5	[]	1	100	1
3	S2	500	50	5	[]	2	99.989	0.9999
2	BUYER_OFFER	100	10	1	[]			
2	S2	474	50	5	[]	1	100	0.9999
2	S1	500	50	5	[]	2	99.999	1
1	BUYER_OFFER	100	10	1	[]			
1	S1	500	50	5	[]	1	100	1
1	S2	475	50	5	[]	2	99.999	0.9999

| Start Round | End Auction | Accept Bid | Close |

Status: Round has Ended

Figure 3H-1: JMLAM User Interface.

The auction is designed so that each seller can sell a single unit of a hypothetical good/service, while the buyer can purchase one or more units of the good/service. The maximum number of goods/services that the buyer is willing and able to purchase is unknown to the seller. Subjects are informed that at least one good/service is available, however, that the buyer is not obligated to accept a bid from a seller(s). The buyer's objective is to maximize the difference between the buyer's reserve and the seller offers. Earnings are only accrued to the buyer if he or she accepts a seller's offer and the offer is less than the buyer's reserve. Buyer's earnings, therefore, increase the greater the difference between the buyer's reserve and the accepted seller's offer and the number of seller's bids the buyer accepts.

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[12]   Experiments to date; however, have been limited to the participation of subjects in only one auction at a time.

Sellers submit bids on three hypothetical attributes of a good/service. Each attribute has a reserve price. Depending on the experimental parameters, (see Tables 3H-7 and 3H-8) the reserve prices may vary across sellers and auctions. Sellers know their reserve prices; sellers do not know the other sellers' reserve prices or the distribution of reserve prices. The implication here is that while subjects can refer to the history screen for guidelines as to how to submit future bids, knowledge of past bidding behavior may or may not be helpful.

Table 3H-7: Experiment 1 Parameters

Seller Value	1
Reserve Prices, N = 360	(10, 5, 2)
Reserve Prices, N = 408	(10, 5, 2) or (13, 7, 3) or (18, 9, 4)
Job Openings	2, unknown to the seller
Seconds for Play	90 – 105 seconds
Conversion Rate	.05, $1 Experimental Dollar = $0.05 USD
Maximum Number of Rounds	10, unknown to seller
Buyer Reserve	(100, 50, 25), unknown to a seller
Maximum Number of Sellers	9, average subjects per session was 7

Table 3H-8: Experiment 2 Parameters

Seller Value	.6, .8 or 1, randomly assigned session/auction/subject
Reserve Prices	(13, 10, 6) if seller value = .6
Reserve Prices	(16, 12, 8) if seller value = .8
Reserve Prices	(20, 15, 10) if seller value = 1
Job Openings	2, unknown to the seller
Seconds for Play	60 seconds
Conversion Rate	.10, $1 Experimental Dollar = $0.10 USD
Maximum Number of Rounds	10, unknown to seller
Buyer Reserve	(100, 50, 25), unknown to the seller
Maximum Number of Sellers	9, average subjects per session was 7

The seller's earnings are determined by the difference from his or her reserve price and the submitted bid. The greater the difference between the reserve price and the submitted bid the greater the earnings. A seller only realizes earnings if the seller wins an auction. The probability of winning an auction diminishes the greater the difference between seller's reserve price and his or her submitted bid. The complexity of setting an optimal bid is compounded by the fact the seller is required to submit bids on three attributes. Bidding strategy is further complicated by the fact that each seller is assigned a "seller value."[13] Each seller knows his or her seller value, but other seller values and/or the distribution of the seller values are unknown to individual sellers. The buyer, however, knows all seller values and the distribution of seller values.

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[13] See Annex B for a description an function of the 'seller value.'

The probability of winning an auction, therefore, is a function of the seller bid and seller value. Given two sellers, s1 and s2, with seller values of 1 and .5 respectively and who submit identical bids, the seller with the higher seller value will win the auction, in this case s1.

The seller's bids are evaluated using a scoring rule, described in greater detail in Annex A. Assuming that the buyer is willing and able to accept a bid, the buyer chooses that seller with the highest rank. If the buyer can purchase multiple units of the hypothetical good or service, the buyer simply chooses the *n* highest ranked sellers until the number of available units is exhausted.

3H.5   EXPERIMENTAL DESIGN

This research is an ongoing effort, with two experimental sessions having been completed to date. The experimental parameters adopted in Experiment 1 were largely designed to provide a benchmark from which to compare future experiments. In all cases seller value remained fixed across sessions and auctions. In approximately one-half of the auctions subject reserve prices were fixed across auctions. In those cases reserve prices varied, subjects were randomly assigned to one of the following three (A1, A2, A3) groupings; (10, 5, 2), (13, 7, 3) or (18, 9, 4).

Approximately 60 subjects participated in the first experimental session. Each subject group participated in 2 sessions of 10 auctions each, with a sample size of 768 observations. In general, the two highest ranked sellers were chosen as auction winners. While the auction is designed to enable multiple rounds, winners were always assigned in the first round. In general, sellers submitted bids very close to their reserve; typically within $1 – $3 experimental above their reserve and in some cases sellers bid their reserve on at least one attribute. Submitting bids equal to seller reserves may be attributed to the fact that sellers did not know the buyers reserve. Future experimentation will examine the effect of bidding behavior when the buyer's reserve is known, (see Annex B).

In Experiment 2, subjects were asked to participate in 3 sessions, for a total of 810 observations. Experiment 2 subjects were assigned seller values and corresponding reservation prices in a random order. Higher seller values imply higher productivity and, therefore, higher associated reserve prices were assigned to sellers with higher seller values. Based on the bidding behaviors observed in Experiment 1, the seller value/reserve prices were set so that there would be an equal probability of winning an auction, independent of the seller value/ reserve price combination.

3H.6   PRELIMINARY AUCTION RESULTS

At this stage of the research it is uncertain as to whether subjects focus on the summed value of their bids, a composite bid, or consider each attribute bid independently. To this extent we present analysis on composite bidding behavior and individual attributes. Median and minimum bids are examined as a cursory insight into bidding behaviors in Experiment 1 and 2. The median bid, relative to a mean bid, is examined to mitigate the effect of outliers. To provide additional insight into subject bidding behavior we mapped the minimum submitted bid by auction.

Experiment 1 was the experimental base case, where all seller values were fixed at "1." In approximately one-half of the auctions, the reserve prices were fixed across subjects, with subjects randomly assigned variable reserve prices in the remaining auctions. Figure 3H-2 reflects the median difference in the composite reserve prices and composite bids. In the initial auctions the median difference in the subject groups is opposite of what we had expected and surprisingly large. One would expect that the median bid in the "same

group" would be relatively lower than the median bid in the "different reserve group," particularly, since the reserve prices for two-thirds of the subjects was significantly larger than the "same reserve group." Over successive auctions, however, the median difference between the two groups begins to converge.
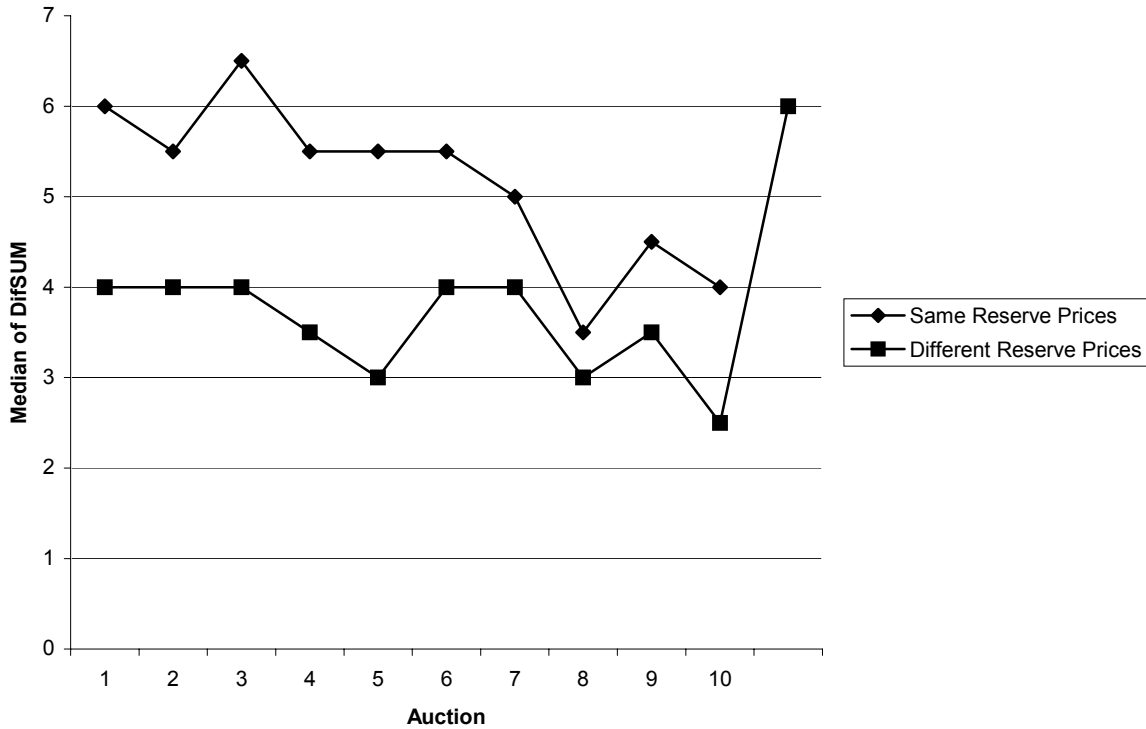

Figure 3H-2: Experiment 1 Median of Difference in Composite Bids.

Figure 3H-3 shows the minimum difference in the composite bids and reserve prices. For the "same reserve price" group at least one subject submitted a composite bid that equaled his or her reserve price. Bids submitted at reserve may imply that subjects placed a greater value on simply winning the auction relative to any earnings potential; alternatively, subjects may be searching for information on possible winning bid combinations. In contrast, the minimum bid in the "different reserve group" was consistently above the minimum composite reserve of the "same reserve group" (see Figure 3H-3). This effect could be attributed to biases in the experimental design. In Experiment 1, there was no randomization in the order subjects played the auctions. In all cases, subjects participated in the "same reserve price" auctions and then the "different reserve price" auctions. This non-randomization of experiments may have provided information to the subjects regarding the distribution of reserve prices across subjects, thereby influencing the bids upward.
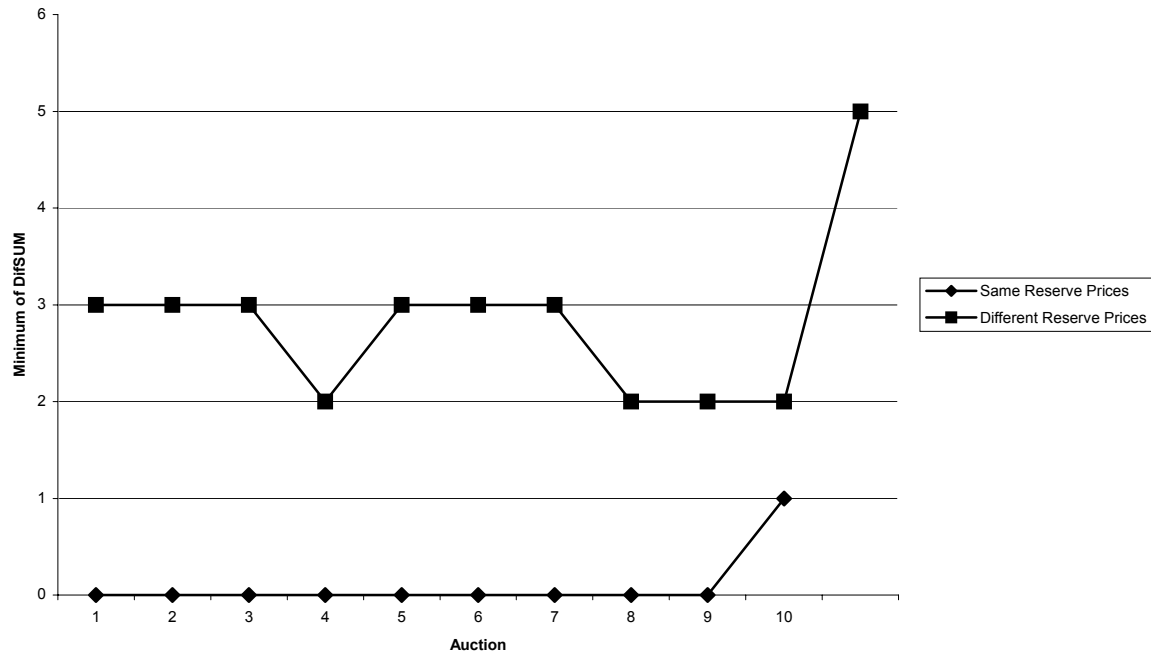
Figure 3H-3: Experiment 1 Minimum of Differences in the Composite Bid.

In Experiment 2, four groups of subjects participated in three auction sessions.[14] Each auction session consisted of 9 auctions for a total of 108 auctions completed. In each auction, two units of the hypothetical good or service were available; therefore, for each auction the two highest ranked bidders were awarded the units. In contrast to Experiment 1, subjects in Experiment 2 were assigned varying seller values; with each seller value assigned a corresponding set of reserve prices.

In Figures 3H-4 and 3H-5 we look at the differences in the median and minimum composite bids. A pattern of convergence to the composite reserve prices is observed across all four groups. In general, the minimum composite bid allowed subjects to potentially earn $1 Experimental. Interestingly, at least one subject per auction submitted his or her reserve price, inferring that some subjects may have been searching for information on winning bid combinations.

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[14] Group 1 participated in auctions 1 – 27, Group 2 participated in auctions 28 – 53, Group 3 participated in auctions 54 – 80, and Group 4 participated in auctions 81 – 108. The quadrants, denoted by vertical lines, in the Experiment 2 graphs are mapped to group specific bidding behaviors.
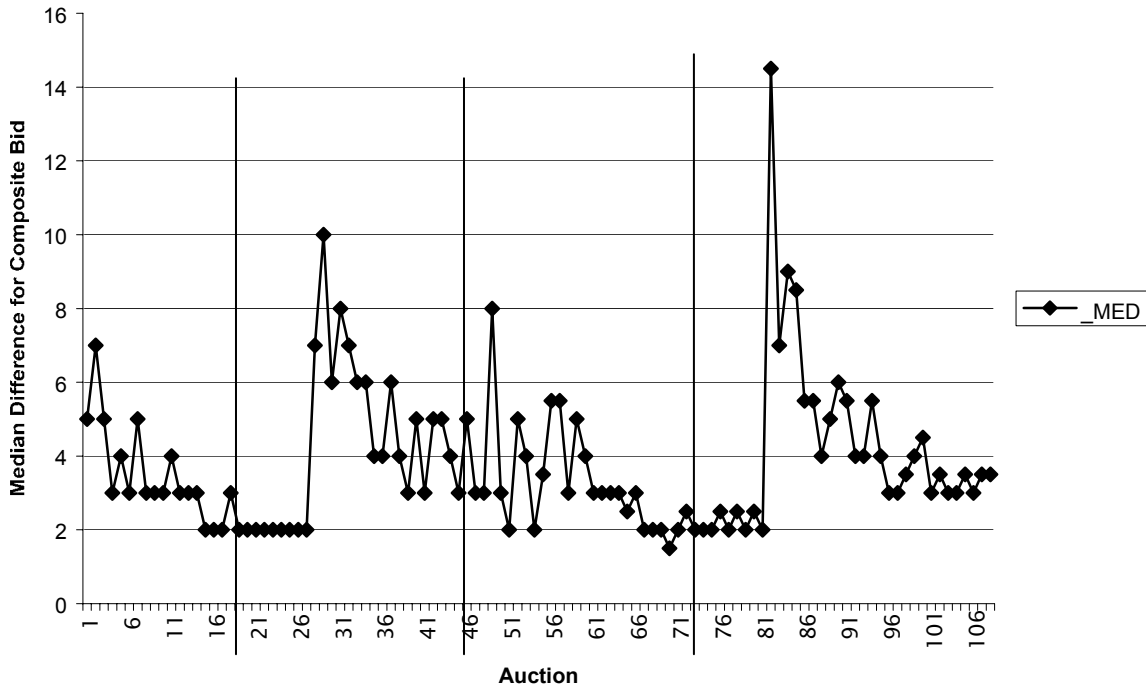
Figure 3H-4: Experiment 2 Median Difference of Composite Bid.
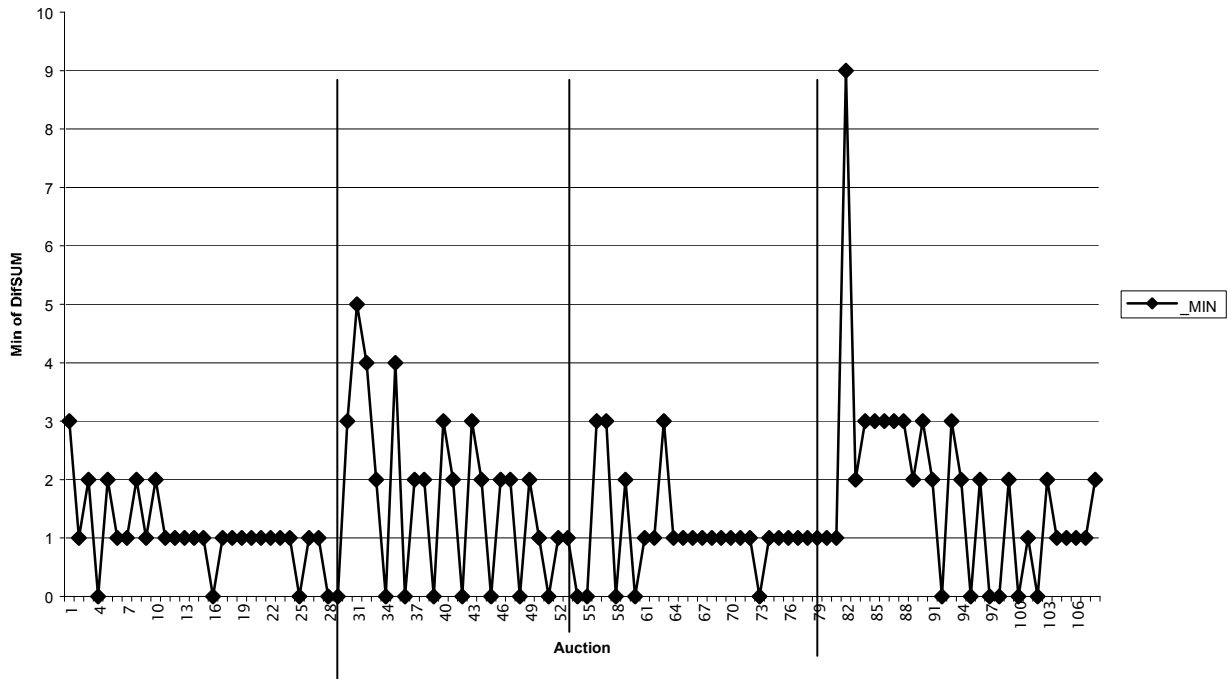
Figure 3H-5: Experiment 2 Minimum of Composite Bid Difference.

In Figures 3H-6 through 3H-11 we decompose the bidding behavior of the four groups by attributes. There appears to be a distinct demarcation between Groups 1 and 3 and Groups 2 and 4. Groups 1 and 3 have a more frequent relative tendency to bid their reserve on at least one attribute. As compared to the median bids for Groups 2 and 4, where, in general, the median was above the attribute reserve price across all attributes.
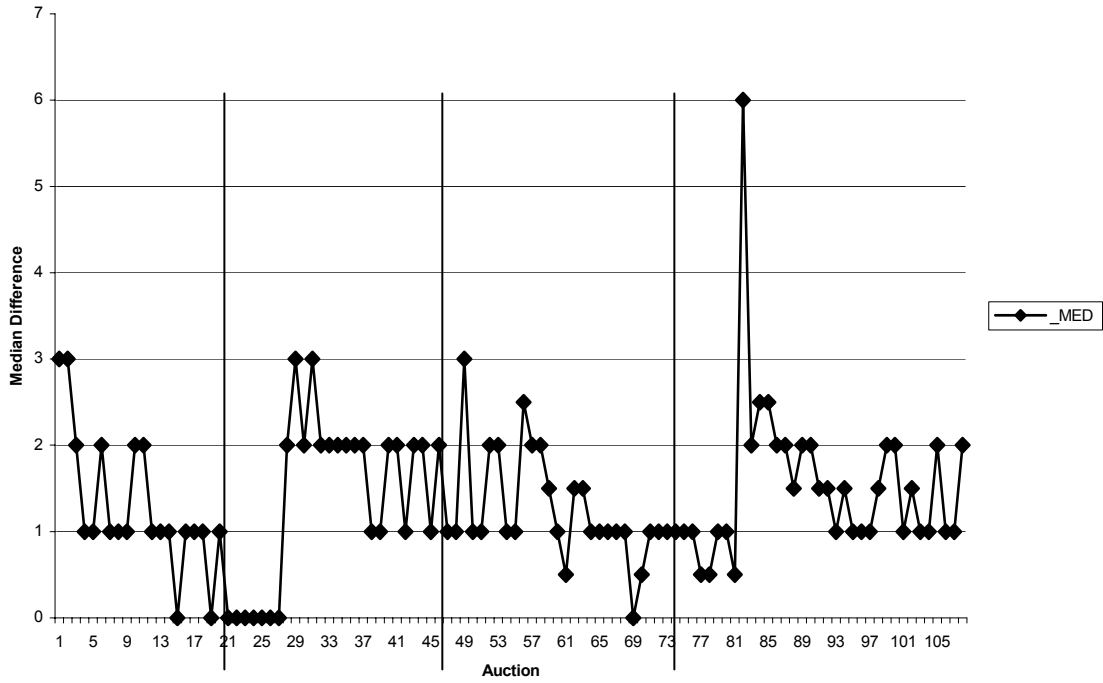
Figure 3H-6: Experiment 2 Median Difference between Reserve Price and Bid for A1.
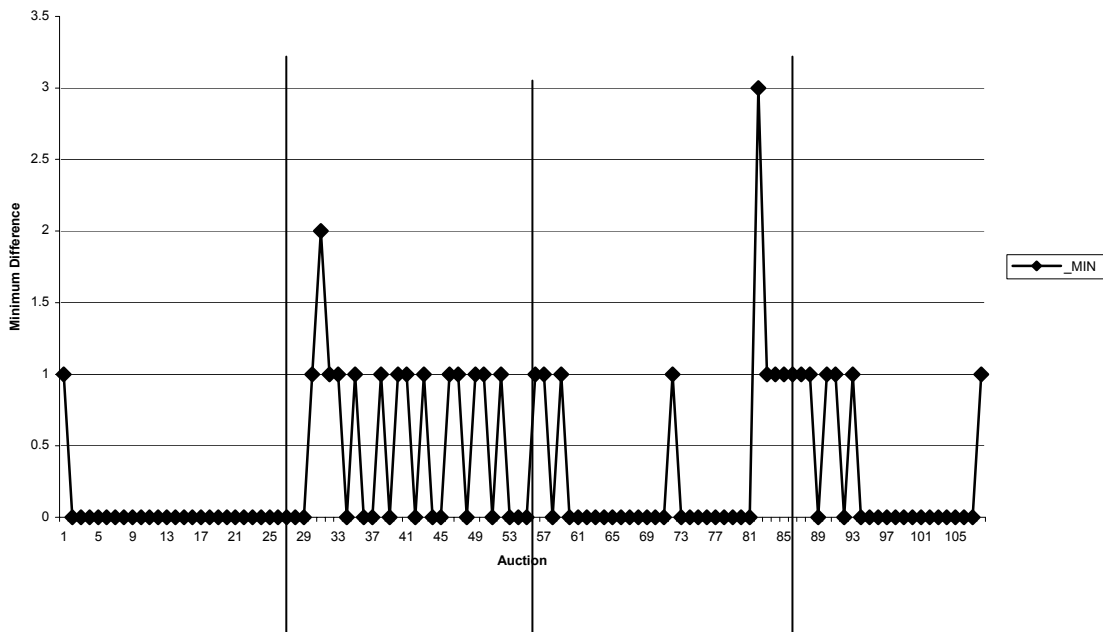
Figure 3H-7: Experiment 2 Minimum Difference between Reserve Price and Bid for A1.
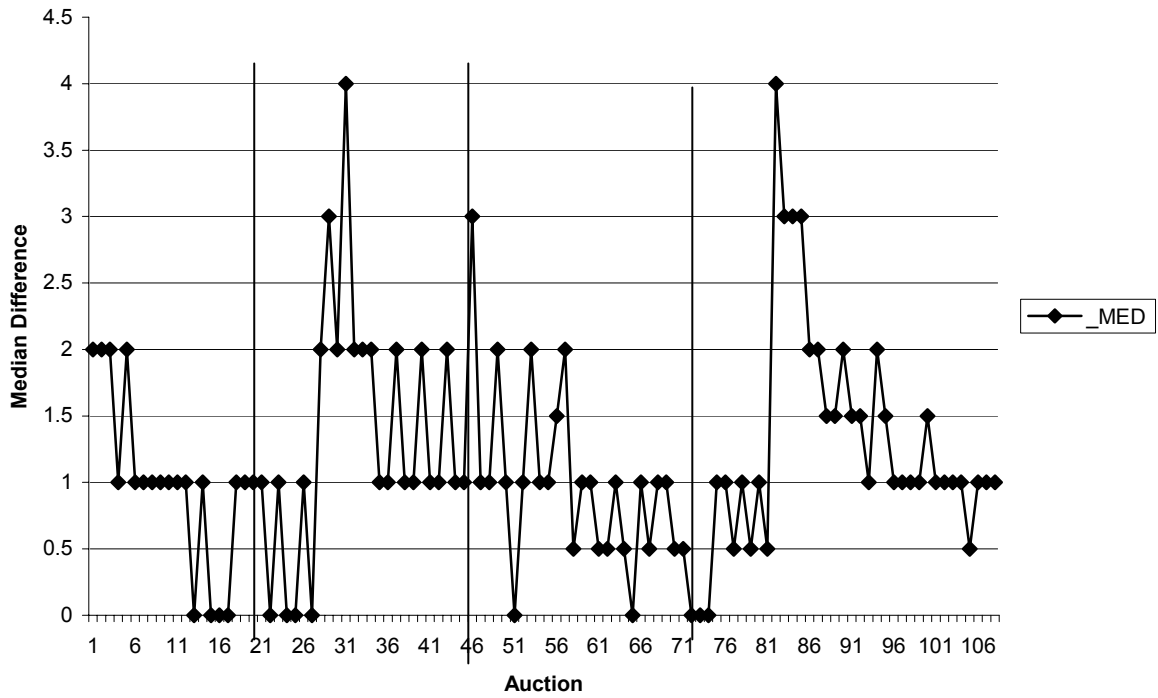
Figure 3H-8: Experiment 2 Median Difference between Reserve Price and Bid for A2.
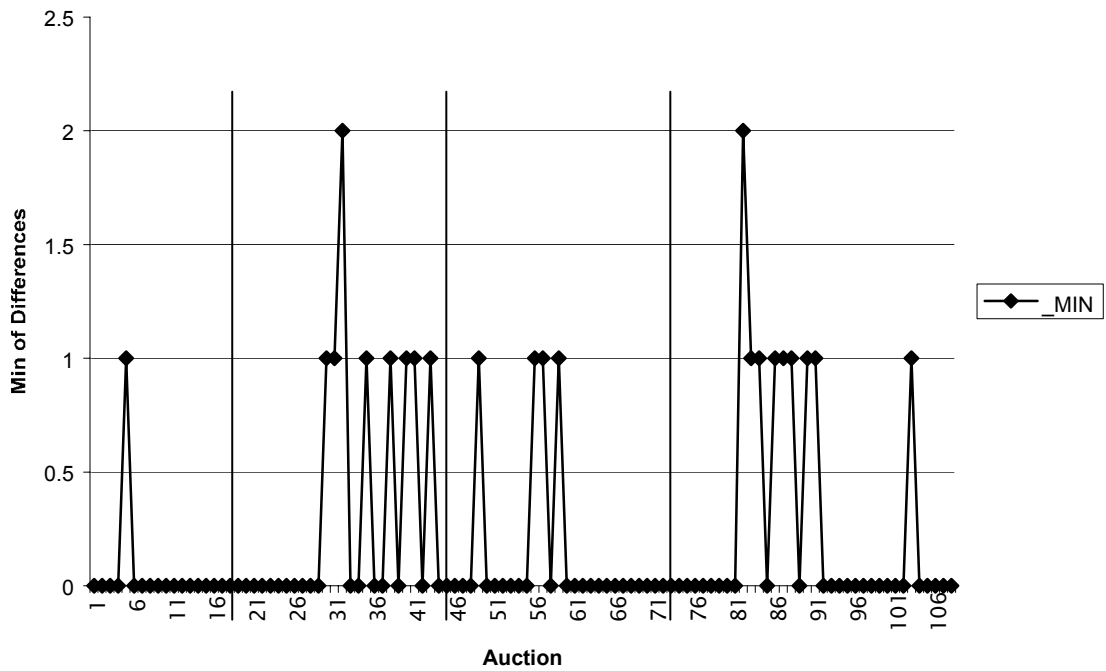
Figure 3H-9: Experiment 2 Minimum Value of Differences between Reserve Price and Bid for A2.
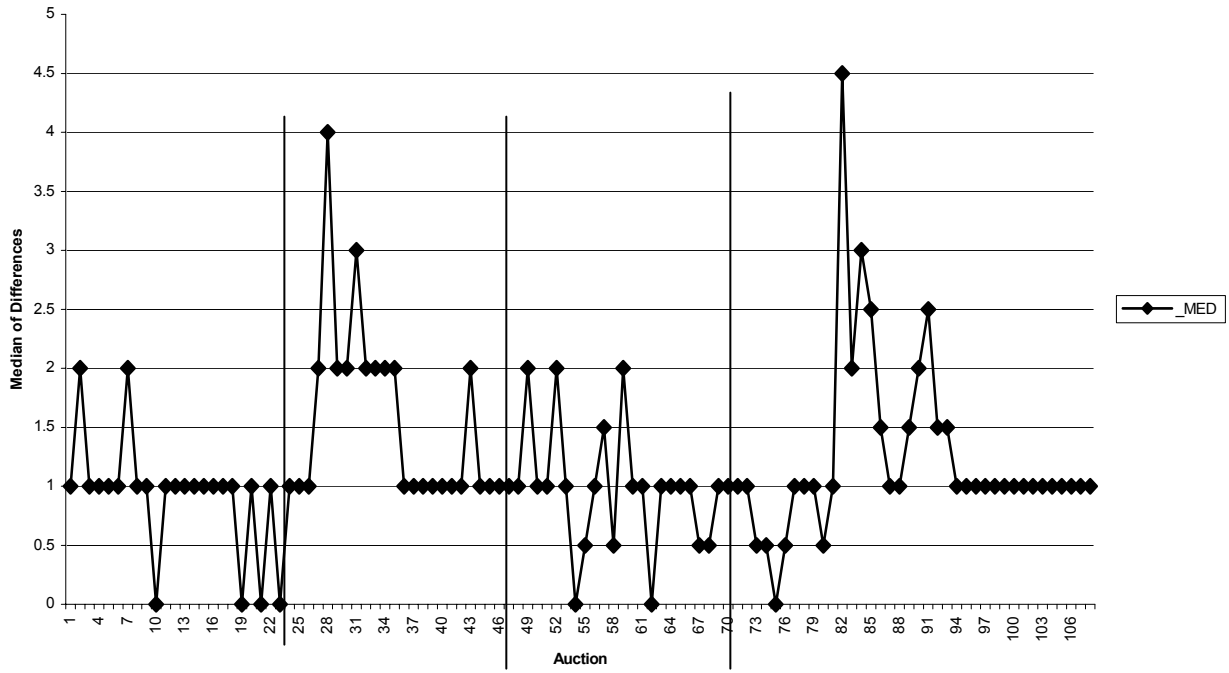
Figure 3H-10: Experiment 2 Median of Differences between Reserve Price and Bid for A3.
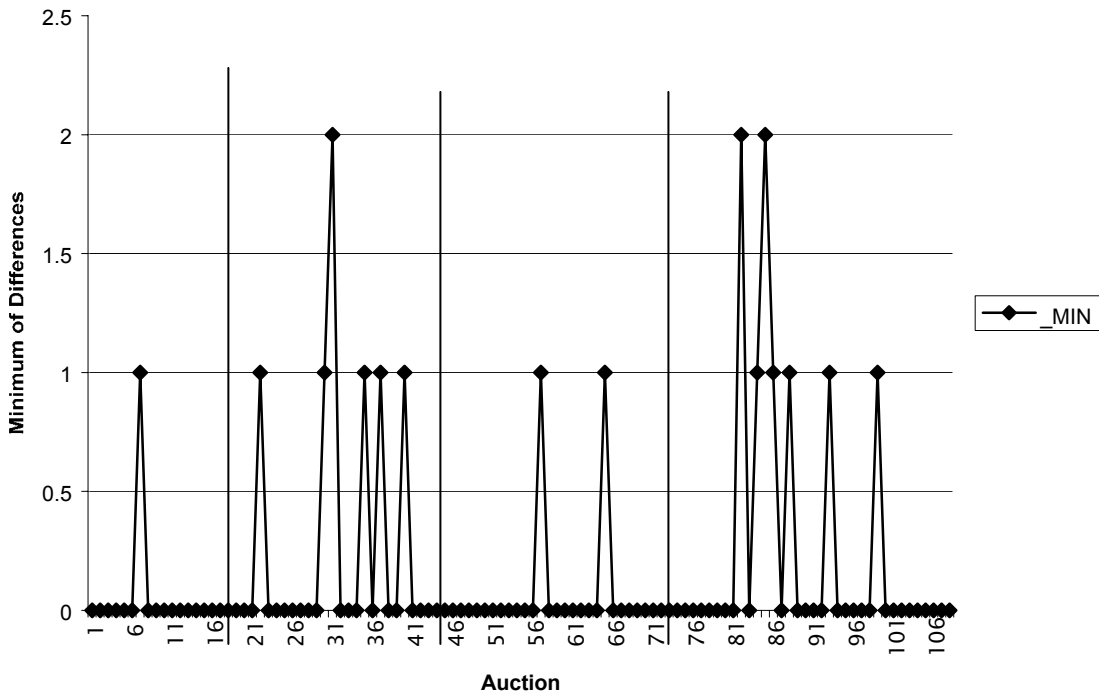
Figure 3H-11: Experiment 2 Minimum of Differences between Reserve Price and Bid for A3.

A comparison of the median bid between A1 and A2 indicates that in the initial auctions subjects were more likely to bid relatively lower on A2 than A1, however, the median bid for A3 was remained on average $1 Experimental above the subjects reserve. The subject focus on A1 can perhaps be attributed to relative weight of A1's reserve price. It may be the case that subjects perceive that attributes with higher reserve are given more weight in determining the auction winner. If subjects believe that A1 is the influencing attribute, then a winning bidding strategy of bidding relatively lower on A1 and higher on A2 and A3 may exist. In Experiments 1 and 2 subjects were not (de)briefed on possible winning bidding strategies nor did the experiments allow for experience bidders.

Submission of a bid equal to the reserve, the minimum, occurred more frequently in Groups 1 and 3. Subjects in Group 2 appeared to be less likely to submit a minimum bid on A1 and A2, but more likely to submit a minimum bid on A3. Of the three attributes, Group 2 was more likely to bid the minimum on A1 and A3, but in only one auction, auction 50, do we observe a minimum bid on A2. Overall Group 2 had higher earnings relative to the other groups. We postulate that the higher relative earnings of Group 2 and hence their bidding behavior may have resulted from a break in protocol during the training sessions.

The training sessions are designed to familiarize the subjects with the auction software and rules. For purposes of training, the buyer accepts the two highest ranked feasible bids, regardless of the bid value. In the Group 2 training session, the group as a whole submitted very high bids, with the experimenters announcing the earnings. The announcement of a high earnings may have induced the group to bid relatively more aggressively.

The combination of seller value and associated reserve price was established through successive testing of the auction parameters. The seller value-reserve price combination was set such that each seller in the auction had an equal opportunity of winning. In order to give sellers with low values an equal opportunity to win auctions the high value sellers were restricted to having higher reserve values.

The difference in composite bids to reserves by seller value for the composite bid is illustrated in Figure 3H-12. As expected, the greater the seller value the greater the difference in the composite bid, as the high value bidders attempt to exploit their high productivity. However, the relatively larger difference in the composite bid is observed only in the early auctions. Regardless of the seller value, over successive auctions the difference in composite bids begins to converge towards the reserve.
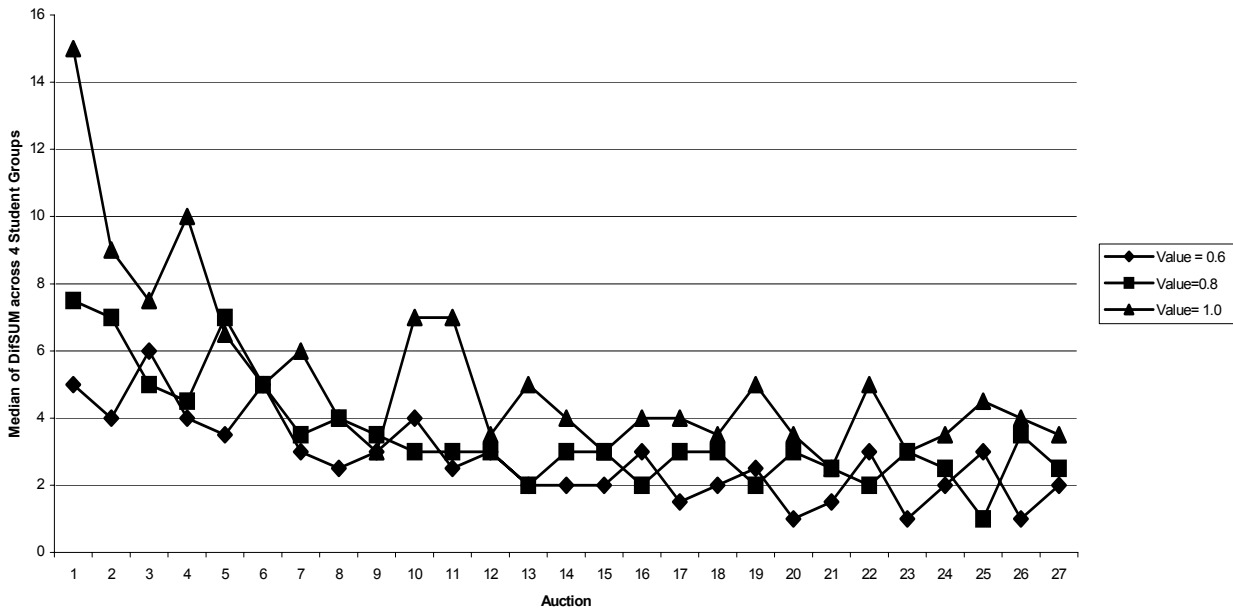
Figure 3H-12: Median of Difference of Composite Bid by Seller Value.

This research only discusses preliminary data analysis on the experiments performed to date. Two experiments, Experiments 1 and 2, were executed to observe bidding behavior in a multi-attribute auction setting over varying reserve prices and seller values. On average 7 subjects participated in each experimental session or 27 auctions. Interestingly, convergence of subject bids to individual reserve prices generally occurs within five auctions and even with as few subjects/bidders as seven.

While theoretically it can be shown that a first price open out cry auction quickly converges to subject reserve prices, we have shown that the first price sealed bid auction design addressed in this paper also quickly converges to the subject reserve. Interestingly, the rapid convergence occurs despite the fact that information used in the current auction is based on past auction winning bids. Future experimentation outlined in Annex B will provide further insight with respect to consistent performance of the auction designed discussed in this research.

3H.7   OTHER COMPLETED EXPERIMENTS

Testing of additional hypothesis, listed below, has been completed. Final results and conclusions are not discussed in this review.

1) Introduction of asymmetric information into the auction game. Asymmetric information will be introduced into the market by randomly providing one-half of the subjects with information as to the buyer's reserve, while this information is unknown to the remaining sellers. As the intent of the auction experiments is to consider Navy constraints, we propose to examine the effect of asymmetric information when bidding rounds are unlimited as compared to announcing limited bidding rounds.

2) Under the current experimental design, subjects participated in a 3-attribute auction environment. Relative efficiencies and bidding behavior may differ as a function of the attribute number. We propose to examine the effect of bidding behavior in one- and two-attribute auctions.

3) In previous experiments the number of job openings has been unknown to the subjects. Bidding behavior may be affected if the sellers know the number of job openings.

4) In earlier experiments the seller weight or the distribution of seller weights across subjects is unknown to the auction participants. We propose to examine bidding behavior when, at a minimum, the distribution of the seller weights are known.

3H.8   CAFETERIA STYLE COMPENSATION PACKAGES

The standard compensation package offered to military personnel is fixed. There has been substantial discussion on implementing a flexible style benefits package plan, whereby the Department of Defense can set the overall level of compensation and the member chooses from a menu of non-cash and cash benefits. A benefit to offering a flexible compensation package is that 'choice' promotes increased job satisfaction and thereby retention.

Critics of flexible benefits package plans cite potential high administration costs and that too many choices could lead to sub-optimal choices and hence job dissatisfaction. In a study supported by Navy Personnel Research, Studies, and Technology, results indicate that in complex multi-choice environments, individuals, on average, make optimal choices. The research on decision-making in complex environments lends support to the use of flexible compensation plans.

3H.9   DISCRETE CHOICE IN MULTI-ATTRIBUTE DECISION MAKING ENVIRONMENTS[15]

Managers and employers use an array of rewards to attract and retain quality employees. An increasingly significant component of the overall compensation is the employee's benefits package. Flexible benefits plans have the potential of increasing job satisfaction (White, 1983), thereby increasing the likelihood of retaining existing employees. Additionally, the labor supply pool from which the employer can draw may increase if prospective employees place a greater relative value on a flexible compensation package.[16] Nevertheless, in order for the flexibility to result in greater job satisfaction, employees must **perceive** the new plans as more valuable than the existing ones and this requires that employees are able to make optimal choices from the menu of benefits. Increasing the number of options and the flexibility of combinations increases the subjective value of the compensation package in so far as the employee is able to effectively decide on the optimal combination of benefits.

If the choice problem facing the employee becomes too complex, it is possible that the subjective value of the compensation package actually decreases with the number of options. Selecting an optimal benefit plan can be difficult because by nature the attributes of such plans are both multiple and discrete. These two factors

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[15] See *Managerial and Decision Economics*, 2006, for full article.

[16] While a flexible compensation scheme may decrease the employer's labor cost, it could increase other costs. Offering a large number of benefit combinations would likely impose substantial monitoring and administrative costs on the employer. Further, employees may attribute very little added value beyond the *kth* option (Bucci and Grant 1995). The employer, therefore, has an incentive to offer just enough options and associated attributes such that the marginal cost of offering an additional option is just equal to its marginal benefit.

complicate the employee's choice and may push the limits of his or her cognitive abilities.[17] The outcome may be a high degree of dissatisfaction with the plan, leading to reduced job satisfaction and job tenure; the benefit package has not been successful. In this paper we report on an experimental investigation of individual decision-making over complex (multiple and discrete) options broadly designed on the choice of an employment benefits compensation packages. Our research is motivated by recruitment and retention issues facing managers as they compete in an increasingly sophisticated labor market.[18]

Many decision scientists argue that individuals have computational or cognitive limits, and that these limits become more critical when decisions involve difficult choices. Individuals may cope by adopting simplifying techniques, known as heuristics. Following Simon's (1955) seminal work, different schools of thought have emerged ranging from the belief that human decision making is intrinsically prone to errors to the belief that it is fundamentally efficient.[19] Three strands of research address decision-making in complex settings (see von Winterfeldt and Edwards, 1986). The first investigates individual assignment of values for commodities with multiple attributes. This strand is largely normative, as the researcher constructs a decision aid to facilitate the "correct" decision. The second strand studies whether individuals are capable of making payoff-maximizing decisions in the presence of multiple attributes. The third looks at whether or not individuals are able to consistently make payoff-maximizing decisions with multidimensional decisions and meeting multiple constraints. The second and third strands are more positive as they assess the ability of individuals from observations of unaided behavior.

Our research focuses on the second issue. The experimental literature in economics and psychology has paid little attention to problems of complexity arising from choices over discrete, multi-attribute objects (McKinney and van Huyck, 2000). To make optimal choices over multi-attribute and discrete alternatives, an individual must, in effect, solve an integer-programming problem. Using data generated through laboratory experiments, we examine the choices of individuals when faced with sets of discrete multi-attribute goods. We vary the relationship between the relative values of the attributes, and the value of an outside (simple) option, in effect varying both the complexity and the potential value of the options package. The main results are that (a) individual subjects respond to the relative trade-off between the attributes and (b) the majority of subjects adopt heuristics that approximate the optimal solution to the programming problem. Further, individuals appear to value the right to make choices since our subjects rarely choose the fixed payoff option,

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[17] These two factors also complicate the employer's decision on what combinations to offer to the employee. Here, we focus on the employee's decision-making task.

[18] These are especially significant issues for the United States Department of Defense (DOD) and the U.S. Navy in particular. During FY97, the Navy encountered, for the first time in its history, problems meeting recruitment and retention goals (in FY03 this was less of a problem due, in part to worsened economic conditions). To address these issues, the Navy uses pecuniary incentives, which include numerous enlistment and re-enlistment incentives. But the overall compensation package includes non-pecuniary benefits such as dental and health care. Introducing flexible benefit plans may help solve staffing issues, as it would allow employees to tailor the plan according to their own preferences. Under such a scheme, the employer (Navy) chooses the level of compensation and the employee (a sailor) chooses the mix of salary and benefit options in the compensation package. Primarily because of institutional constraints, the Navy has typically ignored this option. The existing benefits package provided to military personnel by the DOD is standardized and relatively inflexible. Currently DOD is prohibited from offering non-standard packages to specific groups.

[19] The literature expressing the view that human decision makers are prone to errors has received recent attention, with reviews in Camerer (1995) and Starmer (2000). Prospect Theory, introduced by Kahneman and Tversky (1979), and theory of Framing Effects (Kahneman and Tversky, 1984), are particularly popular among behavioral economists and psychologists as alternatives to the neo-classical optimization approach. An alternative decision theory view, that human heuristic decision-making is fundamentally efficient, is based on a concept of ecological rationality, which is promoted by Gigerenzer (1996) and Gigerenzer et al. (1999). According to this view, many decision heuristics have evolved through time, affected by the successes and failures of individual decision makers.

with known payoff and low decision cost, even when the fixed payoff is up to 80% of the maximum possible under the complex decision task. (The 80% maximum possible under the fixed option refers to the reward a subject would receive prior to the "fixed deduction." If you take into consideration the fixed deduction then in fact the reward to choosing the fixed payoff option is significantly less than 80% of the reward to search – may want to keep this in mind).

3H.10   THE DECISION MAKING TASK

In this section we present our decision-making task and discuss how it represents a stylized version of an optional benefits package. In this experiment, the subject earns money by either playing a "cell selection" game or by choosing a fixed payoff in lieu the game. In the cell selection game, the subject's choice set is discrete and represented by an $n \times m$ matrix. (Just a thought using the notation n x m implies a rectangular matrix, when in fact in all cases (test cases and game matrices) we used square matrices, may want to say n x n or m x m to indicate the use of a square matrix.) Each cell of the matrix has three attributes: a **cell payoff**, a **cell weight** and a **cell value**. The cell weight and cell payoff are fixed, at the same level for each cell in the matrix, while the cell value is different for each cell. When a subject selects a cell, her[20] reward is the cell payoff plus the product of the cell weight and the cell value. Thus the subject's reward from selecting k cells is the sum of the rewards from those cells:

$$\text{Reward from selecting } k \text{ cells} = \sum_{i=1}^{k} [\text{Cell Payoff} + (\text{Cell Weight} \times \text{Cell Value}_i)] \qquad (1a)$$

$$= k \times \text{Cell Payoff} + [\text{Cell Weight} \times \sum_{i=1}^{k} \text{Cell Value}_i]. \qquad (1b)$$

Additionally, the subject has a **value limit** that constrains her choices. She can continue to select cells as long as the sum of the cell payoffs from the cells she has selected does not exceed her value limit. Specifically, if the subject selects k cells, then her selections must satisfy:

$$\sum_{i=1}^{k} \text{Cell Value}_i \leq \text{Value Limit} \qquad (2)$$

Thus the decision task facing a profit-maximizing subject is a constrained optimization problem where the objective function is equation (1a) or (1b) and the constraint is equation (2). In the context of neo-classical consumer theory, the selected cells are analogous to the market basket, and the value limit is analogous to the budget constraint – but the goods are discrete, not continuous, and so optimization at the margin is not strictly available. In effect, the subject must solve the "knapsack problem" (Greenberg, 1971). While this type of problem may be intuitively simple, the process of identifying the optimal solution can be extraordinarily complex, requiring an integer -programming algorithm.[21]

Figure 3H-13 shows an example of the computerized interface viewed by our experimental subjects. All of the decision matrices we presented to subjects were selected from the set of problems where integer

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[20]   For simplicity, we refer to a generic subject with a female pronoun. Both male and female subjects participated in the experiment.

[21]   The experimenter interface of our computer program includes a choice of algorithms for calculating the optimal solution; we used the branch-and-bound method (see Garfinkel and Nemhauser, 1972 or Parker and Rardin, 1988). We calibrated the program's calculations with a separate exhaustive search algorithm.

r-programming algorithms calculate an exact optimum. The box labeled "You could earn this or more" in the upper middle of Figure 3H-13 identifies this optimum; the "or more" designation is for the more generic cases where integer-programming algorithms provide only an approximate solution. We explicitly told subjects that the number shown in the box was the maximum they could earn (in experimental dollars) for the given matrix. One of our research questions is what (if any) heuristics subjects would utilize. We determined **a priori** that an essential piece of information they needed was the maximum possible earnings. Additionally, subjects need this information to decide whether or not to opt for the fixed payoff, to which we now turn.

Figure 3H-13: Subject Screen Display.

As an alternative to selecting cells, the subject may choose the **fixed payoff** shown in the upper right hand corner of Figure 3H-13. That is, instead of "playing the game" where she is rewarded for selecting cells, the subject can "opt out" and receive the fixed payoff. So as to have a benchmark by which to decide whether or not to take a given fixed payoff, the maximum possible earnings from selecting cells is displayed on the subject's computerized interface.

Our decision-making task is designed to loosely represent the selection of components of a flexible benefits package. The matrix represents the benefits options offered by the employer. Each cell constitutes a component of the package, such as medical, dental and childcare policies, and the combination of cells that the subject selects is the package chosen by an employee. The value of a selected compensation package consists of two parts. First, the cell value is the dollar value of coverage for each policy while the cell weight determines the economic discount (or premium) at which the employee purchases that coverage. For example, in this experiment, we use a cell weight of 1.2. In order to receive a reward of 100 from selecting a cell (ignoring for the moment the cell payoff), the subject need only chose a cell with a cell payoff of 83. Alternatively, $83 of expenditure translates into $100 of benefits coverage for the employee. Second, in addition to the value of the coverage, employees place values on coverage, independent of the amount, and this is represented with the cell

payoff. The total reward in equation (1a) represents the value that the employee places on the package she has selected. The value limit represents the total amount of coverage that the employer is willing to offer the employee; it is the employee's benefit "budget." Finally, the fixed payment option represents the monetary value the employee places on an alternative non-flexible benefits package.

3H.11   HEURISTICS

Given the computational complexity of the optimal solution, we expected subjects to develop heuristics or "rules of thumb" to simplify the decision-making task. The effectiveness of a particular heuristic can be evaluated relative to the optimal solution as well as relative to other heuristics.

Here we identify three heuristics that stand out because of their (apparent) simplicity. These heuristics assume that a subject chooses to focus on a range of cell values: high (H), medium (M) or low (L). Simple versions of these heuristics often leave a substantial amount of unspent budget (i.e., the sum of the selected cells is substantially less that the value limit). Thus we expected subjects to use slightly sophisticated versions. As described in 3H.13 below, our cell values range from a minimum of 100 and a maximum of 1000:

- **Heuristic H.** Select cells with values in the 700 – 1000 range that (nearly) exhaust the value limit, and if the value limit is not reached, select one or two cells with low cell values to (nearly) reach the value limit.

- **Heuristic M.** Select cells with cell values in the 350 – 700 range that (nearly) exhaust the value limit, and if the value limit is not reached, select cells with high or low cell values to (nearly) reach the value limit.

- **Heuristic L.** Select cells with cell values in the 100 – 350 range that (nearly) exhaust the value limit, and if the value limit is not reached, select one or two cells with higher cell values to (nearly) reach the value limit.

We conducted "simulations" utilizing the actual matrices used in the experiment to obtain number-of-cells-selected and earnings estimations for each of the above heuristics. [22] Based on these simulations, heuristic H results in the selection of two or three cells, heuristic M results in the selection of four or five, and heuristic L results in the selection of six or more (most often seven or eight cells). To the extent that heuristic H involves selecting the fewest cells, it has the lowest decision cost of the three. Heuristic L involves selecting the greatest number of cells, so arguably it has the highest decision cost. While heuristic M focuses on a specific range, it has equal emphasis high and low values outside the range, so in that sense it is the most flexible of the three and has the intermediate decision cost.

Because we are interested in what heuristics subjects might employ when facing a computationally difficult problem, we utilize decision matrices that have several cells in the optimal solution. The subjects in this experiment view a total of thirty-eight matrices (see 3H.13 below), and thirty-six have optimal solutions comprised of six or more cells. Thus the experiment may appear biased towards heuristic L, as that heuristic selects six or more cells – but this is by design, as we want to see if subjects can identify a useful (i.e., profitable) heuristic in a complex setting. While heuristic L has the best **a priori** chance of being the

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[22] We conducted our simulations using a spreadsheet with cell values ranked in one column from high to low (versus the randomly populated matrix 5 x 5 matrix viewed by subjects) for each of the thirty-eight decision matrices. This alternative format makes it easier to identify the most profitable choice(s) under any of the three heuristics, and our analysis did not face a time constraint, as did our subjects. Our number-of-cells-selected estimations and earnings estimations are meant as benchmarks for comparison, rather than behavioral predictions **per se**.

most profitable because of its close alliance with the optimal solution, it has the highest decision cost. Our simulations suggest that heuristic H, with the lowest decision cost, should yield of over 90% of the maximum possible earnings and heuristic M should yield around 95%. Thus it would not be surprising to see subjects adopt these less onerous rules.[23]

3H.12 THE EXPERIMENT

3H.12.1 Design

The experiment is a 2 × 2 design with the cell payoff and fixed payoff option as the treatment variables. The cell payoff is either 20 or 100. Holding the cell weight constant, the higher the cell payoff the less the relative contribution of the cell value to the reward from selecting a given cell (see equation (1a) above). The fixed payoff is either 80% or 50% of the maximum possible reward from selecting cells; both the maximum payoff and the fixed payoff are displayed to the subject (see Figure 3H-13 above). The lower the fixed payment percentage, the higher the opportunity cost of foregoing the option to select cells.

The experimental treatments allow us to examine two important aspects of this decision-making task. First, we can examine how the relative importance of the cell value versus the cell payoff (holding cell weight constant) affects the subject's choice of cells. This corresponds to an employee's choice between having a particular benefit in the package (a cell's reward is determined primarily by the cell payoff) versus the amount of the coverage (a cell's reward is determined primarily by the cell value).

Second, we can examine how variations in the fixed payoff affect the subject's decision to select cells versus taking the fixed payoff. Our cell selection game represents a flexible package and the fixed payoff represents a fixed package. Fixed benefits are generally less than those under a flexible package, (if the statement 'fixed benefits are generally less than those under a flexible package' refers to the experimental design then fine. However, if this statement is meant to refer to real world benefits plans, I am not certain that one could argue that fixed plans are generally less than flexible plans at least to the employee in terms of real money. Flexible plans are offered because either (1) the employer can receive some tax savings (I believe employer taxes/federal/state contributions are greater on wages relative to say medical benefits) if employees on average chose more medical vice salary in the their compensation packages or the employer saves on recruiting costs if flex plans are a retention tool and (2) from the employees point of view the monetary value of the two types of plans may be the same, but the employees combined explicit and implicit value of a flex plan may be greater as he derives utility from choice. Bottom line is not sure you can make an absolute statement that money value of fixed plan is less than money value of flex plans, but a flexible package requires that the beneficiary incur the subjective cost of identifying the preferred package. If the subjective cost is high,

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[23] A fourth but somewhat complicated heuristic k' is based on information displayed on the subject interface (see Figure 1). If a subject can infer equation (1b) from the version of equation (1a) given in the instructions, she can substitute the maximum possible earnings for "the earnings from selecting k cells" in (1b), treat equation (2) as an equality and substitute the value limit for the sum of the cell payoffs in (1b), and then solve for k to get:

$$k' = \frac{\text{Optimal}}{\text{number of}} = \frac{\text{Max Possible Earnings} - (\text{Cell Weight} \times \text{Value Limit})}{\text{Cell Payoff}}$$
$$\text{cells to select}$$

This k' calculation provides an excellent approximate (and when the optimal solution exhausts the value limit, an exact) count of the number of cells in the optimal solution. In our simulations, heuristics L and k' result in the same number of cells being selected in 35 of the 38 matrices. Given its complexity, we did not expect many subjects to use heuristic k'. Nonetheless, our experiment is not designed to distinguish between heuristics L and k'.

an employee might choose the fixed package with lower total benefit if the difference between benefits is relatively small. In our experiment, the subject incurs her subjective decision-making cost in the cell selection game; if that cost is high, she may opt for the fixed payoff.

Tables 3H-9 and 3H-10 report our experimental parameters. To avoid confusion with the cells of the game matrix, the four cells of the experimental design are referred to as "sessions" S1, S2, S3, and S4.[24] The subject completes all four sessions in one trip to the laboratory (see 3H-12B below). Table 3H-9 shows those parameters that are varied across sessions, and Table 3H-10 shows those that are held constant across sessions. As described below, various considerations resulted in our choice of experimental parameters. Table 3H-9 shows that session S1 has a cell payoff of 20 and fixed payoff percentage of 80%, S2 has 100 and 80%, S3 has 20 and 50%, and S4 has 100 and 50%, respectively. The fixed payoff is a percentage of the maximum possible earnings from selecting cells; the subject sees the amount of the fixed payoff each round, but is otherwise not informed as to how that amount is determined.

Table 3H-9: Experimental Parameters Varied across Sessions

	Session			
Parameter	S1	S2	S3	S4
Cell Payoff	20	100	20	100
Fixed Payoff Percentage	80%	80%	50%	50%
Number of Rounds	9	8	10	11
Fixed Deduction (US$)	$17.00	$18.00	$20.00	$27.00

Table 3H-10: Experimental Parameters Constant across Sessions

	Cell Values						
Matrix Dimensions	Lower Bound	Upper Bound	Cell Weight	Value Limit	Revocable Moves?	Seconds per Round	Conversion Rate
5 × 5	100	1000	1.2	2000	Yes	240	0.001

Each session is a series of decision-making "rounds" where the given cell payoff and fixed payoff percentage applies to each round. The subject sees a different decision matrix and fixed payoff each round. For example, session S1 has eight rounds, so the subject sequentially views eight different decision matrices, each with a cell payoff of 20 and a fixed payoff that is 80% of the maximum possible earnings from the selecting cells in the given matrix. The number of rounds per session is varied across sessions to control for "end of experiment" and/or "end of sequence" effects (see Davis and Holt, 1998).

Each subject completes all four sessions (i.e., thirty-eight rounds). As a control for order effects, we use four different randomly determined sequences. A total of 80 subjects participated in the experiment – 21 subjects

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[24] In the experiment, subjects are told the session's labels are S17, S18, S19, and S20, respectively.

received the sequence S4-S1-S2-S3, 20 received the sequenced S1-S3-S4-S2, 19 received the sequence S3-S2-S1-S4 and 20 receive the sequence S2- S4-S3-S1.[25]

Table 3H-9 also shows a "fixed deduction" that varies with each session. At the end of each session, a deduction is subtracted from the subject's earnings. This deduction is explained to the subject as part of the instructions, and the amount of the deduction is revealed to the subject as she begins each session. This deduction serves to maintain salient incentives while at the same time keeping overall earnings within the research budget.[26]

Table 3H-10 shows the parameters that are identical in each of the four sessions. All decision matrices are square 5×5 matrices. This dimensionality has a sufficiently rich optimal solution while making the comparison of individual cells relatively easy for the subject. Both the combination and location of cells that comprise the optimal solution vary considerably each round.[27]

Each of the twenty-five cells of a given matrix is randomly populated with a cell value from the range 100 to 1000 (inclusive). We chose this range because the variety of choices is sufficiently rich while the computational difficulty is significant but not overwhelming. Our expectation was that the subject could develop a useful but non-trivial decision rule (possibly a heuristic) for deciding which cells to select.

The cell weight is fixed at 1.2 in all rounds of all sessions. The value limit is also constant across all rounds of all four sessions. In any given round, the subject may continue to select cells as long as the sum of the cell values that have been selected does not exceed 2000. We chose these values in conjunction with, and for similar reasons as, the matrix size and cell value range.

We allow subjects to make revocable choices when selecting cells (i.e., if a subject selects a cell by clicking on it with her mouse, and she can "deselect" the cell by clicking it a second time). She can deselect a cell at any time, even after selecting other cells, and she can select and deselect cells as many times as she wishes (provided time has not expired). One of our research questions is what (if any) decision rules are used by subjects, and we expected that at least some subjects would experiment before settling on a decision rule. Thus we included this deselect feature to increase the chance of identifying systematic strategies in the subjects' final choices of cells. The computerized interface allows the experimenter to choose whether or not the subject's cell selection decisions are revocable.

Each round lasts up to four minutes (240 seconds). When a subject is finished making decisions in a round, she mouse-clicks either the "accept fixed payoff" button to take the fixed payoff, or an "end round" button to indicate that she is done selecting cells. If she does not click one of these two buttons before time expires,

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[25] We intended to randomly assign twenty subjects to each sequence. After completing the experiment, we realized that one subject was inadvertently given sequence S4-S1-S2-S3 instead of S3-S2-S1-S4.

[26] Subjects typically earned $10 – $20 for participation in a two-hour session. Without the fixed deduction, a subject would earn around $60 simply by choosing the fixed payoff each round. Although she could earn an additional $5 – $10 selecting cells, she might very well opt for fixed payoff because that option has both a substantially lower time cost and substantially lower decision cost. Other methods of achieving the desired earnings levels would have involved modifying parameter values in ways that would have reduced incentives For example, small cell weights and cell payoffs may lead a subject to interpret equation (1a) as essentially zero, irrespective of the cell values.

[27] Based on pre-testing, 4×4 or smaller matrices often have trivial or easily identifiable solutions, and 6×6 or larger matrices have excessively burdensome solutions so that subjects almost always opt for the fixed payoff.

the subject's reward for that round is zero.[28] This time limit does not appear to be binding – only 23 (0.8%) of the 3040 total rounds have a zero payoff (i.e., end before one of the two buttons is clicked).

The subject's rewards are expressed in "experimental dollars" or E$, which are converted into U.S. dollars or US$ at the rate of E$1 = US$0.001. The computer interface automatically converts the subject's experimental rewards into U.S. currency at the end of each session. The subject then records her US$ earnings from the screen onto a paper record sheet, and then subtracts the appropriate fixed deduction. We chose this conversion rate in conjunction with our other parameters, so as to yield an expected payout in the $15 – $20 (US) range per subject for participation in a (roughly) two-hour period. (See footnote #26 – In the footnote you state 'subjects typically earned $10 – $20 for a two hour session. In the above sentence you use the word 'expected' payout. A question might arise as to what explains the difference between expected payout and actual payout.)

3H.12.2   Procedure

We conducted the experiment at the Mississippi Experimental Research Laboratory (MERLab) at the University of Mississippi and at the Business, Economics, Accounting and Marketing Laboratory (BeamLab) at the University of South Carolina. The computerized application is comprised of an experimenter interface and a subject interface, which includes computerized instructions. The subjects were recruited from undergraduate business courses at the respective universities. Participation by the subject involved two visits to the laboratory, called Part I and Part II. Part I is instructional training that lasts approximately one-and-a-half hours. Part II is the data-collection period, and lasts approximately two hours. The subject was paid her earnings from both parts upon completion of Part II.[29] This included a $6 participation fee for each part.

The training in Part I familiarized (or familiarizes?) the subject with the computerized interface, record keeping, and the sequence of events (multiple sessions, fixed deductions, etc.). Upon arrival, the subject is assigned a subject number, given a blank earnings record sheet, and seated in a private computer carrel. She completes the computerized instructions and two practice rounds with 2×2 matrices. An experimenter then visits her carrel, and she is prompted for questions and/or clarification regarding the task. After any discussion, the subject is presented with some brief printed instructions and a consent form, and given a few moments to review that material. After she signs the consent form, an experimenter writes the first session number and corresponding fixed deduction on her printed record sheet. While the experimenter watches, the subject restarts the program and enters the session and subject number. The subject then proceeds through all rounds of the given session. After completing the session, the subject raises her hand, receives another session number and fixed deduction, and restarts the program while the experimenter watches. This process continues until all Part I sessions are completed. After the final Part I session, the subject totals her earnings on the record sheet, signs up for Part II (a least one day later, and no more than seven), and is excused.

The decisions from Part II are used in the data analysis. Upon returning for Part II, the subject is again seated at a private computer carrel and given her record sheet from Part I (she uses the same subject number both parts). The Parts I and II the procedures are identical[30], but the Part II parameters and decision matrices are different from those used in Part I. Upon completion of the final session of Part II, the subject is privately paid

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[28] The time remaining in the round is shown on the subject's screen (see Figure 3H-13). Also, the "zero payoff if no decision is made" was reiterated in the subjects' instructions.

[29] This payment schedule is explicitly explained to subjects when they are recruited.

[30] Subjects were explicitly recruited for participation in two parts, with each part on a separate day. The consent form is signed prior to participation in Part I. Prior to participation in Part II, each subject is reminded that she signed the consent form during her previous visit, and offered an opportunity to review the form at her request.

her cash earnings and excused. In our experiment, cash earnings in Part I average $14.35, with a low of about $4 and a high of about $25. In Part II, the average is $20.67, with a low of about $3 and a high of about $28 (exclusive of the participation fees). (This statement seems to be contradictory to footnote #26 where we state that subjects earned $10 – $20 for participation in a 2-hour session).

3H.13   RESULTS

3H.13.1   V.A. Summary

Our eighty subjects completed a total of 3040 rounds in Part II of the experiment. Table 3H-11 reports summary data on the round-level outcomes, both overall and by individual session. In those rounds where the subjects choose the cell selection game, earnings are calculated as a percentage of the maximum possible reward for the respective round. The table shows the percent of rounds where subjects chose the fixed payoff and the percent of rounds that fall into a given earnings category. Rounds where a subject "times out" (i.e., fails to click either the "choose the fixed payoff" button or the "end round" button before time expires) is categorized as 0% payoff. We make four general observations based on the data shown in Table 3H-11:

- First, subjects predominantly choose to play the cell selection game, as the fixed payoff option is chosen in only 4% of the rounds.[31] However, the fixed payoff is chosen significantly more often (7% v. 1% of the time) in sessions S1 and S2 where the fixed payoff is 80% of the maximum possible earnings, than sessions S3 and S4 where the fixed payoff percentage is 50%. This is consistent with a decision-cost model of behavior, and with our expectations, although we are somewhat surprised it only occurred in 7% of the rounds where the fixed payoff percentage is 80%. (Why would you be surprised by '7%'? This statement implies that you would expect to observe subjects' frequency of fixed payoff to be higher. Do you need to justify why you were 'surprised' at only 7%?)

- Second, the 240-second time limit is not binding, as subjects "time out" in only 1% of the rounds, and the occurrences are roughly evenly dispersed across sessions.[32]

- Third, when subjects choose to play the game, they do quite well. In almost half (48%) of the rounds earnings are in the 97 – 99% range, and in 85% of the rounds earnings are 90% or more of the maximum possible. Inspection of the individual data reveals that low earnings are confined to a subset of subjects.[33]

- Fourth, although subjects consistently earn over 90% of the maximum possible, there are differences across the cell value treatment. In sessions S1 and S3 where the cell payoff is 20, subjects earn

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[31] Inspection of the individual data reveals that the fixed payoff choice is confined to less than a third of the subjects (24/80). By session, the fixed payoff was chosen 47 times in S1 by ten different subjects, 46 times in S2 by eighteen different subjects, 10 times in S3 by six different subjects, and 4 times in S4 by three different subjects.

[32] Inspection of the data reveals that twenty different subjects time out across all four sessions. Three of those subjects time out twice, two of them in two separate sessions and one of them twice in the same session (S2). By session, time outs occur five times in S1, seven times in S2 (by six different subjects), four times in S3 and seven times in S4. The maximum number of times this occurs for any one subject is twice; there are three such instances and only one of those is occurs in the same session (7407, S3). Other summary data on the zero payoffs: Five of the zero payoffs are in S1, seven in S2, four in S3 and seven in S4. Thus 61% (14/23) occur when the cell payoff is 100. Fifty-seven percent (13/23) occur in either rounds 1, 2 or 3. By random-order sequence, four zero payoffs occur in the first random sequence, five in the second sequence, six in the third, and eight in the fourth.

[33] The 339 rounds with earnings less than 90% are confined to less than half of the subjects (38/80), and 208 of those rounds are confined to 18% (14/80) of the subjects. The 41 rounds with earnings below 80% are confined to six subjects, and two subjects account for 32 of those 41 rounds.

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97 – 99% of the maximum possible in 60% and 69% of the rounds, respectively, and they rarely earn less that 90% of the maximum (2% of the time in each session). This contrasts with sessions S2 and S4 where the cell payoff is 100. There, subjects earn in the 97 – 99% range in only 31% and 30% of the rounds, respectively, and earn less than 90% in 18% and 24% of the rounds, respectively. In general, when the cell payoff is 20 earnings tend to be higher and less disperse than when the cell payoff is 100.[34] A relatively low cell payoff implies that the cell value is more important in determining the reward from selecting a particular cell. Perhaps this makes subjects concentrate relatively more on the cell value, and thus more closely approximate the optimal solution. Further discussion on subjects' strategies is presented below.

Table 3H-11: Summary of Round-Level Outcomes

	Experimental Parameters			Chose cell selection game and earned (% of maximum possible earnings)					
	Fixed Payoff Pct.	Cell Value	Chose fixed payoff	0% (timed out)	Less than 80%	80 – 89%	90 – 96%	97 – 99%	100%
Total n = 3040	–	–	4% (110)	1% (20)	1% (41)	10% (299)	28% (855)	48% (1451)	9% (264)
S1 n = 720	80%	20	7% (47)	1% (5)	1% (4)	1% (5)	25% (181)	60% (433)	6% (45)
S2 n = 640	80%	100	7% (46)	1% (7)	2% (11)	16% (99)	34% (216)	31% (198)	10% (63)
S3 n = 800	50%	20	1% (10)	1% (4)	0% (0)	2% (12)	23% (180)	69% (553)	5% (41)
S4 n = 880	50%	100	1% (7)	1% (4)	3% (26)	21% (183)	32% (278)	30% (267)	13% (115)

3H.13.2 Fixed Effects Estimation

We estimate a fixed effects (or dummy variable) regression for three different dependent variables: Earnings Ratio, Cell Ratio and Search Ratio.[35] Referring to these three dependent variables generically as Y, our fixed effects model is given by:

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[34] But curiously, subjects are able to earn 100% the maximum possible in a greater percentage of the rounds in S2 (9.8%) and S4 (13.1%) than in S1 (6.3%) and S3 (5.1%).

[35] We examined random effects models as well but this estimation was rejected, on the basis of a Hausman test, in favor of the fixed effects model.

$$Y = \beta_0 + \beta_F \text{Fixed} + \beta_T \text{Timeout} + \sum_{i=2}^{4} \beta_{Si} \text{Session}_i$$

$$+ \sum_{j=2}^{11} \beta_{Rj} \text{Round}_j + \sum_{k=2}^{80} \beta_{Subk} \text{Subject}_k + \varepsilon \qquad (3)$$

The three dependent variables and the right-hand side fixed effects dummy variables are summarized in Table 3H-12 and discussed below.

Table 3H-12: Variables in Equation (3) Fixed Effects Regression Model

Variable	Definition
Dependent Y	
Earnings Ratio	Subject's per-round earnings, as a percent of the maximum possible in the round
Cell Ratio	Number of cells in subject's final per-round choice, as a percent of the number of cells in the round's optimal solution
Search Ratio	Total number of cells subject selects per round (including those not part of subject's final choice), as a ratio of the number of cells in subject's final choice for the round
Fixed Effects	
Fixed	= 1 if subject chooses the fixed payoff option in the round = 0 otherwise
Timeout	= 1 if time expires before subject is finished in the round = 0 otherwise
Session $_i$ $i = 2, …,4$	= 1 if Y observation from session Si = 0 otherwise
Round $_j$ $j = 2, …,11$	= 1 if Y observation from round Rj = 0 otherwise
Subject $_k$ $k = 2, …,80$	= 1 if Y observation from subject Sub$k$ = 0 otherwise

The first two dependent variables measure the subject's performance relative to the optimal solution. The Earnings Ratio measures the subject's per-round earnings, as a percentage of the maximum possible earnings in the given round of the given session. The Cell Ratio measures the number of cells in the subject's final choice each round, as a percentage of the number of cells in the optimal solution for the given round of the given session. The number of cells in the subject's final choice is the number of cells that the subject has selected when she clicks the "end round" button.

The Search Ratio measures the search activity of the subject while controlling for the heuristic used by the subject. The numerator of this ratio is a count of **all** cells that the subject selects during the course of a round, including those that the subject subsequently deselects (i.e., those that are not part of the subject's final choice). Recall that with the revocable choice option, the subject is able to search out and try different combinations of cells before clicking the "end round" button. The denominator of Search Ratio is the count of the number of cells in the subject's final choice in the round. Recall from 3H-12 that the subject's heuristic can be categorized according to the number of cells that in the subject's final choice. Thus this measure normalizes search activity so that it is comparable across subjects.[36]

The 94 independent variables are fixed effects dummy variables, as shown in Table 3H-12. The Fixed and Timeout variables control for those rounds where, respectively, the subject chooses the fixed payoff option or she "times out" (i.e., fails to click either the "choose the fixed payoff" button or the "end round" button before time expires). If Fixed = 1, then the Earning Ration equals the amount of the fixed payoff (divided by the maximum possible for the round) and both Cell Ratio and Search Ratio equal zero. When Timeout = 1, all three dependent variables have a value of zero. The three Session dummy variables control for individual session effects, and are used to test for the effect of the experimental treatments outlined in Table 3H-12 above. The ten Round dummy variables control for individual round effects or variation over time, such as learning. The seventy-nine Subject dummy variables control for a variety of subject-specific effects, including (but not limited to) risk aversion.[37]

Table 3H-13 presents the hypothesis tests from the fixed effects regressions. The models fit the data fairly well, with adjusted R^2s of 0.85, 0.77 and 0.49 for the Earnings Ratio, Cell Ratio and Search Ratio, respectively. There is strong evidence of a session or treatment effect in the Earnings Ratio and the Cell Ratio regressions ($p < 0.001$ and $p = 0.002$, respectively, in the Session Effect row); there is marginal evidence of a session effect in the Search Ratio ($p = .087$). There does not appear to be a round effect in the Earnings Ratio ($p = .260$ in the Round Effect row), but there are significant round effects in both the Cell Ratio and Search Ratio ($p < .05$ for each). As we expect, there are strong subject effects in all three ratios.

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[36] Consider the following example. Two subjects both have three cells in their final selection so that their decisions are consistent with heuristic H (see above). Suppose that the second subject selects and then deselects two additional cells in the process of making her final choice (i.e., she searches a total of five cells while the first subject only searches three). The first subject has a Search Ratio of 3/3 = 1.0, and the second has a ratio of 5/3 = 1.67, thus the subject who searches more has a higher Search Ratio. Now consider a third subject who has five cells in her final choice but does not deselect any cells during the round. This subject, whose final decision is consistent with heuristic M, has a Search Ratio of 5/5 = 1.0. Thus according to the this measure of search activity, the first and third subjects search an equal amount, after accounting for their different heuristics, and the second subject searches more.

[37] A dummy variable for session sequence is not included as the order of sessions is varied across subject with one of four random sequences (3H.13) in order to control for sequence effects.

Table 3H-13: Hypotheses Tests from Fixed Effects Regressions

	Dependent Variable		
Test	**Earnings Ratio**	**Cell Ratio**	**Search Ratio**
Overall Model $H_0: \beta_{S2} = \ldots = \beta_{Sub80} = 0$	$R^2_{Adj} = 0.85$ $F = 196.9$ $p < .001$	$R^2_{Adj} = 0.77$ $F = 111.2$ $p < .001$	$R^2_{Adj} = 0.49$ $F = 29.7$ $p < .001$
Session Effect $H_0: \beta_{S2} = \beta_{S3} = \beta_{S4} = 0$	$F = 174.0$ $p < .001$	$F = 5.07$ $p = .002$	$F = 2.19$ $p = .087$
Estimated Coefficients			
S1 $\quad \beta_0$	1.007	0.989	1.291
S2 $\quad \beta_0 + \beta_{S2}$	0.978	0.998	1.247
S3 $\quad \beta_0 + \beta_{S3}$	1.011	1.012	1.258
S4 $\quad \beta_0 + \beta_{S4}$	0.971	0.998	1.249
Round Effect $H_0: \beta_{R2} = \ldots = \beta_{R11} = 0$	$F = 1.24$ $p = .260$	$F = 4.37$ $p < .001$	$F = 2.13$ $p = .020$
Subject Effect $H_0: \beta_{Sub2} = \ldots = \beta_{Sub80} = 0$	$F = 28.1$ $p < .001$	$F = 70.9$ $p < .001$	$F = 13.6$ $p < .001$

Note: n = 3040 for each regression.

Table 3H-13 also shows the individual coefficient estimates for the Session fixed effects. For the Earnings Ratio, the nature of the significant treatment effect is apparent. Sessions S1 and S3 are virtually identical; they both have a cell payoff of 20. Estimates for S2 and S4 are substantially less, and those two sessions have a cell payoff of 100. However, all four sessions have estimates are reasonably close to 1.0 (or 100%). The estimated coefficients are consistent with data in Table 3H-11, where most of the rounds have earnings of 90% or higher, but more are in the 97% – 100% range in S1 and S3 than in S2 and S4. Collectively, Tables 3H-11 and 3H-12 suggest that a lower cell payoff, and thus a relatively higher importance of cell value, results in higher earnings. The coefficient estimates in Table 3H-13 also suggest that S4 has (slightly) lower earnings than S2. In S4, the fixed payoff was 50% of the maximum possible, while in S2 it is 80%. Recall from Table 3H-11 that the fixed payment option is chosen in 7% of the rounds in S2, but is chosen in only 1% of the round in S4s. One interpretation is that 80% fixed payment option provides a cushion in those rounds where the subject does (relatively) poorly, but the 50% option does not provide such a cushion. However, no such effect is apparent in the comparison of S1 and S3, which have 80% and 50% fixed payment options, respectively.

The estimated coefficients for the Cell Ratio tell a very different story than those of the Earnings Ratio. The Cell Ratio also exhibits a significant treatment effect, but for (or 'but with respect to this ratio') this ratio, S1 and S3 appear dissimilar – of the four Cell Ratio estimates, S1 has the lowest and S3 has the highest – while S2 and S4 are virtually identical and lie between S1 and S3. This is somewhat paradoxical: S1 is the

furthest from the optimal solution in terms of the Cell Ratio, but it is the **closest** to the optimal solution in terms of the Earnings Ratio. We note that while there is a significant treatment effect, all four sessions have coefficient estimates close to 1.0 (or 100%). (It might be important to note that in a handful of a cases the subject found (submitted in his/her final solution) a combination of cells that actually received a higher payoff than the optimal payoff posted. This would affect the earnings ratio and cell ratio for that subject).

The estimated coefficients for the Search Ratio suggest that the search activity is higher in S1 and S3 than in S2 and S4, but the marginal session effect (p-value = .087) appears to be due to the difference of S1 from the other three sessions, as the S2, S3 and S4 are relatively close to one another. There is, however, substantial search occurring in all sessions. The estimated coefficients are in the 1.25 to 1.30 range, suggesting that on average subjects click 25 – 30% more cells than they include in their final decision.

We make a brief observation about the Round effects, as this effect is statistically significant for the Cell and Search Rations. Based on our inspection of the individual coefficient estimates (not shown in Table 3H-13), the Cell Ratio exhibits an upward trend and Search Ratio exhibits a downward trend over the first several rounds. Both of these trends are consistent with learning – subjects pick more cells over time, but do so with less searching. (The Earnings Ratio exhibits a very slight upward trend, and an insignificant Round Effect.) However, the trends for both the Cell Ratio and the Search Ratio also exhibit a significant downward "spike" in round 6, and then a return to (approximately) the previous level in round 7. This unexpected movement may be the primary reason for the significant Round Effect. One possible explanation is a "training effect." In Part I of the experiment, subjects complete four instructional training sessions, each of which lasts five rounds. Upon returning for Part II, subjects may incorrectly anticipate that round 5 is again the last round. But why subjects systematically choose and/or search substantially fewer cells when confronted with an unexpected round 6 remains a mystery for which we have no parsimonious explanation. We note that this "spike" phenomenon is not observed in the Earnings Ratio.

3H.13.3   Observed Heuristics

We *Ex Post* categorize a subject's decisions according to the heuristics discussed in 3H-12. The categorization is a three-step process:

- First, the subject is assigned a round-level categorization in each of her thirty-eight rounds. In a given round, if her final submission choice for a round includes three or less cells then she is assigned to heuristic H, if it includes four or five cells she is assigned to heuristic M, and if it includes six or more cells she is assigned heuristic L.

- Second, the subject is assigned a session-level categorization for each of the four sessions, based on her round-level categorizations. We use four session-level categories: H, M, L or Unable to Categorize. The session-level categorization is subjective, but generally individual subjects exhibited a great deal of consistency in their choices across the rounds of a given session. In only five instances do we designate the subject as "Unable to Categorize" at the session level?[38]

- Third, the subject is assigned an overall categorization. If she was assigned a session-level H categorization in all four session, then she is categorized as H at the overall level; the same rule is used to for categories M and L. If the subject is categorized as using different heuristics at the session level, then she is categorized as Mixed at the overall level. The overall categorization is also

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[38] In session S1, subject 68 chose the fixed payoff in all nine rounds and subject 79 chose the fixed payoff in eight rounds. In session S2, subject 47 chose the fixed payoff in seven of the eight rounds. In session S3 subject 50 and in session S4 subject 49 appeared to employ all three heuristics.

subjective, but like the session-level categorization, the exceptions are relatively few. Nonetheless, because of the subjectivity at the session and overall levels, we do not conduct formal statistical tests on our categorization data.

Table 3H-14 shows the results of our categorization at the overall and session level. For simplicity, when summarizing these data, we use terminology like "the subject uses heuristic X" when the more accurate terminology is "the subject's choices are consistent with heuristic X." Two regularities are the frequent use of heuristic L and the infrequent use of heuristic H, both at the session level and the overall level. Approximately half (51%) of the subjects use heuristic L at the overall level, and heuristic L is used over 60% of the time at the session level. By contrast, the corresponding percentages are 5% and about 10% for heuristic H. Interestingly, heuristic M is used about 25% of the time at the session level, but only 16% of the subjects used heuristic M overall. Inspection of the individual level data indicates that 60% (13/22) of the subjects who use heuristic M in some sessions use heuristic H in other sessions.[39]

Table 3H-14: *Ex Post* Categorization of Subject Heuristics

Heuristic	Overall Level	Session Level			
		S1	**S2**	**S3**	**S4**
H: chose 3 cells or less	5% (4/80)	10% (8/80)	10% (8/80)	14% (11/80)	9% (7/80)
M: chose 4 or 5 cells	16% (13/80)	26% (21/80)	28% (22/80)	25% (20/80)	28% (22/80)
L: chose 6 or more cells	51% (41/80)	61% (49/80)	61% (49/80)	60% (48/80)	63% (50/80)
Mixed: used multiple strategies	28% (22/80)	n/a	n/a	n/a	n/a
Unable to Categorize	n/a	3% (2/80)	1% (1/80)	1% (1/80)	1% (1/80)
Column Total	100% (80/80)	100% (80/80)	100% (80/80)	100% (80/80)	100% (80/80)

In Table 3H-14 above, heuristic L is identified as having the highest expected payoff but the highest decision cost, while heuristic H has the lowest expected payoff and the lowest decision cost. Our interpretation of the data in Table 3H-14 is as follows. The majority (51%) of the subjects opt to incur the subjective decision cost in order to obtain the higher payoff; while very few (5%) opt to avoid the subjective decision cost in lieu of lower earnings – but to the extent that thirteen subjects use heuristic M at the overall level, and that thirteen of the subjects who use a Mixed heuristic at the overall level use a combination of H and M, a significant minority (44% = 26/80) undertake a strategy designed to avoid at least some of the decision cost.

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[39] Of the remaining nine, six use a combination of L and M, two use L and H, and one uses L, M and H.

3H.14   CONCLUSION

Although wage and salary compensation is an important factor in recruitment and retention of employees, the scope and mix of the fringe benefits is an oft-cited factor. For managers and employers, the effectiveness of the benefit package as a recruitment and retention tool depends on the ability of the workers to make optimal choices from the available options. There is considerable evidence from the naturally occurring world that discrete, multi-attribute goods complicate the decision-making task. The present research uses experimental methods to examine individual decision-making in a stylized discrete multi-attribute goods setting.

Two main results emerge:

- First, the relative trade-off between the attributes of the discrete good is a significant treatment variable. The discrete good has two attributes; one that is fixed across choices and one that varies across choices. When the variable attribute has relatively more weight in the overall reward function, subjects earn a higher reward on average. One hypothesis is that that with greater weight on the variable attribute, subjects focus on the "essence of the problem" and develop heuristics that closely approximate the optimal solution. Overall, subjects do quite well, as most of the eighty subjects consistently earn 90% of the maximum possible reward. Further analysis reveals the majority of experimental subjects adopt heuristics that approximate the optimal solution to the complex linear programming problem.

- Second, subjects rarely choose a fixed payoff option with a known payoff and low decision cost, even when the fixed payoff is 80% of the maximum possible under the decision-making task. This suggests that the subjects place a high implicit valuation on the flexibility in making choices, and that they appear confident in their ability to exceed the fixed payoff.

Collectively, the results suggest that individuals (at least, financially motivated experimental subjects) can indeed handle difficult decision-making tasks like those involving discrete multi-attribute goods – and these individuals systematically reveal a preference for the task, as they rarely opt for a fixed payoff option. This indicates that a flexible benefits package may be strongly preferred to a pre-defined benefits package.

It is interesting that the subjects choose to apply the heuristic that most closely approximates the marginal setting of neo-classical consumer theory. This suggests that individuals prefer settings that allow for marginal decisions, but it may also suggest that individuals prefer, *ceteris paribus*, consumption bundles with larger numbers of goods. This ambiguity suggests that unanswered questions concerning individual behavior remain for further investigation.

3H.14.1   Summary

Compensation and incentives are used as a retention tool. Two general categories of incentives have been discussed, selective re-enlistment bonuses and auctions. While SRB has been shown to be effective in retaining individuals in critical skill categories, the fixed nature of SRB may lead to overpayment or underpayment of military personnel. In contrast, auctions can mitigate the overpayment or underpayment of bonuses to the individuals. Preliminary research shows that individuals tend to bid their reserve price for any given job were the reserve price is the amount of compensation just necessary to induce the individual to continue military employment. However, the effectiveness of auctions, such as relative cost savings and retention effects, is contingent on auction rules. Effectiveness of a real world auction in a military labor market, subject to constraints, is yet to be determined.

Private sector adoption of flexible compensation plans and their effectiveness in retaining employees is evident. Alternatively, while the military has discussed offering a cafeteria-style benefits package institutional constraints of the military are likely to deter adoption of such policies. However, continued shortages in critical skill areas may necessitate a revisit by DOD of offering a flexible compensation plan.

Chapter 3I – PERSTEMPO/OPSTEMPO AND QUALITY OF LIFE

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3I.1   EXECUTIVE SUMMARY

PERSTEMPO and quality of life (QOL) are important subjects to cover when examining issues that influence recruiting and retention of military personnel. Unlike other factors, these elements have very specific contexts in a military setting that would be different from most non-military environments. This paper examined the relationships between these two factors and their influences on recruiting and retention of military personnel. A majority of the literature reviewed described and explained the consequences of PERSTEMPO/ OPSTEMPO and QOL influenced retention directly. The absence of research on how recruiting is influenced by these variables resulted in making many indirect links between these variables by hypothesizing how PERSTEMPO/OPSTEMPO and QOL might influence recruiting. The studies reviewed indicate that the relationship between PERSTEMPO/OPSTEMPO and retention is complex. The type of deployment influences the stay or leave decision. Participating in non-hostile, newer missions seems to be associated with higher rates of retention/re-enlistment than do repetitive or hostile deployments. It would also appear that career progression plans might mitigate the effect that this association demonstrates in terms of the direction of the relationship and how reasons for leaving are measured. A number of individual factors related to quality of life have been associated with recruitment and retention. Only recently have these models been used to assess facets of QOL on organizational outcomes, and they have only been used with specific populations of military personnel (e.g., Navy and Marine Corps). Results to date indicate that these models have been successful in determining that quality of life variables influence peoples' intentions to remain in the military.

3I.2   INTRODUCTION

PERSTEMPO and quality of life are important subjects to cover when examining issues that influence recruiting and retention of military personnel. Unlike other factors that could be examined, these elements have very specific contexts in a military setting that would be different from most non-military environments. The purpose of this paper is to examine the relationships between these two factors and their influences on recruiting and retention of military personnel. The former has been well researched and have examined numerous relationships. It is not the purpose of this paper to provide an exhaustive literature review of all the research conducted, but to limit the review to those aspects that have shown to have a direct or hypothesized influence on recruiting and retention. This review found research on the influence of these topics on retention, but found very little related to recruiting. As such, the paper presents considerable linkages with retention, but very few with recruiting.

3I.3   TOPIC INTRODUCTION – PERSTEMPO

OPSTEMPO research has increased dramatically over the last ten years in response to the increased pace of many countries' military operations. Countries' involvements in such areas as the Middle East, the Balkans, East Timor, Iraq and Afghanistan have meant that soldiers have been busier than their predecessors.

3I.3.1   Effects of PERSTEMPO on Retention

Research on retention has examined some of the links between PERSTEMPO, OPSTEMPO and attrition of military personnel. Sticha, Sadaca, DiFazio and Knerr (1999) reviewed the literature to identify (a) definitions and measures of PERSTEMPO, (b) research that links PERSTEMPO to retention, and readiness or quality of life, and (c) sources of existing data that could form the basis of additional analyses. The literature review and additional analyses showed:

1) The effects of PERSTEMPO on retention are relatively small;

2) The effects of PERSTEMPO are often not linear; and

3) Different ways of measuring PERSTEMPO and outcome variables produce different assessments of the magnitude of relationships between them.

At low levels, they found that increasing time away from a home unit was associated with higher retention and greater Army career intentions. As the time away increased, the positive effect was reduced and become somewhat negative. They found that the number of deployments prior to the end of a soldier's term of service was positively related to re-enlistment likelihood, while the average length of these deployments was negatively related. Finally, they found no evidence that the levels of PERSTEMPO at the time of the study were having adverse impacts on a large segment of the Army population.

Specific studies have examined the link between the number and variety of deployments military personnel performed and the extent to which they re-enlisted in or separated from the military. Hosek and Totten (1998) found that having some long or hostile duty had a positive effect on re-enlistment for NCOs, but as the duty lengthened or involved danger it may have caused stress and disrupted personal life, thereby lowering morale and potentially reducing re-enlistment.

A second similar study (Hosek and Totten, 2002) found that non-hostile deployments increased Army, Air Force, and Marine Corps first-term re-enlistment. Navy first-term re-enlistment was higher for one non-hostile deployment than for none, but did not rise further with more deployments. Hostile deployments had little effect on first-term re-enlistment. For the most part, first-term re-enlistment did not decrease with the number of hostile episodes, but remained constant or slightly increased. In one case, for marines without dependents, re-enlistment tended to decline as hostile deployments increased. Navy re-enlistment was slightly lower for one hostile episode versus none, although it was not lower for two or more hostile episodes.

Fricker (2002) examined the link between PERSTEMPO/OPSTEMPO and retention of military officers. This study was designed similar to the above-mentioned studies except that it accounted for the fact that the terms of service for officers are very different from those of NCOs. Fricker (2002) found a clear, positive association between increasing amounts of non-hostile deployment and junior and mid-grade officer retention: Officers who participate in more non-hostile deployments are retained at a higher rate in all services. Hostile deployment generally mitigates this positive effect, but in almost all cases examined, even those with some or all hostile deployment show higher retention rates than do non-deployers. The major differences found by service include the Air Force showing the most pronounced effect of hostile deployment and the Marine Corps and Navy showing the least effect of hostile deployment. In all services except the Air Force, in the late 1990s, the effect of hostile deployment was less for mid-grade officers than for junior officers.

Dunn and Morrow (2002) conducted focus groups with military personnel to determine peoples' reasons for leaving the military. Of the themes that were identified, the second most commonly mentioned reason for leaving was the workload as it related to PERSTEMPO and OPSTEMPO. The participants consistently

described how their workload was hectic. It was frequently stated that primary duties, coupled with secondary duties and a high deployment tempo, were leading to some members feeling burnt out and to others leaving the military. Members often stated that the high PERSTEMPO and workload were putting people in the position of having to choose between staying in the military or losing their families. It was stated that the amount of time members had to spend away from home due to deployments, exercises, courses, and overtime was in many cases beyond the coping ability of their families.

Discussions surrounding pre-deployment and deployment were common. Many believed the time spent in pre-deployment training (especially for Bosnia) was "*too long*," "*repetitive*", and took away too much quality time that could be spent with their families prior to deploying. They also felt that more pre-deployment training should be done locally with a standardized training package. Members felt courses were too scattered and records about qualifications were incomplete. They reported traveling away from home for training to find out that they had already taken courses that were now being scheduled for them.

Other common complaints members had concerning deployments were their length and purpose. It was consistently expressed that the deployments to Bosnia were too long, and boring. Many also felt they were being deployed at the wrong time in their careers and/or life cycle.

On the other hand, Jenkins and Morrow (2003) examined members' reasons for leaving the military from their responses to an attrition information questionnaire. When asked if "I have been on too many deployments (UN/NATO/other out-of-country taskings)" had any importance in their decision to leave, 72.7% of participants answered that it was "not true or of no importance." While there was no way to identify participants who had or had not been on deployments during their careers, this result counters the findings of Dunn and Morrow (2003).

A possible explanation for the attrition survey results is the nature of the military career progression plans. One of the more popular leaving points in the military examined in the studies above is after 20 years of service (Currie, 2002). Such people are entitled to draw a pension immediately. It is particularly popular with people who join the military at an earlier age. They can retire as early as age 38 (if they join at 18 years old), draw their pension and are still young enough to start another career. Historically, the most often chosen reasons for leaving are those that talk about being able to enjoy a pension and work in another field. Therefore, if the majority of people leaving the military are leaving at 20 years, those economic reasons may be outweighing other workload issues.

In addition, only a minority of personnel regularly deploy on UN or NATO missions. As such, they represent a smaller number of people who would be leaving the military in any one year. Differences concerning the reasons for leaving between those people who deploy and those who do not deploy needs to be studied to assess if any differences are related to their PERSTEMPO/OPSTEMPO.

The results of research conducted are not consistent. Huffman et al (2005) examined OPSTEMPO research and have come up with five possible methodological reasons to account for the results. They include:

1) Different operational definitions of turnover used in the research. Intentions to leave have been used as a proxy for actual turnover behaviours. While the former has shown to be positively related to the latter, asking people who have actually left the military is the preferred method. However, obtaining information from people who have left the organization is more difficult and time consuming.

2) Measuring role overload or subjective perceptions of OPSTEMPO versus workload or an objective assessment of workload. The many different of ways measuring OPSTEMPO could also explain the

inconsistent results. When examined in greater detail, it becomes clear that the differences between the types can be categorized as those that are more self-report, subjective assessments of OPSTEMPO or role overload versus quantitative, archival records of workload. The quantitative, objective measures are better, but are also more resource intensive to collect.

3) Different operational definitions of OPSTEMPO. Some research has used specific time away from family, days at sea, or long hours while others have used all of these dimensions. Other research has used these dimensions, but have assessed to what extent the time away is positive (i.e., career enhancing) or negative. The latter uses Equity Theory to hypothesize the balance between the personal cost of workload (i.e., time away) and the personal benefit of workload (i.e., financial rewards, promotion enhancement). Thus, when OPSTEMPO is made up of work that is likely to bring external work-related rewards (deployment, schooling), there is likely a link with decreased turnover. However, if OPSTEMPO is defined by work that brings few external rewards (i.e., time away from family and long work hours), a link with increased turnover is expected (Huffman et al, 2005).

4) The lack of control over key demographic and organizational variables. Most studies have not controlled for rank or unit type. Junior enlisted personnel are more likely to report that they plan to leave the service than do non-commissioned officers (NCOs) or officers. Combat arms soldiers are more likely to report they intend to leave than are non-combat arms soldiers (Huffman et al., 2005). These influences are likely to have impacts on overall results if their specific influences are not controlled for.

5) The possible curvilinear nature of the OPSTEMPO-turnover relation. Most of the studies assume a linear relationship between OPSTEMPO and turnover meaning that the more OPSTEMPO a soldier has, the more likely that soldier will leave the military. However, Huffman et al. (2005) theorize that these relationships are more complex and should be examined as a curvilinear phenomenon. Specifically, they argue that there is a level of OPSTEMPO that maximizes performance and increases the soldier's intention to stay in the military. At moderate levels of military deployments, training exercises, and garrison duties, soldier and unit readiness are maintained. It is only when OPSTEMPO levels are very high or very low that turnover increases. To complicate the issues even further, they argue that non-career enhancing OPSTEMPO is likely to have a more pronounced effect on turnover in this curvilinear association.

Huffman et al. conducted a study in 2005 to address and resolve these discrepancies. The researchers clarified a number of the concerns they had identified. The results seemed to support the curvilinear relationship between OPSTEMPO and turnover. They found that people who were uncertain about upcoming career decisions were more likely to stay in the military than leave. Moreover, they also found that intentions to stay were more accurate than intentions to leave. Other interesting findings were more complex and nuanced. For instance, they found that the workload aspects of OPSTEMPO were less important than the attitudes towards the work, training and deployments. If soldiers felt that the work, training and deployments were meaningful, relevant and challenging, they were more likely to stay. If they held more negative views, they were more likely to leave. Another component to the nature of deployments and their impacts was the context within which it occurred. If soldiers regarded the experience as personally or professionally enhancing, they were less likely to want to leave.

Examining the workload results in more detail, other findings were revealed. Soldiers revealed that aspects such as predictability, task significance and the nature of the deployment were factors that influenced their desire to remain. For instance, they were not as concerned about the long hours they worked as they were about the uncertainty of how long their training, deployment and work schedules would be (U.S. data

collected pre-September 11, 2001). They were also more concerned about the job they were doing than the long hours they spent working. If the jobs they were doing were part of the mission or jobs they were trained to do, then they did not mind the long hours.

3I.3.2   Discussion

The different results from these studies can be reconciled by taking a closer look at the nature of the operations that are completed and the career progression of those participating. In the qualitative research reviewed, the results focused on the idea that the deployments were long and boring. What was not mentioned in the study (Dunn and Morrow, 2001) was a number of participants described a hierarchy of deploying. This phenomenon has shown up anecdotally for a number of years (personal communication J. Dunn). There was a consensus that having the opportunity to serve in the first few deployments of a mission was far more exciting, challenging and professionally rewarding. For Army personnel, they looked forward to putting all their combat skills into use in an operational setting. However, if you serve on deployments after the beginning of a mission, they were generally perceived to be more boring and repetitive because the work was routine. In other words, these military personnel were less concerned about serving on the first few deployments of a mission where there were more unique challenges than they were if they had to serve on subsequent deployments of a mission where everything was routine and predictable.

This discussion is in line with the results of Hosek and Totten (1998, 2002) and Fricker (2002). Participants in these studies reported that some deployment actually increased their likelihood to remain in the military. While those studies did not focus on explaining those relationships, it is plausible that they also felt that such deployments gave them the opportunity to put into use all the training they had received. Thus, as long as they were not persistently hostile, personnel found the deployments to be professionally fulfilling and would want to continue to serve in the military to be able to deploy.

Moreover, with Fricker's (2002) study, their career progression may very well be a confounding factor in assessing these links. The country in which the study took place has a much more competitive promotion system that may require them to participate in more of these kinds of missions in order to be promoted and remain in the military. Thus, the relationship between how retention is influenced by PERSTEMPO and OPSTEMPO is more important than the influence that OPSTEMPO/PERSTEMPO has on retention. The Morrow and Dunn (2001) results also agree with those of Huffman et al. (2005). In both studies, soldiers were more positive about their experiences if they were performing challenging work that they had been given proper training to do and that was part of the mission for which they were sent. Finally, Huffman et al. (2005) support the earlier findings of Hosek and Totten, (1998, 2002) and Fricker (2002) that the relationship between PERSTEMPO/OPSTEMPO and retention was more complex and non-linear. Specifically both studies demonstrate that factors beyond the quantity of time away on deployments influences the retention of personnel on those missions.

3I.3.2.1   Summary

There is a considerable amount of evidence that indicates PERSTEMPO/OPSTEMPO may play a role in military personnel's decisions to stay or leave. The studies reviewed indicate that the relationship between PERSTEMPO and retention is complex. It would seem that the type of deployment influences the stay or leave decision. Participating in non-hostile, newer missions seems to be associated with higher rates of retention/re-enlistment than do repetitive or hostile deployments. The total amount of PERSTEMPO/ OPSTEMPO seems to be less important than the type completed and under what circumstances it is taken. It would also appear that career progression plans might mitigate the effect that this association demonstrates in terms of the direction of the relationship and how reasons for leaving are measured.

3I.4   QUALITY OF LIFE

Quality of life (QOL) refers to those non-monetary benefits, such as base housing that impact positively or negatively on the wellbeing and morale of members and their families (NATO HFM-107/RTG-034 Terms of Reference, 2002). The general purpose of research in those areas is to determine their impact on the stay-leave decision of members. Before discussing quality of life as it influences recruiting, attrition and retention, it is important to specify what is being discussed. The concept of quality of life has been in the literature since the mid 1960s. It started primarily in medical research in reference to patients with severe, terminal medical conditions. The intuitive appeal of the term led it to be used in Industrial/Organizational psychology under the term 'quality of working life' (Dowden, 2000).

Glaser (1996) reviewed the literature on the effects of quality of life on turnover and performance in the private sector. He found that family and economic conditions may influence turnover. Causation was difficult to establish because much of the research completed to that point focused on the influence of work on QOL rather than the reverse relationship. For example, one of the cited family conditions associated with turnover was that women with young children viewed the family impact upon work as negative. It resulted in absenteeism, tardiness, inattentiveness and inefficiency. Glaser (1996) also reported that role conflict (family/work) and work scheduling played a role in family conflict and that led to higher rates of turnover. The economic factors Glaser (1996) discussed were pay related. The extent to which expected salary levels met achieved salary reduced the inclination to withdraw.

While pay has not shown to directly influence peoples' decisions to leave the military, it was certainly a significant influence on recruiting. In regions in which economies were very strong at the time the military was interested in attracting people to join, competition amongst employers for personnel increased. Syed and Morrow (2003) found that signing and recruitment bonuses have and continue to be used to compete for personnel, especially in occupations for which the military cannot compete with the private sector on salaries (i.e., doctors, technical and IT occupations). The amount of money offered depended on the occupation and on the level of experience or academic level the applicant held. For the most part however, this method of increasing the attractiveness of the organization to those targeted occupations has not been systematically studied to evaluate its effectiveness in terms of attracting the quantity and quality of personnel desired, nor the extent to which those personnel stay in the military (Syed and Morrow, 2003).

Across a number of studies, family factors have been found to influence retention. For instance, in a study of Army families, Rosen and Durand (1995) found that the main predictor of retention for junior enlisted families was the spouse's unrealistic expectations of what the military could provide as resources for families of deployed soldiers. The main predictor of retention for senior enlisted couples was the spouse's wish that her husband stays in or leaves the Army. Schumm, Bell, and Resnick (2001) found that family factors were more strongly related to retention than military readiness factors. In both studies, only family factors were examined as variables influencing retention.

A number of approaches have been used study QOL. In earlier research, a debate emerged about whether objective indicators (i.e., salary, education level) were more useful to study QOL than subjective indicators (i.e., subjective judgments of individuals' cognitive and affective experiences) (Dowden, 2000). A combination of both is seen as the preferred method. Researchers have also examined global QOL (satisfaction with life as a whole) as well as domain measures of QOL (satisfaction with a particular domain of life) (Dowden, 2000).

In addition to the difficulty of finding research that examines the desired direction of the QOL – turnover relationship, the quantity of research examining that relationship is small. Most of the QOL research has

focused simply on describing the quality of life of different populations or of trying to develop models of how different components of quality of life are related to one another. Even with a number of models that include organizational outcomes in them, less emphasis has generally been given to exploring those relationships.

A number of different models have been developed to measure and evaluate quality of life (Kerce, 1995; Rice, McFarlin, Hunt, and Near, 1985; Ventegodt, 1996; Hart, 1999). One of the most used models developed has been Kerce's 1995 model of quality of life. It has been used to study military personnel (Kerce, 1995; Kerce, 1996; Wilcove, Schwerin, and Wolosin, 2003**)** to examine a number of organizational outcomes, including re-enlistment.

Kerce used the life domain approach to evaluate QOL and examined the underlying structure of life needs among Marines. QOL was evaluated in 11 life domains identified in interviews with Marines and a review of the civilian literature. In the conceptual model (Figure 3I-1), domains were related to overall QOL, which in turn was related to several organizational outcomes, one of which was re-enlistment. Structural Equation Modeling (SEM) was conducted separately for several family/marital status groups (i.e., married Marines with children, married Marines without children, and single Marines without children). Support was only found for the married Marines without children model in which satisfaction with life domains was positively related to re-enlistment. In other words, higher ratings of quality of life were associated with a greater likelihood of re-enlisting.
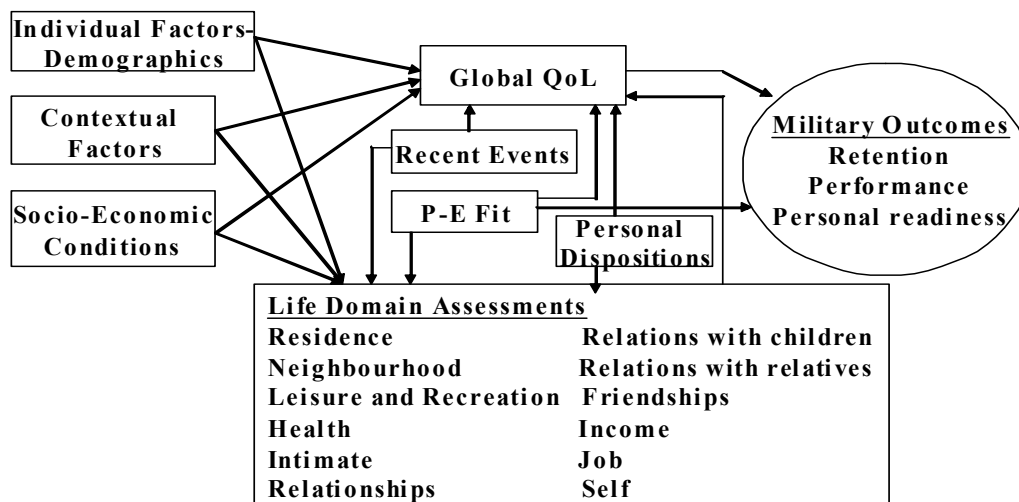
Figure 3I-1: Kerce Quality of Life (QOL) Model.

Dowden (2000) developed a theoretical model (Figure 3I-2) of QOL that examined impacts on retention and recruiting. The latter was accomplished by including a factor called anticipatory QOL into the model (Dowden, 2000). While not a new concept (Rice et al., 1985), this factor was developed in an attempt to explore what effect, if any, the anticipated QOL in the military had on new recruits joining the organization. Dowden (2000) used SEM to develop a military QOL model that could be used in future policy and experimental research. As such, the links between anticipatory QOL and recruiting were not specifically tested.
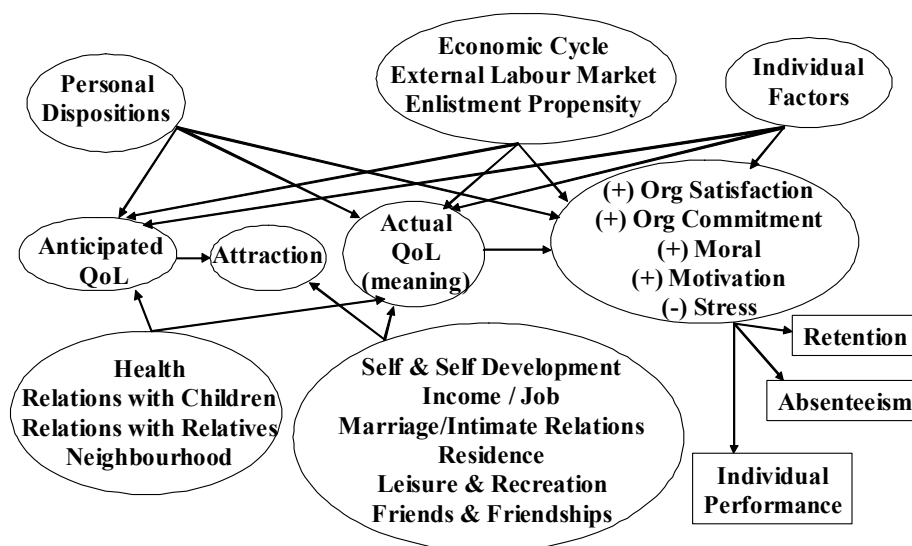
Figure 3I-2: Dowden Conceptual Quality of Life (QOL) Model.

Dowden's (2000) model was influenced greatly by the Kerce model and included measures of organizational outcomes such as retention and absenteeism. Unfortunately, the links between QOL and retention were not specifically examined for two reasons. Firstly, just as the links between recruiting and anticipatory QOL were not specifically examined in the SEM modeling, the links between QOL and retention were not examined for the same reasons. Secondly, the overall focus of the research was to address very specific recommendations from government hearings on military quality of life, none of which were specifically targeting recruiting and retention. Specifically, Dowden (2001) reported responses to a QOL questionnaire that asked respondents about their satisfaction with their overall QOL, as well as their satisfactions with several life domains such as residence, neighbourhood, health, relationships with children, job, etc. Finally, several questions were asked that were much more specific to which involved assessing the impact of QOL on recruiting and retention. As such, the results of the research describe the QOL of military members and their spouses. Finally, several questions were asked that were much more specific to the experiences of the members in the military (e.g., rating the military as a preferred employer, feelings about senior leadership, etc.). Respondents were asked five questions about their intentions to remain in the military. The results are listed in Table 3I-1 below and illustrate a range of responses from "neutral" to "somewhat disagree" with remaining in the military for an extended period.

Table 3I-1: Overall, Mean Level of Agreement with Each of the Retention Items Asked

Statement	Mean
I will stay in the CF as long as I can	4.22
I will leave the CF as soon as I complete my actual contract	3.77
I will leave the CF if another job becomes available	4.29
I will leave the CF as soon as I put in 20 years for pension eligibility	3.98
I will leave the CF as soon as I complete my obligatory service	3.29

Responses on the scale included: 1 = Strongly disagree; 2 = Disagree; 3 = Somewhat disagree; 4 = Neutral;
5 = Somewhat agree; 6 = Agree; 7 = Strongly agree.

In terms of their global QOL, the data show that military members were relatively satisfied overall. Interestingly, female military members reported a significantly higher global QOL than male members. Participants reported being most satisfied with their marriage-partner relationship and their relationship with their children whereas the most commonly voiced dissatisfaction came from the income and standard of living and career domains. Although respondents as a whole were moderately satisfied with their residences overall, several striking and significant between-group differences emerged when respondents were separated into those who lived on bases in military housing versus those who did not. In each case, military members living in base housing were much more dissatisfied with aspects of their residence than those not living there.

Dowden (2001) completed another study that asked the spouses of military members to rate their own QOL. An additional measure of the support for the spouse's military career was included. This measure offers another domain of studying QOL factors and their influence on retention even though it is not directly linked to the extent to which the military member would remain in the military. Military spouses reported the highest satisfaction with their relationships with their children and their marriage/partner relationship. The lowest satisfaction scores were found in the leisure, recreation, income and standard of living QOL domains. Interestingly, military spouses were more satisfied with each of these QOL domains than were the military members.

Wilcove, Schwerin, and Wolosin (2003) developed exploratory models of quality of life for Navy personnel that were based upon the Kerce model. Similar to Kerce (1995), SEM models were developed for different groups. In this study, models were developed for married, enlisted sailors with children, unmarried, first-term sailors without children and a target group of sailors at a key point in their career decision-making process. The SEM model was made up of two factors called personal and job. The personal factor was made up of domains of marital/intimate relationships, relationships with children, personal development, health, standard of living and shipboard life. In addition to global QOL, both levels of satisfaction with one's military job and the impact of one's military job on plans to remain on active duty loaded on the job factor.

For the first model, this personal factor was related to re-enlistment intentions, accounting for 22% of its variance (parameter estimate = .47). In the second model with unmarried first-term sailors without children, the personal factor (relationships with children not included) accounted for 10% of the variance in re-enlistment (parameter estimate = .31). The model for the last group demonstrated that personal factors accounted for 17% of the variance in re-enlistment (parameter estimate = .41). All of these results were significant. The authors concluded that the personal factor was the best predictor of re-enlistment. In addition, they found that the personal factor was directly associated with re-enlistment intentions whereas the job factor influenced re-enlistment indirectly through organizational commitment.

Hindelang, Schwerin, and Farmer (2004) tested the generalizability of the Wilcove et al. (2003) model using Marine Corps data. The results suggested that the Navy model provided an acceptable fit to the Marine Corps data for each of the subgroups considered. They concluded that this model extended the military QOL research literature by providing further support for a work/non-work dichotomy, in which personal factors bear direct influence on service members' re-enlistment intent, and organizational commitment mediates the relationship between job factors and service members' re-enlistment intent.

A component of the Kerce (1995) QOL model that may play a factor in recruitment is person-environment (P-E) fit. The degree to which members react to positive and negative experiences from military life may be due in part to how well their personal qualities match the demands and opportunities in the situations they find themselves. If there is a close match of abilities, interests, and motives of a person with the program of a behavior setting (i.e., if the setting engages members in ways that allow them to use their skills and abilities, and to participate in ways that interest them and that satisfy their motives) there is a good person-setting fit.

However, it has not been examined in detail in the model. Wicker (1996) highlighted the need to develop this component more specifically by proposing that Navy members be asked to make their own assessment of how well their abilities, interests, and personal needs are suited to Navy life. He also suggested that married members could also be asked to make the same assessment of their spouse and of their children. Wicker (1996) recognized that this approach would be a rather simplistic attempt to deal with a complex concept. Moreover, he was only looking at how this concept would be relevant to outcomes such as attrition and performance. However, knowledge of any systematic determinants of QOL P-E fit would assist in the recruitment, selection, and classification process.

Some research has attempted to examine how aspects of OPSTEMPO influence quality of life. Britt and Dawson (2005) studied the extent to which workload, job attitudes, group attitudes and health predicted work-family conflict (WFC). They found that workload was a strong predictor of WFC, as well as health related variables of morale and physical symptoms. Specifically, soldiers who worked more hours in a day, slept less, and spent more days training over the previous six months were more likely to report high WFC. In addition, soldiers with more physical symptoms and lower morale were also more likely to report higher WFC. Moreover, those who were more satisfied with their jobs and felt recognition from leaders for their hard work reported less WFC. Finally, while not conclusive, results indicated that strong leadership may buffer soldiers from factors related to increased WFC. While this research clearly illustrates links between OPSTEMPO and quality of life, the results do not specifically predict or explain why people join the military or why they may leave.

3I.4.1 QOL Summary

A number of individual factors related to quality of life have been associated with recruitment and retention. Different levels of complexity of models have been developed to describe and assess quality of life. Only in the last number of years have these models been used to assess numerous facets of QOL on a number of organizational outcomes, and they have only been used with specific populations of military personnel (e.g., Navy and Marine Corps). Results to date indicate that these models have been successful in determining that quality of life variables influence peoples' intentions to remain in the military. Studies to date have been able to show that QOL variables account for 10 – 20% of the variance in peoples' stay leave decisions over and above the influence of other variables. This research has also highlighted a number of personal and work factors that influence retention and may influence recruiting more than others.

3I.5 LINKS TO OTHER TOPICS

While there is some empirical evidence that QOL and PERSTEMPO/OPSTEMPO are only causally linked to the individual differences and later turnover chapters, these two factors are certainly related to the chapters on realistic information during recruiting, the psychological contract, advertising and marketing, and transition.

The chapter on individual differences variables and later turnover are most closely linked to QOL and PERSTEMPO/OPSTEMPO influences. In the former chapter, four broad categories of factors relevant in military turnover are described. These are unmet expectations, work-family concerns, job related attitudes, and person-environment fit. A number of the QOL influences discussed in this chapter are the unmet expectations and work-family concerns described in individual differences chapter through the work of Kerce (1995), Dowden (2000), and Dunn and Morrow (2002).

Realistic information is related to QOL and PERSTEMPO/OPSTEMPO during recruiting and retention for very obvious reasons. If military applicants are not given accurate information about the amount of and type

of time away from home they will experience or are not given an a reasonable understanding of services and programs available to maintain a certain quality of life, recruiting and retention efforts may be diminished. Therefore, the QOL and PERSTEMPO/OPSTEMPO information should be part of the realistic information given to potential military applicants.

Advertising and marketing are usually linked very closely to recruiting activities. These become the means by which the realistic information about the quality of life to anticipate in the military and the types and frequency of PERSTEMPO and OPSTEMPO that will be expected of military personnel can be accurately described to potential applicants.

The psychological contract is related in a similar manner as the realistic information. To the extent that potential applicants see a certain quality of life as one of the obligations or conditions of employment they expect an employer to maintain, making those psychological contracts more "explicit" is important. Military organizations should communicate these obligations clearly to all members so that they are aware of what the organizations will provide for their quality of life in return for their military service.

QOL research has included, at various times, pay into its definition, but has not produced conclusive results to indicate a clear association. Just as there was very little research on how these two topics are related to recruitment, there is also very little research that directly links them to the other TG topics.

3I.6   LINKS TO THE MODELS

3I.6.1   Turnover Model – How QOL and PERSTEMPO Fit

PERSTEMPO/OPSTEMPO and quality of life have complex, indirect effects on turnover in this model. Both influence turnover through their effects on job satisfaction, continuous commitment, and turnover intentions. Specifically, job and organizational characteristics such as PERSTEMPO/OPSTEMPO mediate the effects of on job satisfaction and continuous commitment through quality of life. At low to moderate levels of operational PERSTEMPO, job and organizational characteristics do not seem to precipitate negative quality of life. In fact, they seem to enhance quality of life factors. In addition, they enhance continuance commitment, job satisfaction and affective commitment, leading to a decrease in turnover intentions and turnover. However, at high levels of dangerous, operational PERSTEMPO, the relationship reverses. Job and organizational characteristics lead to negative perceptions of quality of life. This leads to decreased continuance commitment, job satisfaction, and affective commitment, which is associated with higher levels of turnover intentions and higher turnover is predicted.

The above description looks at the influence of organizational factors on members overall quality of life including their home life. Some evidence is available to suggest that a service member's quality of home life will influence their work life as well independent of the job and organizational characteristics that the member is experiencing. However, much of evidence comes from non-military populations and thus, cannot be used in this context.

Alternatively, the PERSTEMPO and other instrumental factors may not negatively influence quality of life, or may not reduce it enough to overcome the continuous commitment. People in these situations may still feel they do not have other alternatives and will continue to serve. Positive non-instrumental factors may also offset negative instrumental factors to prevent members' quality of life or job satisfaction from being reduced. They may also serve to increase affective commitment, reducing both turnover intentions and actual turnover.

3I.6.2   Recruitment Model – How QOL Fits

QOL fits in this model describing Perceptions of Job and Organizational Attributes and under Job and Organizational Attractiveness under the concept of anticipatory quality of life. The factor was developed in an attempt to explore what effect, if any, the anticipated QOL in the Canadian Forces had on new recruits joining the organization. Therefore, if the anticipated QOL is high, it is expected to positively influence perceptions of job and organizational attributes as well as job and organizational attractiveness.

Another component of the Kerce (1995) QOL model may play a factor in recruitment is person-environment (P-E) fit. The degree to which members react to positive and negative experiences from Navy life may be due in part to how well their personal qualities match the demands and opportunities in the situations they find themselves. If there is a close match of abilities, interests, and motives of a person with the program of a behavior setting (i.e., if the setting engages members in ways that allow them to use their skills and abilities, and to participate in ways that interest them and that satisfy their motives) there is a good person-setting fit.

However, it has not been examined in detail in the model. Wicker (1996) highlighted the need to development this component more specifically by proposing that Navy members be asked to make their own assessment of how well their abilities, interests, and personal needs are suited to Navy life. He also suggested that married members could also be asked to make the same assessment of their spouse and of their children. Wicker (1996) recognized that this approach would be a rather simplistic attempt to deal with a complex concept. Moreover, he was only looking at how this concept would be relevant to outcomes such as attrition and performance. However, knowledge of any systematic determinants of QOL P-E fit would assist in the recruitment, selection, and classification process.

3I.7   OVERALL SUMMARY

OPSTEMPO and QOL have shown to be issues at the heart of retaining personnel. These two variables have such a large influence because they are the natural by-products of military service. Military personnel conduct operations at home and abroad and they require extensive training to complete this work. All of these activities take them away from home. They are issues that intersect between a soldier's professional life and his/her private or family life.

The relationships with recruiting are more indirect. There has not been extensive research that conclusively links OPSTEMPO and QOL with recruiting. Specifically, it suggests that research needs to be done to establish those links. All that can be said now is that there are potential areas in which OPSTEMPO and QOL may influence the effective recruiting of applicants.

Table 3I-2: Practical Recommendations of the Research Reviewed

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
PERSTEMPO	A curvilinear relationship exists between OPSTEMPO and turnover. Significant negative relationship between OPSTEMPO and retention at very high and very low levels of OPSTEMPO.	The quantity and nature of OPSTEMPO influence military members' decisions to leave. At very low or high levels of OPSTEMPO, personnel are more likely to leave or say that they are going to leave.	1) Monitor the duration and quantity of deployment that personnel complete.
	Relationship between OPSTEMPO and retention varies by the context of the OPSTEMPO.	Within these extremes, there is an optimal level of OPSTEMPO that maximizes performance and reduces turnover. The type or nature of the OPSTEMPO will reduce or increase turnover.	2) Focus attention on the nature and context of deployments as much as the actual quantity of deployments.
	There is a positive relationship between OPSTEMPO and retention when the OPSTEMPO is meaningful, relevant and challenging.	Workload aspects of OPSTEMPO are less important than the attitudes towards the work, training, and deployments. If soldiers feel that the work, training, and deployments are meaningful, relevant and challenging, they are more likely to stay.	3) Make the work that personnel conduct on deployments more meaningful, relevant, and challenging.
	There was also a positive relationship between OPSTEMPO and retention if the work was considered personally or professionally enhancing.	Another component to the nature of deployments and their impacts was the context within which it occurred. If soldiers regarded the experience as personally or professionally enhancing, they were less likely to want to leave.	4) Re-align policy, tasks and missions (where required) to ensure that deployments are personally and professionally rewarding for those who participate.

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
	Poor work predictability, low task significance, and mission non-specific tasks are positively related to higher turnover.	Aspects such as predictability, task significance and the nature of the deployment are factors that will influence the desire to remain. There is less concern about the long hours personnel work than there is about the uncertainty of how long training, deployment, and work schedules would be. They were also more concerned about the job they were doing than the long hours they spent working. If the jobs they were doing were part of the mission or jobs they were trained to do, then they did not mind the long hours.	5) Ensure that personnel know how long they will be deployed and (whenever possible), do not lengthen that time commitment. 6) Ensure that personnel are trained properly for the missions for which they are sent and that the tasks they perform are related to that mission.
Quality of Life	Personal factors are the best predictor of re-enlistment.	The more satisfaction personnel have with such personal factors as marital/ intimate relationships, relationships with children, personal development, health, and standard of living, the more likely are people to re-enlist.	7) Military personnel policy should support family relationships, especially as it relates to OPSTEMPO. 8) Military personnel policy should support personal development, health and an adequate standard of living. 9) Military personnel policy should support leisure and recreation, income and standard of living aspects of military life for spouses and family.

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
Quality of Life	Job factors influence re-enlistment indirectly through organizational commitment (Affective and Continuance).	The more satisfaction personnel have with such job factors as global QOL, their military job, and the more commitment they felt to the organization, the more likely they are to re-enlist.	10) Military culture should instil and reinforce commitment to the organization. 11) Ensure that work is structured to maximize job satisfaction.
	Anticipatory QOL needs to be studied in more depth. It offers the possibility of contributing positively to military recruiting.	Applicants likely have an impression of what their quality of life will be like should they become a military member. This impression may be more positive or negative than the actual experience turns out to be. If there is a gap that needs to be addressed so that applicants do not have an overly negative view of what life will be like nor should they have an overly positive impression either.	12) Realistic expectations of the quality of life that military members should be included in realistic job previews.
	Workload, morale, and health symptoms are strong predictors of work-family conflict (WFC).	Personnel who work longer hours, sleep less, and spend more days training are more likely to report higher levels of WFC.	13) Where possible, as part of balancing operational effectiveness, workload and working conditions should be augmented to decrease the risk of WFC.
		Military personnel with more physical symptoms and lower morale are also more likely to report higher WFC.	14) Physical fitness, optimal health and good morale can be used as mitigation strategies to decrease the likelihood of WFC occurring.
		Soldiers who are more satisfied with their jobs and feel recognition from leaders for their hard work reported less WFC.	15) As per recommendations 10 and 11.

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
		While not conclusive, results indicated that strong leadership may buffer soldiers from factors related to increased WFC.	16) Strong leadership may be used to reduce the likelihood of WFC occurring.

Chapter 3J – INDIVIDUAL DIFFERENCES AND LATER TURNOVER

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3J.1 EXECUTIVE SUMMARY

The purpose of this chapter is to review individual differences factors that are likely to play a role in the process of military turnover. Four broad categories of factors relevant in military turnover have been identified. These are unmet expectations, work-family concerns, job related attitudes, and person-environment fit. Unmet expectations represent a relatively distal group of variables affecting especially early military turnover. The reviewed literature suggested that the effects of unmet expectations on military turnover seem to be mediated by overall job satisfaction and, perhaps, continuance commitment. Work-family concerns, as part of broader quality of life (QOL) concerns, constitute a critical group of individual differences variables associated with military turnover. Theoretical and empirical work on QOL carried out mainly in the U.S. Forces and the Canadian Forces suggest that work-family concerns are likely to contribute to the development of turnover intentions through their influence on work-related attitudes. Work-related attitudes, namely job satisfaction and organizational commitment, have been consistently shown to be related to variables associated with employee withdrawal. Evidence suggests that job dissatisfaction and relatively low levels of organizational commitment contribute to the development of turnover intentions. Finally, theoretical and empirical evidence lends support for the criticality of person-environment fit in the turnover process. Although both dispositional factors (in the form of personality congruence) and person-organization fit (i.e., values congruence) are expected to play a role in turnover, the impact of values congruence is expected to be stronger than that of personality congruence in the military context. In addition to presenting an overview of the literature concerning these individual differences factors and how they are linked within the military turnover process, practical implications of the reviewed literature for managing military turnover are discussed.

3J.2 INTRODUCTION

Turnover "as an individual motivated choice behavior" (Campion, 1991, p. 199) has been a widely studied outcome variable in industrial and organizational psychology literature for almost 50 years now. It is important to note at the outset that not all types of voluntary turnover are negative for the organization. According to Campion, turnover can serve the organization if it is functional. For example, if the individual leaving the organization is a poor performer or is an easily replaceable one, then the turnover can actually be a positive condition for the organization. Voluntary turnover may also be favorable to the extent that it is avoidable. That is, turnover may be something positive if the organization could have prevented it, but decided not to do it. Utility consideration is another factor in evaluating voluntary turnover. That is, turnover is considered negative if the cost of replacing the leavers outweighs the benefits. Voluntary turnover that is dysfunctional and unavoidable can be very costly for the organizations, especially for the military, considering the scale of the investments made in the recruitment, selection, classification, and training of the personnel. Hence, identifying organizational, job- and individual-related factors contributing to dysfunctional voluntary turnover is imperative in order to be able to take appropriate actions.

Well-known turnover models presented in the literature (Bannister and Griffeth, 1986; Dalessio, Silverman, and Schuck, 1986; Fishbein and Ajzen, 1975; Griffeth and Hom, 2001; Griffeth, Hom, and Gaertner, 2000; Hom and Griffeth, 1991, 1995; Hom, Griffeth, and Sellaro, 1984; Mobley, 1977; Mobley, Horner, and Hollingsworth, 1978; Schneider, 1987; Schneider, Goldstein, and Smith, 1995) have been based on civilian samples/organizations and are attitude-centered. In most of these models, although organizational and job-related factors and external labor market conditions are included as key variables in the turnover process, their effects on turnover thoughts and intentions are hypothesized to be through job attitudes, mainly job satisfaction. Yet, theoretical and empirical literature indicates the role of individual differences factors other than job satisfaction in the turnover process.

The purpose of this chapter is to review individual differences factors that are likely to play a role in the process of withdrawal from the military. These factors are examined under four general headings: unmet expectations, work-family concerns, job related attitudes, and person-environment fit. Furthermore, evidence suggests interrelations among these factors. As presented in the proposed military turnover model included in this report, most of these factors could be an antecedent, correlate, or consequence of one another.

In the following four sections, the literatures concerning each of the four-groups of factors are briefly reviewed. In these reviews, whenever possible, the links between these factors and the other recruitment and retention (R&R) topics of the Task Group, such as quality of life (QOL) and PERSTEMPO/OPSTEMPO, recruitment, and values are established. Also, at the end of the review of the literature on each of the individual-differences factor, a brief discussion concerning how that specific group of individual-differences factor fits in the military turnover process is presented. In the final section, some of the implications of the presented material for the management of military retention along with some recommendations are presented.

3J.3   UNMET EXPECTATIONS

Initial expectations not fulfilled at work are believed to play a critical role especially in early attrition in the military (e.g., Griffeth and Hom, 2001). According to van de Ven (2003), the majority of young people who are employed on fixed-term contracts have a relatively instrumental attitude toward the military work, and unmet expectations and disappointments concerning readily observable aspects of work/job have a great deal of influence in the decision to drop out. In a study testing these assumptions, van de Ven reported that compensation, more specifically salary, was the most important job aspect concerning which there was a great disappointment among both leavers and stayers of initial military training in the Royal Netherlands Army. One third of those leaving the training reported that their expectations concerning atmosphere in the workplace had not come true. The content of the job and work relationships were also among the sources of disappointment for the trainees. Furthermore, a significant portion of those who left training early indicated that they were not assigned to the function they had opted for. The author concluded that the extent to which initial expectations of the trainees about job characteristics were met determined to a great extent the satisfaction and the following drop out rate in the initial training programs.

Expectations concerning military life have also been reported to be a critical factor for the British Army personnel applying for premature voluntary release (PVR) (Richardson, 2003). Richardson reports that opportunities for sport, adventure, and an active life were among the factors most influential in the decision to join the British Army. Yet, almost 60% of the PVR leavers stated that lack of adventurous training and opportunities for sporting activities played a critical role in their decision to leave.

Hom and colleagues initially proposed that met expectations mediated the link between post-entry realistic job previews (RJP) and job-related attitudes, namely job satisfaction and organizational commitment

(Hom, Griffeth, Palich, and Bracker, 1998). However, empirical evidence indicated that realized expectations underlay the affect toward the job (i.e., job satisfaction) more than the organization (i.e., commitment) for newly hired nurses. Hence, in the revised model, rather than having a direct link to organizational commitment, met expectations were hypothesized to directly influence newcomers' commitment by enhancing job satisfaction. In a following study, Hom, Griffeth, Palich, and Bracker (1999) admitted problems in the measurement of met expectations in their previous analyses and proposed an alternative framework after reanalyzing the same data. According to this framework, post-entry RJP influences initial expectations, which in turn influence perceptions of post-entry experiences. Job satisfaction is stated to be influenced directly by post-entry experiences. Again no direct link between post-entry experiences and commitment is identified. All told, the revised model suggested that post-entry experiences on the job are likely to mediate/ translate the effects of RJP on specifically job satisfaction.

A meta-analysis by Griffeth, Hom, and Gaertner (2000) indicated that met expectations modestly predicted actual turnover behavior (corrected validity coefficient = –.15). However, these authors cautioned the readers concerning problems associated with operationalization/measurement of met expectations.

3J.3.1   How Do Unmet Expectations Fit in the Military Turnover Process?

It seems plausible to state that unmet expectations expressed in the form of post-entry experiences concerning more visible job aspects/characteristics, such as specific working conditions, workplace atmosphere, relationships, and salary, are likely to have an influence on especially early turnover. Supporting this expectation, the revised integrated model of Hom et al. (1999) on the effects of post-hire RJP suggests that post-entry realistic job previews contribute significantly to the development of initial expectations concerning job and conditions of employment. These initial expectations in turn play a role in the perceptions of post-entry experiences, directly influencing job satisfaction. Discrepancies between initial expectations and post-hire experiences are likely to result in disappointments.

Unmet expectations are believed to be a relatively distal group of variables affecting military turnover. Their effects on turnover are likely to be mediated by overall job satisfaction, and perhaps continuance commitment, but not affective commitment. As discussed below, affective commitment refers to an individual's emotional attachment to, identification with, and involvement in the employing organization, whereas continuance commitment refers to the perceptions of the costs associated with leaving the organization (Meyer and Allen, 1991, 1997). Based on van de Ven's (2003) findings, expectations, and hence disappointments, seem more likely to develop concerning readily observable aspects of jobs, such as physical conditions and compensation. Since affective commitment is expected to be relatively resistant to direct influences of physical aspects of the job, it seems reasonable to expect that unmet expectations are likely to affect (i.e., decrease) continuance commitment, which represents an exchange-oriented bond to the employing organization, rather than affective commitment (a more detailed discussion of different commitment types is presented below).

3J.4   WORK-FAMILY CONCERNS/BALANCE

Work-family conflict, which can be defined as the extent to which work invades not only family but also personal life (Hom and Kinicki, 2001), has been identified as one of the critical determinants of turnover. In a test of an expanded Hom-Griffeth (1995) model, Hom and Kinicki (2001) found that inter-role conflict influenced turnover through the mediated effects of job satisfaction (parameter estimate = –.39) and withdrawal cognitions (parameter estimate = .15).

Work-family concerns, as part of broader quality of life factors, are believed to constitute a critical group of individual differences variables associated with voluntary military turnover as well. Rather than representing an independent set of factors in the R&R process, work-family concerns are closely interrelated with factors like work overload, PERSTEMPO, OPSTEMPO, and deployments (see also the topic chapter *PERSTEMPO/ OPSTEMPO and Quality of Life)*. Kelley, Hock, Bonney, Jarvis, Smith, and Gaffney (2001) argue that family considerations have been under-researched in the prediction of retention/re-enlistment decisions in the military. These authors argue that theoretical models adopted from civilian research or research conducted on service members without families are deficient in capturing the development of re-enlistment intensions. Frequent and long deployments, overnight duty, long work hours, high tempo, and work overload, typical of most military jobs (e.g., Dunn and Morrow, 2002; Sanchez, Bray, Vincus, and Bann, 2004), are likely to play a critical role in the decision to join in and to leave the military. Hence balancing the conflicting demands of military life and family life becomes a challenging task for most military personnel, and naturally, for the armed forces.

According to the results of the U.S. Department of Defense's 2004 survey of both active-duty and reserve members, 14% of the respondents (20% for Army members) report that their desire to stay decreased as a result of tempo, or being away more than expected (U.S. Department of Defense, 2005). Similarly, the British Airmen and Non-Commissioned Aircrew Leaver's survey results indicated that ''family stability' was the factor with the highest importance rating in the decision to leave especially for personnel with more than six years of tenure. Furthermore, high workload, lack of notice for postings, and frequency of detachments were among factors that had increased in importance recently as reasons for leaving (Brackley, 2003).

Enlisted men in the army as well as their spouses reported incompatibility of child rearing with the army life (Price and Kim, 1993). Similarly, active duty air-force women who gave birth were found to be twice as likely to leave the military compared to women who did not give birth during the same time period (Price, 1998). Research summarized by Kelley et al. (2001) indicates that deployed fathers report disrupted communication patterns, feelings of out synchrony with the family, and problems in establishing and maintaining strong parent-child attachment. Furthermore, both navy fathers and mothers anticipating deployment report substantial levels of separation anxiety characterized by guilt, shame, and concerns about the interruption of family relationships.

In another study investigating the factors associated with premature voluntary turnover in the British Army, the majority of the respondents (81.6%), who applied for premature voluntary release (PVR), reported that their decision was related very much to the impact of the Army on personal and/or domestic life (Richardson, 2003). For serving personnel, other critical factors in the development of intentions to leave were operational commitments and over-stretch (workload), amount of extra duties, frequency of operational tours, and accommodation.

Similarly, a study conducted in the Canadian Forces (CF) for the purpose of revising the Canadian Forces Attrition Information Attrition Questionnaire (CFAIQ) indicated that PERSTEMPO factors (e.g., frequent and long pre-deployment trainings and deployments themselves), quality of life concerns, and work overload were among the reported reasons (or potential reasons) for leaving the CF (Dunn and Morrow, 2002). More specifically, participants indicated family concerns as being one of the most critical factors in the decision to leave or stay in the military. Inability to balance work and family life, problems associated with being absent from home during postings, lack of support services when members were away from home or were deployed, lack of provisions for single parent families, and spouses'/partners' careers being negatively affected by postings emerged as critical issues under this general theme. According to the participants of this study, heavy workload, high tempo, frequent deployments, and long pre-deployment trainings resulted in

being away from home to an extent that was beyond the coping ability of both service members and their families.

Interestingly, studies on the effects of frequency of deployment seem inconclusive at first. Yet, a detailed examination of the findings suggests that the relationship between deployment frequency and withdrawal intentions is not necessarily linear. For example, Sticha, Sadacca, DiFazia, Knerr, Hogan, and Diana's (cited in Huffman, Adler, Castro, and Dolan, 2000) review of the studies examining personnel tempo and retention suggested that moderate levels of personnel tempo had a positive impact on retention. In a study on the impact of multiple peacekeeping deployments on soldiers' attitudes, morale, and retention in the U.S. Army, Reed and Segal (2000) found no relationship between the number of deployments and re-enlistment intentions. They, however, reported that as the number of deployments increased, soldiers' morale declined. Acknowledging the other potential contributors of low morale, like living conditions, food quality, or mail service, Reed and Segal reported that the majority of the soldiers viewed deployments to be more difficult for married soldiers with families. Castro and Adler (1999) proposed a model of the relationship between OPSTEMPO and soldier and unit readiness/performance/retention. The model predicted that moderate levels of deployments, garrison duties, and training activities were likely to facilitate soldier and unit readiness and that retention tended to decline only when OPSTEMPO levels were either very high or very low. Supporting this model, Huffman et al. (2000) reported that officers with at least one deployment (but not two or three deployments) were more likely to report that they were staying in the military than those with no previous deployment experience. Furthermore, these authors found that although junior officers with at least one deployment experience were more likely to stay in, those expecting to deploy a lot in the future were more inclined to leave the military.

Finally, Kelley et al. (2001) compared deployed and non-deployed Navy mothers on a number of variables like commitment to Navy, re-enlistment intentions, and work family concerns. Although the groups did not differ in terms of intentions to re-enlist, women who experienced deployment were more likely to report commitment as a reason for planning to stay in the Navy than non-deployed women in the control group. Also, women in the control group were more likely to report dissatisfaction with the Navy as a reason for planning to leave. The authors argued that deployments increased integration to the Navy for Navy women experiencing deployment. Yet, regardless of having experienced deployment or not, approximately one fourth to one third of the women in both groups emphasized the difficulty of balancing a Navy career with family responsibilities as a reason to leave the military.

3J.4.1   How Do Work-Family Concerns Fit in the Military Turnover Process?

Based on the available evidence it seems plausible to argue that work-family concerns as part of broader QOL factors are likely to contribute to the development of turnover intentions through their influence on overall job satisfaction and continuance commitment. Theoretical and empirical work on QOL carried out mainly in the U.S. Forces and the Canadian Forces lends support for this argument. For example, Kerce (cited in Dowden, 2000) provided a conceptual framework for the QOL research within the U.S. Marines, which later directed the development of the QOL survey in this service. The following aspects are among the main assumptions of this framework:

1) Global perceptions of QOL (i.e., people's sense of global well-being) reflect a composite of feelings and satisfactions related to various domains of life; that is, the more domains people feel positive about (satisfied with), the stronger their sense of well-being;

2) Personal dispositions influence perceptions of QOL; and

3) Perceptions of global QOL have direct influences on important organizational outcomes such as retention, performance, and personal readiness.

Building further upon Kerce's framework, Dowden (2000) proposed a conceptual model for the measurement of QOL in the Canadian Forces. Among the assumptions of the model are:

1) QOL domains such as income, job characteristics, family domain, and friends and friendship, are significant contributors of global QOL;

2) Enhancing the global QOL has an impact on subjective variables like satisfaction, commitment, and motivation; and

3) The global QOL perceptions influence important organizational outcomes, mainly retention, absenteeism, and performance through the mediating effects of subjective organizational variables.

The way work and family (or non-work) domains are balanced or not balanced seems to play a critical role in the perceptions of quality of life by the military members. According to Dowden's (2000) model, work/ non-work factors, such as marriage/intimate relationships, job itself (e.g., work load, tempo, job enrichment, and safe working conditions); self and self-development, and leisure and recreation are among the critical QOL domains. Balancing work and non-work lives means positive perceptions concerning these QOL domains and hence can be expected to contribute to the development of positive global QOL perceptions. Reviewed literature suggested that work-family concerns play a critical role in the development of intention to leave the military. It is believed that, work-family concerns influence turnover intentions through their effects on job satisfaction and continuance commitment, but not necessarily affective commitment. In the framework proposed by Dowden, a distinction between affective and continuance commitment is not made. Yet, it is expected that affective commitment would be relatively more resistant to conditions of employment. Hence, it is not expected to mediate the effects of quality of life factors/concerns on turnover intentions.

3J.5 JOB-RELATED ATTITUDES

Job attitudes have always been included among the critical antecedents of voluntary turnover. Early turnover research was directed at identifying correlates of turnover within the framework of simple models relating turnover directly to job attitudes like satisfaction and commitment (e.g., Newman, 1974; Porter, Steers, Mowday, and Boulian, 1974). These initial models were followed by increasingly complex models focusing on the decision-making processes involved in employee withdrawal (e.g., Bannister and Griffeth, 1986; Dalessio, Silverman, and Schuck, 1986; Fishbein and Ajzen, 1975; Griffeth and Hom, 2001; Griffeth, Hom, and Gaertner, 2000; Hom and Griffeth, 1991, 1995; Hom, Griffeth, and Sellaro, 1984; Mobley, 1977; Mobley, Horner, and Hollingsworth, 1978; Schneider, 1987; Schneider, Goldstein, and Smith, 1995). In the following parts of this section, relevant literature regarding three attitudinal variables, namely job satisfaction, organizational commitment, and organizational identification, are presented. In the last part of this section, the interplay between job-related attitudes within military turnover process is discussed.

3J.5.1 Job Satisfaction

Job satisfaction, which can simply be defined as an affective response to specific facets of job (e.g., pay and benefits, physical conditions, and leadership), has been an extensively studied variable in the turnover literature (e.g., Farkas and Tetrick, 1989; Hom and Griffeth, 1991, 1995; Griffeth and Hom, 2001; Mobley et al., 1978; Muchinsky and Morrow, 1980; Williams and Hazer, 1986). Although dissatisfied employees are more likely to quit their jobs than are satisfied employees, the correlation between satisfaction and turnover is moderate at best (−.19). Furthermore, the relationship between turnover and overall job satisfaction is reported

to be higher than the relationships between turnover and satisfaction with job facets, such as pay (–.09), supervisor (–.10), and co-workers (–.11) (Griffeth, Hom, and Gaertner, 2000).

In most models of turnover, job satisfaction is treated as the major variable in the decision making process concerning whether or not to leave the organization, and it is assumed to influence turnover behavior not directly, but through turnover thoughts and intentions (e.g., Bannister and Griffeth, 1986; Dalessio, Silverman, and Schuck, 1986; Hom, Griffeth, and Sellaro, 1984; Mobley et al., 1978). Supporting these model, the results of the U.S. Department of Defense's (DoD) 1999 Active Duty Survey (ADS) and the web-based surveys (Status of Forces Surveys of Active-Duty Members) conducted in July 2002 and March 2003 suggested considerably high correlations (.53 to 55) between satisfaction with military life and willingness to stay on active duty on all three years (Lappin, Klein, Howell, and Lipari, 2003). Furthermore, personal and work characteristics are assumed to influence turnover intentions (and hence, turnover itself) through their effects on job satisfaction.

Most turnover models have been developed for and are more applicable to civilian situations and, to the knowledge of the author of this chapter, there exists no comprehensive framework capturing military turnover, perhaps except for an attempt by Knapp, McCloy, and DiFazio (1993), who examined satisfaction, re-enlistment intentions, and performance as predictors of military attrition. Nevertheless, some of the meta-analytic reviews of turnover include organizational type (military vs. non-military) among the potential moderators within turnover models. These meta-analytic findings as well as more theoretical arguments suggest that because of contractual obligations, satisfaction is likely to have a weaker (yet still significant) influence on withdrawal cognitions and actual turnover for military samples than for civilian samples (e.g., Carsten and Spector, 1987; Farkas and Tetrick, 1989; Hom, Caranikas-Walker, Prussia, and Griffeth, 1992). Carsten and Spector, for example, found that predictability of turnover especially by satisfaction decreased with time, and this decrease was more evident in the military samples.

The decision making process in the military seems to be more planned and programmed; individuals are expected to choose between re-enlistment and separation much before the end of their current tour of duty (Steel and Ovalle, 1984). As stated by Hom, Caranikas-Walker, Prussia, and Griffeth (1992), unlike civilians, when they make an enlistment decision, military personnel irreversibly commit themselves to multiyear membership. Under such circumstances, dissatisfaction is expected to have a weaker effect on military personnel's withdrawal thoughts than on civilians' withdrawal thoughts. That is, military people are likely to form planned decisions (to stay in or to leave) relatively early, often at the time of entry. Once the decision is crystallized (i.e., whether they have decided to leave or re-enlist at the end of a tour of duty of fixed duration), it is likely to become resistant to satisfying/gratifying (or even unsatisfying/disappointing) experiences or morale boosting organizational interventions. Consistently, quit decisions are expected to predict military turnover more accurately than civilian turnover. Supporting this argument, in an earlier attempt to understand the process of military turnover, Knapp et al. (1993) found that although predictive ability of satisfaction concerning turnover behavior was weaker, the association between turnover intentions and turnover seemed stronger in the military context.

Empirical evidence provides clear support for the assertion that the relationship between job satisfaction and turnover is weaker for military samples. For example, as discussed above, Farkas and Tetrick (1989) found that satisfaction with the Navy 20 – 21 months after entry had no direct effect on re-enlistment intentions. Similarly, in Motowidlo and Lawton's (1984) study, the model that best explained the re-enlistment decision making process for the military personnel was the one with no direct path from satisfaction to turnover intentions. In line with the above findings, in their meta-analysis of the studies on unemployment, job satisfaction, and turnover, Carsten and Spector (1987) found that predictability of turnover especially by

satisfaction decreased with time, and this decrease was more evident in the military samples (the relationship between length of turnover data collection and job satisfaction-turnover correlations were –.24 and –.84 for civilian and military samples, respectively). Hom et al.'s (1992) meta-analysis also indicated that dissatisfaction was less related with thoughts of quitting in the military samples (–.57 vs. –.65), and there was a closer agreement between quit intentions and withdrawal behavior for the military samples (.40) than for the civilian (.34) samples. In response to the closer correspondence between intention to quit and actual withdrawal for the enlisted personnel, the authors concluded "decision to withdraw from the military develop relatively early and remain stable" (p. 902). Empirical evidence also indicates that quit decisions, which are more predictive of military turnover behavior, are quite resistant to morale boosting organizational interventions (e.g., Landstrom, Biordi, and Gillies, 1989).

3J.5.2   Commitment

Organizational commitment, which refers to a relatively stable and more global attitude toward the employing organization, has been consistently shown to be related to variables associated with employee withdrawal. In a recent meta-analysis, Griffeth, Hom, and Gaertner (2000) reported that organizational commitment predicted turnover (average corrected correlation coefficient = –.23) better than did overall satisfaction (–.19). The predictive power of commitment was even larger for the military samples (–.28). Sjoberg and Sverke (2000) reported that together with job involvement, commitment affected actual turnover behavior of emergency nurses through their effects on behavioral intentions. Among the antecedents of commitment are personal characteristics (age, sex, organizational tenure, perceived personal competence, salary, work values, and job level), job characteristics (skill variety, challenge, and job scope), leader-member/group relations (group cohesiveness, task interdependence, leadership style, leader communication), and role states (role ambiguity, role conflict, and role overload) (Mathieu and Zajac, 1990).

Meyer and Allen (1991, 1997) conceptualized commitment as a three-component structure, and the three dimensions of commitment proposed by these authors have received considerable research attention. These dimensions are Affective Commitment (AC), Continuance Commitment (CC), and Normative Commitment (NC). Within the military context AC refers to a soldier's (or a significant other's) emotional attachment to, identification with, and involvement in the military service or unit, it is the *want to* part of the construct of commitment. CC refers to the perceptions of the costs associated with leaving the military, and it is related with *need to* aspect of commitment. CC taps into perceptions of both available job alternatives and the personal sacrifices to be created by leaving the organization. Finally, NC refers to a soldier's (or significant other's) felt moral obligation to stay with the military. NC refers to *ought to* aspect of commitment (Gade, 2003).

Although all three commitment dimensions were reported to have negative correlations with turnover intentions (e.g., Meyer, Allen, and Smith, 1993; Meyer, Stanley, Herscovitch, and Topolnytsky, 2002), empirical evidence suggests that among these three dimension, AC is a better predictor of variables associated with military withdrawal than the other two dimensions of commitment. For example, Teplitsky (cited in Tremble, Payne, Finch, and Bullis, 2003) reported a significant path coefficient between AC and officer's propensity to stay in the Army. Tremble et al. reported that AC was a stronger predictor of career intent (i.e., likelihood of staying in the Army) for the commissioned officers in the US Army than CC. In this study, organizational tenure accounted for 9% of the variance in career intent and AC accounted for an additional 9%. The additional variance accounted for by CC was 2%. In another study, Heffner and Gade (2003) found that AC mediated the relationship between satisfaction (both satisfaction with the military and satisfaction with Special Operations) and career intentions.

3J.5.3   Organizational Identification (OID)

Recently, a distinction has been made between organizational commitment and organizational identification. While organizational commitment, in its popular conceptualization, refers to a person's belief in and acceptance of the organization's values and goals, willingness to exert effort for the benefit of the organization, and desire to maintain membership in that organization (Mowday, Steers, and Porter, 1979), OID is defined as a form of social identification in which people define themselves by their membership in an organization (Mael and Ashforth, 1995). According to Mael and Ashforth, in the process of identification with the organization, people internalize the attributes and values associated with the organization as their own. While OID is necessarily organization specific, commitment may not be. In fact, OID is expected to be high for at least some people prior to their actual working in the organization.

There exists empirical evidence suggesting that OID is a distinct concept from commitment in its conventional conceptualization and measurement as a single dimensional construct (Mael and Tetrick, 1992). Mael and Tetrick reported that OID had significantly weaker associations with job satisfaction and organization satisfaction than did commitment. OID was found to be a significant predictor of military attrition especially during the first six months of the enlistment (Mael and Ashforth, 1995). At the conceptual level, however, OID seems to be akin to AC as defined by Meyer and Allen (1991).

3J.5.4   How Do Work Attitudes Fit in the Military Turnover Process: The Interplay between Satisfaction and Commitment

There seems to be a lack of clear causal relationship between satisfaction and commitment in relation to employee withdrawal despite some studies suggesting that satisfaction is a precursor of organizational commitment and that commitment mediates the relationship between satisfaction and turnover intentions (e.g., Heffner and Gade, 2003; Williams and Hazer, 1986). Yet, some of the early models indicated that organizational commitment was significantly and negatively related to turnover, and that commitment included job satisfaction among its components (e.g., Porter et al., 1974). According to Currivan (2000), satisfaction and commitment seem to have a spurious relationship in the turnover process due to common determinants like routinization, supervisory support, peer support, and workload. In their meta-analysis Mathieu and Zajac (1990) emphasized the difficulty in specifying the causal precedence of job satisfaction or organizational commitment in the turnover process. Similarly, Hom and Griffeth (Griffeth and Hom, 2001; Hom and Griffeth, 1995) treated job satisfaction and organizational commitment as distinct attitudes separately influencing the withdrawal process. According to these authors, employees may dislike their jobs, but may still decide to remain if they feel committed to the organization.

Interestingly, however, in a methodologically sound longitudinal study, Farkas and Tetrick (1989) reported that the nature of the relationship between commitment and satisfaction was more complicated than a simple unidirectional relationship. Farkas and Tetrick examined the temporal nature of the relationship between satisfaction, commitment, and turnover in a sample of first-term Navy enlisted personnel. Data were collected from the enlisted personnel at three time points: at the end of recruit training, about 8 – 10 months after the beginning of recruit training, and about 20 – 21 months after the beginning of recruit training. Structural equation methodology was employed in testing alternative causal models. Results suggested that the direction of the relationship between job satisfaction and commitment changed over time, with satisfaction influencing commitment at Times 1 and 3, and commitment having a direct effect on satisfaction at Time 2, suggesting a cyclical relationship between the two variables. Satisfaction mediated the effects of personal attributes on commitment and commitment mediated the effects of both satisfaction and personal characteristics on the intention to re-enlist at Time 1 only. At Time 2, however, satisfaction mediated the effects of commitment on intention to re-enlist. At time 3, however, intention to re-enlist was no longer caused by either satisfaction or

commitment, instead, the re-enlistment intention directly influenced satisfaction, which in turn influenced commitment. This last finding suggests that by Time 3, the intention to re-enlist is crystallized and it becomes a critical factor in itself affecting job-related attitudes.

An important implication of Farkas and Tetrick's (1989) study is that the relationships between satisfaction, commitment, and turnover intentions are not static at all, especially in the military context, and hence, in order to reveal the true nature of the developmental processes underlying turnover intentions, longitudinal research designs need to be employed. Similarly, Tremble, Payne, Finch, and Bullis (2003) emphasize the benefits of longer tracking periods in fully capturing the development of organizational commitment. For example, van Maanen's study, cited in Tremble et al., using a sample of police officers indicated that it was not before the first 30 months of employment that organizational commitment stabilized.

One of the factors contributing to inconsistent results concerning the relationship between job satisfaction and organizational commitment within the turnover process could be the ad-hoc nature of the commitment measures used. Despite the well-established relationship between organizational commitment and turnover intentions, as emphasized by Gade (2003) and Allen (2003), military commitment literature has been quite atheoretical concerning the measurement of organizational commitment until recently. Meyer and Allen's (1997) conceptualization of commitment as a three-component structure seems to offer a framework to explore the nature of the relationship between commitment and turnover in the military turnover process.

Based on the available evidence it seems plausible to make the following assertions:

1) Both AC and CC (AC to a greater extent than CC) and job satisfaction contribute to turnover intentions, and

2) The nature of the relationship between AC and satisfaction is likely to be cyclical in nature.

That is, satisfaction is expected to play a role in the development of AC, but once established, AC can be expected to have an influence on satisfaction. CC is expected to be influenced by satisfaction/dissatisfaction with specific, especially, extrinsic aspects of job, such as pay and benefits. No predictions concerning the role of normative commitment have been made because of the conceptual overlap between AC and NC items (see Allen, 2003).

3J.6 PERSON-ENVIRONMENT FIT: PERSONALITY, PSYCHOLOGICAL WELL-BEING, AND PERSON-ORGANIZATION FIT

According to Mumford and Strokes (cited in Gustafson and Mumford, 1995), the fit between person and environment can be expressed as the degree of adaptation an individual exhibits with respect to his/her vocational niche. Increased fit can be expected to result in positive organizational and personal outcomes such as increased satisfaction, motivation, morale, job performance, commitment, and retention. Both empirical and theoretical evidence suggests that the fit between the person (as represented by the personality attributes, interests, skills, abilities, and values) and the environment (as represented by the job or occupation, or the organization) play a critical role in a number of organizational outcomes, including job satisfaction, organizational commitment, career involvement, career success (all positively), and turnover intentions and behaviors (negatively) (see Kristof, 1996; Lauver and Kristof-Brown, 2001; Westerman and Cyr, 2004). In this chapter the P-E fit is conceptualized at three different levels: fit in terms of personality attributes, fit in terms of psychological well-being, and fit in terms of person-organization (P-O) congruence (i.e., value congruence). Based on the literature presented below, all three forms of fit can be expected to play a role in the turnover process.

3J.6.1 Fit in Terms of Personality Characteristics

Schneider's Attraction-selection-attrition (ASA) model, lends support for the criticality of personality-environment fit in the turnover process (Schneider, 1987; Schneider et al., 1995). The model states that individuals are attracted to, selected by, and stay with the organizations that suit their personality characteristics. The major assumption of the ASA model is that both the attraction and retention processes are based on some kind of person-environment (i.e., organization) fit. Schneider and colleagues state that people select themselves into and out of work organizations, and that environments are function of persons working in them. Furthermore, they assert that attraction to, selection by, and withdrawal from an organization result in trait homogenization in that organization.

The effects of personality in the employee withdrawal process have been examined either using a predictive/regression approach or a commensurate measurement approach. Generally, the predictive/regression approach involves examining the effects of single personality characteristic on the outcome variables, such as satisfaction, turnover intentions, and actual turnover. Commensurate measurement approach to personality fit, on the other hand, requires measuring the congruence between the person's personality and the organization's ideal personality type using the same content domain.

Using the predictive approach, Boudreau, Boswell, Judge, and Bretz (2001) found that personality characteristics, such as agreeableness and neuroticism were predictive of employee withdrawal. Another attribute, called *job embeddedness,* has also been shown to predict voluntary turnover over and above organizational commitment and job satisfaction (Mitchell, Holtom, Lee, Sablynski, and Erez, 2001; Mitchell and Lee, 2001). Job embeddedness refers to an employee's (1) association with other people, teams, and groups within the organization, (2) perceptions of his/her fit with the job, organization, and community, and (3) perceived cost of leaving the job (i.e., what the person says he/she has to sacrifice if he/she leaves the job).

Although there exists some evidence concerning the predictive ability of personality characteristics in the turnover process, usually these variables fail to explain a significant portion of the variance in employee withdrawal. According to Westerman and Cyr (2004), because of their relatively weak direct effects on withdrawal process, personality variables are generally assumed to have indirect effects on turnover, through their effects on job satisfaction and organizational commitment. Westerman and Cyr, further argue that "… it may be overly simplistic to assume that any single individual difference variable, acting in isolation from consideration of its relevant environment, would have significant effects on complexly determined withdrawal cognitions and behaviors" (p. 259). These authors recommend the use of commensurate-measurement approaches in studying the effect of personality on employee withdrawal.

According to Westerman and Cyr (2004), the commensurate approach "…provide(s) a more comprehensive picture of the 'chemistry' resulting from congruence between individual differences and organizational situations and may indicate potential to explain more of the variance in withdrawal cognitions and behavior" (p. 259). Consistently, in their study they measured personality congruence by correlating the personality profile of the prototypical successful firm member (by aggregating the "ideal personality" ratings given by participants from a given organization) to each individual's own personality profile. They found that personality congruence contributed directly to intention to remain with the organization.

Along the same lines, using data obtained from a sample of Navy subordinates and their immediate supervisor Gustafson and Mumford (1995) tested the effects of person-environment fit in predicting job performance, job withdrawal, and job satisfaction. Using hierarchical cluster analysis technique they identified eight characteristic patterns of personality (i.e., *externally focused non-impulsives, overall uninvolveds, anxious*

unmotivated impulsives, anxious defensives, comfortable non-strivers, non-anxious strivers, low self-esteem impulsives, and *internally controlled rigids*) and five subgroups of environment (i.e., *independent-simple, structured-complex, unstructured-unsupported, directed-undemanding,* and *protected-certain*). As an example, while anxious defensives were characterized by low job involvement and anxiety, non-anxious strivers were characterized by high job involvement, high achievement motivation, and low anxiety. Results suggested differential effects of person subgroup (i.e., personality type), situation subgroup (i.e., environment type) fit on the three organizational outcomes. For example, compared to the other groups/types, the *anxious defensives, overall uninvolveds*, and *anxious-unmotivated impulsives* were more likely to be dissatisfied, withdrew more, and performed poorly within the structured-complex environments (for more details, see Gustafson and Mumford, 1995). Although further studies are needed to advance our understanding of the interplay between person-environment fit and organizational outcomes, results of Gustafson and Mumford's (1995) study have important implications for personnel management practices in the military. That is, if the best-fitting personality type(s) could be identified for a given organizational/environmental type, then selection and classification efforts can be geared toward selection and classification of individuals into their ideal environments.

3J.6.2   Fit in Terms of Psychological Well-Being

In addition to job-related personality variables, mental health factors are expected to play a significant role in the process of military turnover. Talcott, Haddock, Klesges, Lando, and Fiedler (1999) found that mental-health-related factors were one of the common predictors of discharge in the United States Air Force basic military training. As cited by Holden and Scholtz (2002), emotional instability, over-dependence, optimism, self-efficacy, and depression have all been identified to be significant predictors of military training outcome in the US military.

Psychological well-being has been among individual differences factors considered in the selection/screening of military personnel (e.g., Holden and Scholtz, 2002; Magruder, 2000; Sümer, Bilgic, Sümer, and Erol, 2005). Krueger (2001) stated that compared to most civilian jobs, military jobs involve much more demanding physical and psychological conditions, such as fear, sensory overload, sensory deprivation, exposure to extreme geographies and climatic temperatures, and the like. These conditions call for individuals with not only physical but also psychological stamina. According to Cigrang, Todd, and Carbone (2000), mental-health-related problems play a critical role in a significant portion of the turnover/discharge within the first six months of enlistment in the U.S. Armed Forces. Scholtz (2003) reported that personality factors, such as conscientiousness and neuroticism, significantly correlated with psychological well-being and that both personality measures and psychological well-being had significant relationships with interpersonal and organizational deviance in the Canadian Forces. Along the same lines, Holden and Scholtz (2002) used Holden Psychological Screening Inventory (HPSI) for predicting basic military training outcome for a sample of non-commissioned recruits in the Canadian Forces. Results indicated that the Depression scale of the inventory was predictive of training attrition, yielding support for the use of the inventory as a screening tool.

3J.6.3   Person-Organization Fit: Values Congruence

A distinction has been made between person-organization (P-O) fit and person-job (P-J) fit (see Cable and DeRue, 2002: Kristof, 1996; Lauver and Kristof-Brown, 2001). While P-O fit refers to the extent to which an employee's personal values and the employing organization's values/culture are congruent or compatible, P-J fit refers to the extent to which abilities of the person and the demands of the job match, or the needs of the person and what is provided by the organization are congruent (Lauver and Kristof-Brown, 2001). In other words, while P-O fit involves the compatibility of the individual with the employing organization, mostly at

the level of values, P-J fit refers to a person's compatibility with the job in question (Kristof, 1996). Empirical evidence indicates that these two fit types are weakly but positively correlated (e.g., Cable and DeRue, 2002; Lauver and Kristof-Brown, 2001). While P-J fit seems more relevant in the process of recruitment and selection, the P-E fit seems to be especially critical in understanding the military turnover process as it refers to the similarity between deeply seated individual and organizational characteristics.

Several researchers reported P-O fit as being a sound and/or better measure of P-E fit predictive of important organizational outcomes, such as job satisfaction, organizational commitment, and turnover intentions (e.g., Cable and Judge, 1996; Lauver and Kristof-Brown, 2001; O'Reilly, Chatman, and Caldwell, 1991). Using a values profile matching process to assess person-environment fit, O'Reilly et al. (1991) found that P-O fit predicted job satisfaction and organizational commitment a year after the measurement of fit, and that it predicted actual turnover even after two years. Similarly, Lauver, and Kristof-Brown (2001) found that perceived P-O fit was a significant predictor of job satisfaction (β = .40) and intention to quit (β = −.47) for employees working in a large national trucking company. Predictive ability of P-O fit seemed stronger than that of P-J fit for especially intention to quit (β = −.22). In another study, Cable and DeRue (2002) made a distinction between three types of fit perceptions: *P-O fit perceptions* (i.e., value congruence between the person and the organization); *needs-supplies fit perceptions* (i.e., mach between what is need by the person and what is offered by the organization); and *demands-abilities fit perceptions* (i.e., congruence between the demands of a job and the person's abilities). These authors examined whether these three types of fit were differentially related to organizational outcomes. The needs-supplies and demands-abilities fit perceptions tap into P-J fit construct. Among the important findings of this study was that P-O fit perceptions were good predictors of turnover decision (β = .48), perceived organizational support (β = .44), organizational identification (β = .42), job satisfaction (β = .28), and citizenship behaviors (β = .20).

More recently, Westerman and Cyr (2004) examined the effects of values congruence (i.e., P-O fit), work environment congruence (needs-supplies fit), and personality congruence on job attitudes and turnover intentions using a sample of sales people in a number of organizations. They measured fit using commensurate measurement approach rather than relying on perceptions of congruence. They found that values congruence and work environment congruence were both predictive of job satisfaction and organizational commitment. Also, job satisfaction and commitment mediated the relationship between these two types of congruence and turnover intentions. In addition to its influence through satisfaction and commitment, values congruence had a direct effect on turnover intentions. Finally, as mentioned before, personality congruence had only a direct effect on turnover intentions.

3J.6.4   How Does P-E Fit in the Military Turnover Process?

Based on the reviewed evidence, personality, psychological well-being, and values can all be expected to play a role in the process of military turnover. Hom et al. (1992) state that moral or patriotic reasons play an important role in the enlistment decisions of military personnel. These authors cite empirical evidence implying prevalence of an institutional orientation rather than an occupational orientation among military personnel (Janowitz, cited in Hom et al.). Hence, re-enlistment decisions may have less to do with attitudes concerning specific job duties and, perhaps, more to do with personal characteristics/inclinations, and especially with values.

Although not directly included in most turnover models, personal dispositions are acknowledged in the literature as critical factors in the process of turnover. Griffeth and Hom (2001) included negative affectivity, the tendency to perceive oneself and environment negatively, among the factors contributing to job dissatisfaction in employee turnover. Similarly, person-job fit is hypothesized to be a critical factor

influencing military retention both directly and through global satisfaction (i.e., QOL perceptions) in the Kerce model (cited in Dowden, 2000). In his conceptual model of QOL outcomes, Dowden proposed that personal dispositions are likely to influence three organizational outcomes (retention, absenteeism, and individual performance) through their effects on attitudinal factors, moral, motivation, and perceived stress.

Despite the evidence concerning their possible effects and despite their intuitive appeal, there are important methodological (i.e., measurement-related) and practical issues concerning the inclusion of personality characteristics in a conceptual turnover framework. First of all, it is important to decide whether personality variables need to be treated as distal variables linearly influencing turnover intentions and behaviors (directly or through attitudinal variables) or whether we should focus on the fit between personality and environment and identify the best fitting personality types for a given environment, as done by Gustafson and Mumford (1995) and Westerman and Cyr (2004). The problem with the former approach, where individual personality variables are assumed to influence the variables critical in employee withdrawal, is that, as argued by Westerman and Cyr (2004), it seems overly simplistic to assume any personality attribute or dispositional variable acting in isolation would have significant effects on a complexly determined process like voluntary turnover.

The latter approach, where personality congruence rather than the individual effects of certain personality attributes is the focus of attention, seems to provide a relatively sound basis for exploring the effects of personality in employee withdrawal. Westerman and Cyr's (2004) own study also provided evidence for the effects of personality fit on turnover intentions. However, a general problem with the inclusion of personality factors (as individual variables or as congruence) in a military turnover framework is that it is not possible to talk about personality attribute(s) with a generalizable desirability to all military jobs; studies are needed to identify the best predicting or fitting personality attributes or profiles for different military jobs, and this seems to be a serious endeavor in itself. Additionally, it seems more logical to focus on personality variables, and perhaps psychological well-being, during the process of selection as opposed to retention.

There seems to be stronger evidence for the inclusion of values congruence as an important component in the military turnover process. First, the evidence concerning the primacy of values congruence as a predictor of work attitudes and turnover intentions over the other measures of fit, including personality is quite convincing (e.g., Cable and Judge, 1996, Lauver and Kristof-Brown, 2001; O'Reilly, Chatman, and Caldwell, 1991; Westreman and Cyr, 2004). Second, as stated by Puente (2004, see also the topic chapter *Values Research*), values are especially crucial in the military context, in both recruitment and retention processes. According to him, as deeply seated individual differences factors, values influence individual and collective behavior, both directly and indirectly, through intervening variables such as attitudes and norms. Consequently, understanding values is critical in managing differences and creating a mutual understanding and tolerance for diversity. Hence, values congruence (or P-O fit) can be hypothesized to influence military turnover especially through its influence over work attitudes, mainly job satisfaction and organizational commitment.

3J.7   CONCLUSION: THE EFFECTS OF INDIVIDUAL DIFFERENCES FACTORS IN THE EMPLOYEE WITHDRAWAL PROCESS AND SOME PRACTICAL IMPLICATIONS

The individual differences factors discussed above are believed to be a correlate, antecedent, or consequence of one another in the turnover process. Among these factors, unmet expectations seem to be a relatively distal group of variables affecting military turnover. Unmet expectations are expected to influence job satisfaction and especially continuance commitment, possibly through QOL perceptions. Expectations and disappointments

seem more likely to develop concerning readily observable aspects of jobs, such as physical conditions, compensation, work load, and tempo (e.g., van de Ven, 2003), and such aspects of jobs are included among the potential contributors of QOL perceptions as described by Dowden (2000). Unmet expectations are less likely to influence affective commitment since affective commitment, as an emotional bond to the employing organization, is expected to be relatively resistant to direct influences of physical aspects of the job. Although they seem to be distal factors affecting military turnover through a number of intervening variables, unmet expectations seem to deserve special attention in the development of military recruitment and retention strategies. Since a significant portion of those leaving the military report disappointments concerning work atmosphere and the job/function they are assigned to (e.g., Richardson, 2003), more realistic (!) "Realistic job previews – RJP" can be used to create accurate expectations concerning military life awaiting the candidates. More realistic job previews may involve extended visits to military bases and/or extended probationary/try-out periods. Additionally, alterative approaches to RJPs, such as "decision making training" (Ganzach, Pazy, Ohayun, and Brainin, 2002) and an "expectation-lowering procedure", proposed by Buckley, Fedor, Veres, Wiese, and Carraher (1998), can be employed to create more realistic expectations in the potential members (for more details about the alternatives to RJPs see the topic chapter *Realistic Information or Not?: Short-Term Consequences of (Mis)Information*). In addition, policies aiming to improve the QOL of military personnel and their dependents are important ways to reduce disappointments concerning the military life.

Improving the QOL life is expected to contribute to the retention of military personnel not only through reducing disappointments concerning military life, but also through providing a base for a more balanced work-family life. The reviewed literature suggests that work-family concerns play a critical role in the development of intentions to leave the military. It is believed that work-family concerns, as part of broader QOL factors, influence turnover intentions through their effects on job satisfaction and continuance commitment, but not necessarily affective commitment. In Dowden's (2000) QOL model, work/non-work factors, such as marriage/intimate relationships, job itself (e.g., work load, tempo, job enrichment, and safe working conditions), self-development, leisure, and recreation are among the critical QOL domains. Balancing work and non-work domains means positive perceptions concerning these QOL domains, which in turn contributes to job satisfaction and commitment.

As suggested by Marrow (2004), managing deployment time seems to be a critical factor in ensuring the quality of life, hence positive job attitudes, for military personnel. Optimum number, frequency, and length of deployments for different groups of military personnel need to be identified to maximize the outcomes for both the members and the organization. This approach may require establishment of prediction equations, each unique to a specific group of personnel, in a specific force, in a specific nation, to be used in determining the time away from home critical in decreasing the members' quality of life perceptions.

Military organizations have long been cognizant of the role of job attitudes, especially job satisfaction and commitment, in the member withdrawal process. In this topic chapter, using Meyer and Allen's (1997) three-component approach to organizational commitment, some predictions have been made concerning the nature of the relationships between satisfaction, AC, and CC within the military turnover process. Consistent with the proposed military turnover model (see *A proposed Model of Military Turnover*), job satisfaction and both types of organizational commitment are expected to be among the critical mediators in military turnover. In other words, the effects of unmet expectations, person-environment fit, and work/non-work concerns on military turnover are expected to take place through their effects on these three critical work-related attitudes.

From a practical standpoint it seems logical to focus on factors immediately influencing job satisfaction, and perhaps commitment, in the military withdrawal process. Among these factors, person-organization fit, especially in the form of values congruence, can best be dealt within the processes of recruitment and

selection. In addition to aiming to find the best fitting personnel in terms of skills and abilities, military recruitment and selection efforts can be geared toward finding the best-fitting members in terms of the honored values. Furthermore, as discussed above, policies and strategies aiming to maximize the quality of both work and non-work life of the military members are expected to facilitate the development of positive job attitudes, mainly satisfaction.

Among the factors directly influencing job satisfaction, non-instrumental characteristics, such as leader-member relations, are perhaps the most difficult ones to be influenced by short-term organizational interventions. In many cases a system-wide change or a cultural change may be required to create an environment nourishing positive work-related attitudes.

Personality variables, dispositions, and values are all acknowledged in the literature as critical factors in the process of turnover (e.g., Boudreau et al., 2001; Griffeth and Hom, 2001; Waterman and Cyr, 2004). According to Dowden (2000), personal dispositions are likely to influence organizational outcomes, such as retention, through their effects on attitudinal factors, moral, motivation, and perceived stress. Yet, as discussed above, there are methodological and practical problems especially with the inclusion of dispositional factors in a military turnover conceptual framework. The reviewed literature suggests that values congruence, or P-O fit, has stronger relationships with both intermediate and ultimate outcomes in the civilian turnover process than any other index of person-environment fit. Hence, acknowledging the significance of values within the military context, it is expected that values congruence/incongruence is likely to play a more critical role in the development of turnover intentions in the military, especially through its effects on attitudes known to be critical in the process. Although there are post-hire means to increase the fit of the members in terms of values (such as through training programs or the job experience itself) as emphasized above, recruitment and selection activities allow for the use of more direct means to assure values congruence between the members and the organization.

Chapter 4A – A PROPOSED MODEL OF MILITARY RECRUITMENT

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4A.1   EXECUTIVE SUMMARY

This paper presents a conceptual model of military recruitment based on a review of recruitment research conducted on both military and non-military samples and on the efforts of members of the NATO Task Group on Recruitment and Retention of Military Personnel. The model has two major objectives. First, it is intended to support military HR managers in developing their recruitment policy, as the model shows the impact of organizational measures on the individual's decision-making process. Second, the model may serve as a general framework for further recruitment research. The model is composed of organizational- and individual-level predictor variables, and outcome variables. The organizational-level predictor variables relate to the actual environment in terms of objective job (e.g., pay level) and organizational (e.g., size) characteristics. The individual-level predictor variables refer to the perceived environment in terms of individuals' subjective interpretation of the job and organizational characteristics (e.g., image, familiarity). The model's outcome is defined as job pursuit, which can take many forms (e.g., applying, accepting a job offer) according to the recruitment stage an individual is going through. Job pursuit is broken down into the triad attitude-intention-behavior to indicate the mediating role of attitude and intention in the relationship between individual-level variables and job pursuit behavior. We further rely on principles from information and communication theory to describe how information about the organization is transmitted through various information sources to the target population. A distinction is made between sources that are under the direct control of the organization (e.g., advertisements) and sources that cannot be controlled by the organization (e.g., word-of-mouth). Based on the literature review and the proposed model, several suggestions for future research are presented. The paper concludes with a list of practical recommendations and guidelines to help our military decision-makers solving the recruitment problems our organizations are facing today and will be facing in the future.

4A.2   A PROPOSED MODEL OF MILITARY RECRUITMENT INTRODUCTION

Militaries in several nations are increasingly facing difficulties in attracting, enlisting and retaining the required numbers of new recruits (Asch et al., 2002; Bachman, Segal, Freedman-Doan, and O'Malley, 2000; Knowles et al., 2002). Economic and demographic changes have shrunk the recruit pool and there has been a decline in recruit quality that began in the early nineties (Asch, Du, and Schonlau, 2004). A "war for talent" (Michaels, Handfield-Jones, and Axelrod, 2001) has emerged in which the military faces fierce competition from private and public organizations in attracting the most qualified personnel. Competing organizations invest extensive resources in advertising, head hunting and providing incentives to attract the best people to their organization. In response, militaries are increasing their recruitment efforts. For example, from fiscal year 1995 to 2001, the U.S. Army increased its number of recruiters from 4895 to 6194. In 2000, they raised

basic pay by 4.8 percent. The U.S. also committed to higher than usual pay increases through fiscal year 2006 (Asch et al., 2002). In many European countries the importance of attracting new recruits has been bolstered by the transition to a voluntary military service (Lescreve, 2000; Matser, 2001).

Research interest in the topic of employee recruitment is flourishing. This is evident in the rapid growth of literature on applicant attraction and job choice processes over the past decade. Numerous articles, chapters, books and comprehensive reviews on recruitment have been written (Barber, 1998; Breaugh, 1992; Breaugh and Starke, 2000; Rynes, 1991; Rynes and Cable, 2003; Saks, 2005; Wanous, 1992). Recently the first meta-analysis on applicant attraction was published (Chapman, Uggerslev, Carroll, Piasentin, and Jones, 2005).

Prior to 1990, recruitment research was generally restricted to one of only three topics: recruiters (e.g., Do friendly recruiters make a better impression on job applicants?), recruitment sources (e.g., Do individuals recruited via newspaper ads have a higher turnover rate than individuals referred by current employees?), and realistic job previews (RJPs) (e.g., Does providing realistic job information result in higher levels of commitment and job satisfaction, and lower levels of voluntary turnover?) (Breaugh and Starke, 2000; Rynes and Cable, 2003). Since the early 1990s, new research questions have surfaced, partly as a result of Rynes' (1991) chapter in the second edition of the *Handbook of Organizational and Industrial Psychology*. For example, there has been a significant increase in research examining applicant reactions to a wide variety of selection procedures (e.g., Chapman, Uggerslev, and Webster, 2003; Ryan, Greguras, and Ployhart, 1996; Rynes and Connerly, 1993) and to various types of affirmative action (AA) policies (Cropanzano, Slaughter, and Bachiochi, 2005; Highhouse, Stierwalt, Bachiochi, Elder, and Fisher, 1999a; Truxillo and Bauer, 1999). Considerable progress has also been made in research on the antecedents and consequences of person-organization fit (Cable and Judge, 1996; Judge and Cable, 1997) as well as in the measurement of organizational attractiveness (Highhouse, Lievens, and Sinar, 2003).

Despite these major research contributions, researchers have highlighted many questions that remain unanswered (Breaugh and Starke, 2000). For example, Rynes and Cable (2003) suggested examining the influence of technological advances and changing labor markets on the tactics used by organizations to attract new talent. Chapman et al. (2005) called for more research on actual job choice by real applicants, while others (Barber, 1998; Rynes, 1991) emphasized the need for research that is more theory-driven and "designed with an appreciation of the complexity of the recruitment process" (Breaugh and Starke, 2000, p. 430).

The military has a long-standing tradition of recruitment research that can be broken down into three major streams. One stream of research focuses on the effects of RJPs on post-hire turnover (Ganzach, Pazy, Ohayun, and Brainin, 2002; Horner, Mobley, and Meglino, 1979; Ilgen and Seely, 1974; Meglino, Ravlin, and DeNisi, 1997). A second stream examines predictors of military propensity (intention to enlist) and actual enlistment. Examples of these predictors include: demographic, biographic, educational, and family background factors and attitudes toward the military (Bachman et al., 2000; Brown and Rana, 2005); recruiter traits and behaviors (Schreurs et al., 2005); perceptions of job and organizational attributes (Lievens, Van Hoye, and Schreurs, 2005); and youth perceptions of parental attitudes about the military (Legree et al., 2000). The third stream consists of economic studies conducted to analyze the effects of allocation of military recruiting budgets on recruiting productivity (e.g., Hanssens and Levien, 1983; Lovell, Morey, and Wood, 1991; Sohn, 1996).

Although studies in the three streams mentioned have furthered our understanding of military recruitment, each stream has developed in isolation from the others much like most of the pre-1990 recruitment research in non-military settings (Rynes, 1991). Rynes demonstrated how this piecemeal approach to research may obstruct theory development and barely contributes to the practical know-how of recruitment, the latter being of utmost importance in view of the applied character of most military research.

This paper attempts to bring together research findings in the different areas of recruitment. The purpose of this paper is to describe a conceptual model of military recruitment that is based on research findings in the area of recruitment. The research that forms the basis of the model will be described. The development of this model is based on a review of recruitment research conducted on both military and non-military populations and on the efforts of members of the *NATO Task Group on Recruitment and Retention of Military Personnel*[1]. The model is intended to serve as general framework for further research.

There are several approaches to structuring a review of this nature. This review is organized around the proposed model of military recruitment that is presented in the first section of the article, following the definition of recruitment. In the second section the central outcome variable of the recruitment model, organizational attractiveness, is discussed. In the third section, we zoom in on the predictors of organizational attractiveness. A distinction is made between organizational- and individual-level predictor variables. The organizational-level predictor variables relate to the actual environment in terms of objective job and organizational characteristics. The individual-level predictor variables refer to the perceived environment in terms of individuals' subjective interpretation of the job and organizational characteristics. In the fourth section, we describe how information about the organization is transmitted through various information sources to the target population. A distinction is made between sources that are under the direct control of the organization and sources that cannot be controlled by the organization. Based on the literature review and the proposed model, several suggestions for future research are then presented. The paper concludes with a list of practical recommendations and guidelines to help our military decision-makers solving the recruitment problems our organizations are facing today and will be facing in the future.

4A.3 THEORETICAL FOUNDATION

4A.3.1 Definition of Recruitment

Several definitions of recruitment have been proposed over the last two decades. For example, Rynes (1991) defined recruitment as "encompass[ing] all organizational practices and decisions that affect either the number, or types, of individuals that are willing to apply for, or to accept, a given vacancy" (p. 429). A similar definition was offered by Breaugh (1992): "Employee recruitment involves those organizational activities that (1) influence the number and/or types of applicants who apply for a position and/or (2) affect whether a job offer is accepted" (p. 4). Barber (1998) observed that both definitions confuse the recruitment *process* with the recruitment *outcome*. According to these definitions a recruiting program (e.g., a television ad) that failed to attract applicants would not be considered part of recruitment. On the other hand, organizational practices (e.g., war against terrorism) that have the unintended effect of attracting or turning off prospects would be considered as part of recruitment. To avoid defining recruitment in terms of its consequences, Barber adopted a narrower definition: "Recruitment includes those practices and activities carried on by the organization with the primary purpose of identifying and attracting potential employees." Barber's definition has been the source for several other recruitment scholars to propose their own definition. For instance, according to Taylor and Collins (2000) "Recruitment includes the set of activities undertaken by the organization for the primary purpose of identifying a desirable group of applicants, attracting them into its employee ranks, and retaining them at least for the short term" (p. 306). More recently, Saks (2005), emphasizing the strategic importance of the recruitment function, put forward the following definition: "Recruitment involves actions and activities taken by an organization in order to identify and attract individuals to the organization who have the

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[1] In 2003, a NATO Task Group (TG) on *Recruitment and Retention of Military Personnel* was formed in response to interest in military recruitment and retention. The TG's purpose was to address recruitment and retention issues across NATO countries. This paper is in line with the work conducted by this group. More information on the TG can be obtained from the first author.

capabilities to help the organization realize its strategic objectives. In particular, such activities should generate a pool of desirable candidates; enhance their interest in and attraction to the organization as an employer; and increase the probability that they will accept a job offer" (p. 48). For the purpose of this paper, we adhere to Saks' definition of recruitment as it highlights the important role of recruitment in helping an organization achieve its strategic objectives.

4A.3.2   A Proposed Model of Military Recruitment

The model outlined in Figure 4A-1 is a model of behavioral prediction. In this paper, the behavioral variable is called "job pursuit." Job pursuit can take many forms (e.g., applying, job offer acceptance) depending on the recruitment stage the (potential) applicant is going through. In line with other models of behavioral prediction, such as the theories of reasoned action (TRA, Ajzen and Fishbein, 1977) and planned behavior (TPB, Ajzen, 1991), we assume that a person's intention to act is the immediate antecedent of behavior and that intention, in turn, is predicted by the extent to which a person has a positive or negative attitude toward the behavior. The model also includes a variety of predictors that are proposed as determinants of applicant attraction. These predictors relate to individuals' cognitions (beliefs, perceptions, expectations) and are hypothesized to influence behavior through influencing attitude and/or intention. The model further relies on principles from information and communication theory (e.g., Shannon and Weaver, 1949). Applied to a recruitment context, communication can be conceptualized as the transmission of a message to a target group of (potential) applicants through a specific source or medium (Barber, 1998). The message content relates to information on the available jobs (e.g., type of work to be performed, pay level) and the hiring organization (size, type of industry) that may play a critical role in individuals' decision-making process. The message is usually transmitted and controlled by the organization as it attempts to identify and attract new employees. Yet, people also receive information about the organization from other sources (e.g., word-of-mouth, publicity), which are not all under the direct control of the organization. Finally, several inter-individual difference variables (e.g., values, needs) are assumed to moderate the relationships depicted in the recruitment model. Each component of the model is described below along with a brief discussion of studies, from both military and non-military populations, that have tested the relationships in the model empirically. We will focus on relationships between, instead of within, classes of variables.

Organizational-level variables

Individual-level variables

Outcome variables

Familiarity

Hiring expectancies

feedback loop

Informational sources

Internal sources
- Recruitment advertising
- Company web pages
- Recruiter characteristics/ behaviors
- Military career office
- Selection activities
- Site visits
- Realistic job previews

External sources
- Publicity
- Word-of-mouth

Subjective fit
- P-J fit
- P-O fit

Applicant perceptions of the hiring process
- Recruitment
- Selection

Organizational image
- Instrumental attributes
- Symbolic attributes

Social influence
- Reputation perceptions
- Perceived social support

Perceived alternatives

Attitudes
- Toward the organization
- Toward pursuing a job

Job pursuit
- Visiting the career office
- Applying
- Taking the selection tests
- Accepting a job offer
- Showing up on enlistment day

Job pursuit intentions

Job and organizational characteristics
- Pay and benefits
- Educational opportunities
- OPTEMPO
- (Re)location

Moderating variables
- Values
- Needs
- Personality
- Goals
- Self-esteem
- Self-efficacy
- Need for achievement

Figure 4A-1: A Proposed Model of Military Recruitment.

4A.4   COMPONENTS OF ORGANIZATIONAL ATTRACTIVENESS

4A.4.1   Job Pursuit

Ultimately, recruitment efforts are aimed at influencing a person's behavior, whether this is applying, recommending the organization to others, or attending a site visit. In the present paper, we use "job pursuit" to refer to a variety of possible behaviors. Some behaviors (e.g., applying) occur in early recruitment stages, whereas other behaviors (e.g., job offer acceptance) are typical for later recruitment stages. Barber (1998) identified three recruitment stages: generating applicants, maintaining applicant status, and job choice. Examples in a military context are as follows: attempts to persuade potential applicants to visit military career offices and to apply for the military (generating applicants); attempts to keep applicants interested in the job, for instance by encouraging them to attend the selection procedure and to take the tests (maintaining applicant status); and trying to convince desirable applicants to accept job offers from the military (over offers from other organizations) and to be present on enlistment day (job choice). As individuals advance through this recruitment cycle, they acquire new information about the organization (through various sources, see below). Therefore, in line with Cable and Turban (2001), the recruitment model contains a feedback loop to indicate that the process of establishing and modifying knowledge about the organization is ongoing.

4A.4.2   An Attitude-Intention Mediated Model of Military Job Pursuit

There is an abundance of measures of organizational attractiveness in past research. Despite the practical and theoretical value of having behavioral measures of attraction, most studies on organizational attractiveness used non-behavioral, indirect measures of attraction as a substitute for behavioral measures. This was presumably because behavioral measures of applicant attraction are hard to obtain. Truxillo, Steiner, and Gilliland (2004) made a distinction between "soft" and "hard" outcomes. Soft outcomes typically include items assessing general company attractiveness, company prestige, perceptions of the organization, job acceptance intentions, intentions to recommend the organization to others, and intentions to withdraw from the selection process (e.g., Highhouse, Beadle, Gallo, and Miller, 1998; Macan, Avedon, Paese, and Smith, 1994; Robertson, Iles, Gratton, and Sharpley, 1991; Smither, Reilly, Millsap, Pearlman, and Stoffey, 1993; Turban, Forret, and Hendrickson, 1998). Hard outcomes include actual applications for employment and ultimately choice of one place to work, organizational commitment and satisfaction, and applicant withdrawal from the selection process (e.g., Ambrose and Cropanzano, 2003; Highhouse et al., 2003; Ryan, Sacco, McFarland, and Kriska, 2000).

To gain insight into the complexity of organizational attractiveness measures, Highhouse et al. (2003) did a factor analysis on items commonly used in past research. They found that three non-behavioral components of organizational attractiveness can be reliably distinguished: attractiveness, prestige and behavioral intentions. Furthermore, according to the authors, the relationship between these components and organization-pursuit behavior corresponds to the TRA (Ajzen and Fishbein, 1977). Based on their findings, the authors postulate that intention mediates the effects of company attractiveness (attitude) and prestige (social norms) on organization choice, similar to the mediating role of intentions in the TRA.

Allen, Van Scotter, and Otondo (2004) examined the effects of several recruitment media (e.g., face-to-face, video, audio, text) on attitudes toward the organization, attitudes toward joining the organization, intentions to pursue joining the organization, and behavior associated with joining. Consistent with the TRA and TPB (Ajzen, 1991), the authors found that attitudes toward the organization were positively related to attitudes toward joining, which were positively related to intentions to pursue employment, which were positively related to behavior associated with pursuing employment. This study not only provides support for an attitude-

intention mediated model of job pursuit, it also demonstrates that attitudes toward joining is a better predictor of job pursuit intentions than general attitudes toward the organization (e.g., company attractiveness) (Ajzen and Fishbein, 2005).

Recently, Chapman et al. (2005) conducted a meta-analysis of the relationships between various recruitment predictors and four major recruitment outcome variables: job/organization attraction, job pursuit intentions, acceptance intentions, and job choice. Job/organization attraction refers to an overall evaluation of the attractiveness of the job or the organization, whereas job pursuit and acceptance intentions indicate a person's willingness to pursue (e.g., attend a site visit or second interview) and accept a job. Both are frequently used as proxies of actual behavior. Job choice, or the decision whether or not to accept a real job offer involving an actual job, is the only "hard" outcome in this list. The results showed that attraction and/or intention mediated the predictor-job choice relationships. More specifically, they found that some predictors (e.g., recruiter characteristics) influenced job choice more through attraction, whereas others (e.g., perceptions of the recruiting process) better predicted job choice through intention. This study is noteworthy for at least two reasons. First, it is indicative of the complexity of the recruitment process as it shows how predictors may differ in their relation to job choice despite their sometimes apparent similar content (for similar conclusions, see also Aiman-Smith, Bauer, and Cable, 2001; Schreurs et al., 2005). Second, it demonstrates the importance of having common definitions and operationalizations for the constructs being measured in order to compare studies and accumulate knowledge.

Based on the above findings, we propose an attitude-intention mediated model of job pursuit with the military. More specifically, we propose that attitudes (toward the military, toward pursuing a job) and job pursuit intention mediate the relationship between recruitment predictors and job pursuit behavior. Yet, we are reluctant to propose a fully mediated model of job pursuit (from attitudes to intention to behavior) since several studies suggested that some recruitment predictors may have a direct effect on job pursuit intention (Aiman-Smith et al., 2001; Chapman et al., 2005; Schreurs et al., 2005).

4A.5   PREDICTORS OF MILITARY JOB PURSUIT

A distinction is made between *organizational-level* and *individual-level* predictor variables. The organizational-level predictor variables relate to the actual environment in terms of objective job and organizational characteristics. The *individual-level* predictor variables refer to the perceived environment in terms of individuals' subjective interpretation of the job and organizational characteristics. Most of the predictors of job pursuit can also be classified according to Behling, Labovitz, and Gainer's (1968) three "implicit theories" of job choice: objective factors, subjective factors, and the critical contact approach. The objective factors approach assumes that job pursuit decisions are based on weighing the advantages and disadvantages of objectively measurable job and organizational attributes (e.g., pay, type of work, organizational size). Objective factors relate to the actual environment. The subjective factors approach assumes that job pursuit is based on the perceived congruence between the individual (e.g., personality, needs, values) and the organization (e.g., image). They relate to individuals' subjective interpretation of the organization based on the information available to them. In the remainder of this article, objective factors are treated as equivalent to organizational-level variables, and subjective factors are treated as equivalent to individual-level variables. The critical contact perspective assumes that potential applicants often have insufficient information to make well-informed job choices and therefore rely on (early) recruitment contacts to differentiate between organizations. This perspective will be discussed in the section on informational sources.

4A.5.1 Objective Factors/Organizational-Level Variables

Of central importance in recruitment are the characteristics of the hiring organization and of the vacancy. In the discussion of objective characteristics, we focus on the main effects of these characteristics on applicant attraction. However, there is substantial evidence that the attractiveness of job and organizational characteristics differs across individuals. The moderating role of individual difference variables (e.g., needs, values, personality, etc.) has generally been studied under the rubric of subjective factors/individual-level variables (see below).

4A.5.1.1 Organizational Characteristics

Previous research has convincingly shown that organizational characteristics, such as size (e.g., Barber, Wesson, Roberson, and Taylor, 1999), pay system (e.g., Cable and Judge, 1994) and type of industry (e.g., Cable and Graham, 2000) play a critical role in the job choice process. For example, Turban and Keon (1993) found that management students were more attracted to decentralized rather than centralized organizations, and more to organizations that rewarded performance based on merit rather than on seniority. Most organizational characteristics are visible and salient to most job seekers early in the decision process or, in the case of lesser known organizations, can be obtained relatively easily through corporate reports, recruitment brochures, and the business press (Barber and Roehling, 1993; Rynes and Barber, 1990). Therefore, job seekers use organizational characteristics to screen out job opportunities before specific vacancy characteristics are ever considered (Rynes and Cable, 2003). In addition, organizational characteristics may act as signals of the organizational values and culture and, hence, affect a job seeker's decision whether or not to pursue employment (Lievens, Decaesteker, Coetsier, and Giernaert, 2001). For example, Rynes (1987) suggested that "compensation systems are capable of attracting (or repelling) the right kinds of people because they communicate so much about an organization's philosophy, values, and practices" (p. 190).

4A.5.1.2 Job Characteristics

Job characteristics such as salary, benefits, and promotional opportunities have been identified as important determinants of organizational attractiveness (Barber and Roehling, 1993; Cable and Judge, 1994; Rynes, Schwab, and Heneman, 1983; Turban, Eyring, and Campion, 1993). With respect to pay and benefits, Rynes and Cable (2003) concluded that "pay level is at least moderately important in most applicants' job choices. In addition, other forms of pay (e.g., contingent pay increases, benefits) are also important – perhaps increasingly as they become more variable across employers (Heneman, Ledford, and Gresham, 2000) and more volatile over time (e.g., the value of stock options)." (p. 64).

Research on military enlistment and re-enlistment has mainly focused on economic and educational attributes. For instance, raising pay has been found to be an effective measure in influencing re-enlistment decisions (e.g., Hansen, 2000; Hosek and Peterson, 1985), although the effect sizes differed substantially across studies. Lakhani (1988) showed that bonuses are even more effective in retaining military personnel than equivalent increases in salaries. Hosek, Antel, and Peterson (1989) found that the prospect of getting more education (e.g., through training or the use of educational benefits) influenced first-term enlistees' decision to remain in the service after 36 months. Similarly, Tannen (1987) found that by improving educational benefits for Army applicants meeting certain aptitude requirements, the quantity and quality of applicants increased dramatically.

The military frequently requires its members to relocate to remote areas. Research has shown that employees are often resistant to accept positions that require relocation, especially to dissimilar areas (e.g., Grossman and Magnus, 1988; Noe and Barber, 1993; Turban, Campion, and Eyring, 1995). Similarly, research on geographic boundaries in recruitment suggests that the need to relocate may discourage applicants to continue

job pursuit (Ryan et al., 2000), and that potential applicants screen out jobs located outside their preferred geographic area (Barber and Roehling, 1993; Osborn, 1990; Rynes and Lawler, 1983). This finding suggests that the military may benefit from recruiting within the area in which the job is located or within areas that are similar to the job's location in terms of city size, climate, recreational opportunities, and so forth (Barber, 1998). In a related vein, recent research has shown that frequency of deployment, or operations tempo (OPSTEMPO, Castro and Adler, 2005), has a (curvilinear) effect on turnover (Huffman, Adler, Dolan, and Castro, 2005), and that OPSTEMPO is negatively related to several work-related outcomes, such as quality of life (Adams et al., 2005). For more information on the links between OPSTEMPO and recruiting, please read the chapter on PERSTEMPO/Quality of Life and recruiting and retention (see topic chapter *PERSTEMPO/ OPSTEMPO and Quality of Life*). Given the impact of OPSTEMPO on the attitudes and well-being of current employees, OPSTEMPO may also affect potential applicants' attraction to the military. Therefore, we recommend that future studies on correlates of military attractiveness include need to relocate and OPSTEMPO (besides several other well-established predictors, such as pay and benefits, and educational opportunities) as potential important job characteristics.

4A.5.2   Subjective Factors/Individual-Level Variables

Obviously, the information on job and organizational attributes transmitted through various channels (see below) result in a set of cognitions from which attitudes and intentions are further developed. These cognitions can be classified as beliefs, expectancies, and/or perceptions.

4A.5.2.1   Organizational Image

Organizational image, or the content of the beliefs that (potential) applicants hold about the organization as an employer (Cable and Turban, 2001; Highhouse, Zickar, Thorsteinson, Stierwalt, and Slaughter, 1999b), is an important determinant of applicant attraction. Although definitions and operationalization of organizational image vary from study to study, there is a consensus that job seekers' early impressions of an organization are related to perceptions of organizational attractiveness and propensity to apply for jobs (Rynes and Cable, 2003).

Gatewood, Gowan, and Lautenschlager (1993) made a distinction between corporate image, or the image associated with the name of an organization, and recruitment image – the image associated with its recruitment message (i.e., advertisement). They found that corporate, as well as recruitment, image was significantly correlated with job pursuit intentions, the latter more strongly than the former.

Belt and Paolillo (1982) examined the influence of corporate image on the likelihood that prospective applicants would react positively to a restaurant advertisement. The results of their study showed that prospects were more likely to react to organizations "with high standing in the community" (p. 111).

Turban and Greening (1997) showed that corporate social performance, a construct that emphasizes an organization's responsibilities to multiple stakeholders, is related to firms' reputations and attractiveness as employers. Similarly, Aiman-Smith et al. (2001) found that business students' perceptions of an organization's ecological rating and lay-off policy were significant predictors of their attitude toward the organization and, to a lesser extent, of their job pursuit intentions.

Recently, recruitment scholars have turned to marketing theory and research to study the impact of organizational activities on job seekers' application decisions. Collins and Stevens (2002), using a within-subjects design, found that early-recruitment practices (i.e., word-of-mouth endorsements and advertising)

affected job seekers' application decisions through their impact on employer brand image (i.e., applicants' general attitudes toward the company and perceived attributes).

Lievens and Highhouse (2003), drawing from the instrumental-symbolic marketing literature, made a distinction between perceptions related to job and organizational characteristics and perceptions of organizational traits. The former describes the job/organization in terms of objective, concrete and instrumental attributes a job/an organization either has or does not have (e.g., pay, benefits, bonuses). These attributes primarily trigger interest among applicants because of their utility (i.e., maximizing benefits and minimizing costs). The latter refers to symbolic attributes prospective applicants assign to a particular organization in the form of imagery and trait inferences (e.g., innovativeness, prestige). In a recent study, Lievens et al. (2005) found that symbolic attributes, namely excitement, cheerfulness, and prestige, accounted for incremental variance in the Belgian Armed Forces' attractiveness as an employer, over and above a large set of instrumental job and organizational characteristics. Other (non-military) studies also found that people ascribe personality trait inferences to organizations, and that these inferences are related to organizational attraction (e.g., Slaughter, Zickar, Highhouse, and Mohr, 2004; Timmerman, 1996).

In a recent meta-analysis (Chapman et al., 2005), perceptions of job and organizational attributes (e.g., perceptions of work environment) were found to have a direct influence on job pursuit intention. Based on these meta-analytic results, we also propose a direct relationship from organizational image to job pursuit intention, as an indication of their prominent role within the job choice process.

In summary, there is substantial empirical evidence that shows that the image of an organization plays a critical role in influencing the applicant decision-making process. In our model, image corresponds to (potential) applicants' "subjective" beliefs about job and organizational characteristics.

4A.5.2.2   Organizational Reputation, Perceived Social Support

Fombrun (1996) defined corporate reputation as the "affective or emotional reaction – good or bad, weak or strong – of … the general public to the company's name" (p. 37). The construct of organizational reputation is closely related to that of organizational image, yet based on Fombrun's definition, two important differences stand out (Cable and Turban, 2001). First, image does not include an affective evaluative component whereas reputation does; second, image refers to a person's own beliefs about the organization, while reputation refers to people's assessment of how others (the general public) evaluate the organization relative to other organizations (see also Dutton, Dukerich, and Harquail, 1994). Reputation focuses on aspects of an organization subject to social influence and therefore is closely related to the subjective norm component of the TRA/TPB (Highhouse et al., 2003). As organizational image, reputation is multidimensional since a reputation can be simultaneously positive and negative (Ferris, Berkson, and Harris, 2002). For instance, the military's reputation of being "down-to-earth" may be negative to higher-educated prospects, yet positive to lower-educated prospects, whereas its social reputation may be generally held in a positive light for both groups.

Several studies have investigated the relation between organizational reputation and applicant attraction, with somewhat mixed results. Turban et al. (1998) examined the effect of applicants' perceptions of an organization's reputation prior to the campus interview on their attraction to that organization both before and after the campus interview. They found that reputation was positively related to applicants' pre-interview attraction and to their perception of several job and organizational attributes (e.g., work environment, challenging work), but was negatively related to applicant attraction after the interview.

Most other studies, however, have indicated that organizational reputation has a strong positive effect on attracting applicants. For instance, Cable and Turban (2003) examined how and why organizational reputation

affects job pursuit intentions. The results from their study suggest that job seekers' reputation perceptions affect job pursuit because individuals use reputation as a signal about job attributes, and because reputation affects the pride that individuals expect from organizational membership. In another study (Turban and Cable, 2003), they found that organizations with better reputations attracted more applicants of higher quality. Similarly, Collins and Han (2004) found evidence that early recruitment practices, corporate advertising, and organization reputation each had direct positive effects on applicant pool and quality. Also, Fombrun and van Riel (1997) found that students were most attracted to companies that were in *Fortune* magazine's list of *100 Best Companies to Work For*, which is often used as a (1-dimensional but objective) measure of organizational reputation (e.g., Cable and Graham, 2000).

A military study conducted by Legree et al. (2000) surveyed 2,731 young men and their parents about their attitudes and intentions toward the military to understand factors associated with military enlistment. The results from this study indicated that, regardless of actual parental attitudes toward the military, youth perceptions of parental attitudes were significantly related with stated enlistment propensity, which predicted actual enlistment. The path coefficient ($\beta = .55$) (indicating the strength of the relationship) between perceptions of parental attitudes and intentions-to-apply was even higher than the path coefficient ($\beta = .31$) between personal Army attitudes and intentions-to-apply. A possible explanation for this finding is the lack of compatibility between the measures of attitudes and intentions used (Ajzen and Fishbein, 2005). The authors measured youth attitudes toward military-advertising themes (e.g., cash for education, physical challenge, leadership skills) instead of their attitude toward applying (at a certain place, within a certain time span).

Similarly, in a qualitative study on applicant withdrawal in the Belgian military, Schreurs (2003) found that 10 percent of the applicants who self-selected out indicated that perceived lack of support from significant others was the primary motive for withdrawal. Furthermore, for many, significant others' opinion about the military played a role in their decision, but was not the main reason for withdrawal. For example, some individuals preferred their current job to a military occupation because their parents had convinced them that this was the right thing to do. It should be noted that at the time of the data collection for the Schreurs' study, the Iraqi war had just begun. For most applicants this was not an issue, but withdrawals often mentioned that their parents were strongly opposed the possibility that their child would go to war.

Taken together, the studies reviewed in this section indicate that (potential) applicants' job pursuit intention and decision to join an organization are influenced by their beliefs of how that organization is regarded by the public and significant others. Yet, based on the available evidence it is unclear whether the effect of reputation on job pursuit intention is direct or indirect (through attitudes). With some reservations, we propose a direct relationship to job pursuit intention, consistent with the role of the subjective norm component of the TRA/TPB.

4A.5.2.3   Employer Familiarity

Several studies have addressed the role of employer familiarity, or "the level of awareness that a job seeker has of an organization" (Cable and Turban, 2001, p. 124), in constituting image/reputation. Most studies found that familiarity is significantly related to job seekers' perceptions of an organization, with more familiar organizations being perceived as more attractive. For instance, Gatewood et al. (1993) found that corporate image was strongly related to overall familiarity, knowing someone who works for the company, using the products or services of the company, having studied the company in class, and the frequency of contact with company advertisements. Recruitment image was strongly related to the amount of information presented in the recruitment advertisement and to having worked for the company in the past. These results suggest that providing more information will result in more interest on the part of applicants. It should be noted; however, that most advertisements only contained positive information.

Cable and Graham (2000), using different methodologies (e.g., verbal protocol analysis), also found that job seekers' familiarity with companies was positively related to their perceptions of those companies' reputations. Yet, organizational attributes (i.e., opportunities for personal growth, type of industry) were even better predictors of reputation. Cable and Graham put forward the possibility that "familiarity is most important as a predictor of job seekers' reputation beliefs when information about other organizational attributes is unavailable" (p. 943).

Turban and his colleagues (Turban, 2001; Turban and Greening, 1997; Turban, Lau, Ngo, Chow, and Si, 2001) found support for the hypothesis that familiarity is positively related to organization attraction, with familiarity accounting for approximately 5 percent of the variance. Similarly, Lievens et al. (2005) found that familiarity with the Belgian military was positively related to potential applicants' perceived attractiveness of the military. In addition, the results showed an interaction effect between familiarity and instrumental/symbolic attributes, with the relationship between instrumental/symbolic attributes and applicant attraction being stronger when familiarity was high. Conversely, the relationship between instrumental/ symbolic attributes and attractiveness was weaker or non-existent when familiarity was low.

The above findings not only seem to be very straightforward—higher familiarity leads to increased liking, they are also theoretically embedded in the social psychology literature on "mere exposure" (Zajonc, 1968). Mere exposure refers to the observation that an increased familiarity with previously neutral objects leads to an increase in liking. Furthermore, marketing and advertisement practices are founded on the premise that increased exposure to a product or company increases attraction to that product or company. Nevertheless, we believe some caution is warranted. Most of the above studies were conducted within a single (actual or hypothetical) organization. More importantly, a recent study (Brooks, Highhouse, Russell, and Mohr, 2003) convincingly demonstrated that more familiar organizations elicit more positive *and* more negative reactions than less familiar organizations. For instance, respondents generated more reasons for and against working for more familiar organizations than they generated reasons for and against working for less familiar organizations. Apparently, familiarity serves as an anchor to which other information is attached (Aaker, 1991; Cable and Turban, 2001; Keller, 1993), whether that information is positive or negative. Practically, this finding suggests that advertisement strategies aimed at increasing the increasing familiarity may not have the desired effect of increasing attraction: "Although many of these strategies employ techniques designed to do more than just increase familiarity, firms should bear in mind that increased familiarity might have costs as well as benefits" (Brooks et al., 2003, p. 913).

4A.5.2.4   Subjective Fit

Fit can be broadly defined as "the compatibility between an individual and a work environment that occurs when their characteristics are well matched" (Kristof-Brown, Zimmerman, and Johnson, 2005, p. 281). This definition reflects the most comprehensive type of fit, person-environment (PE) fit. Because of its generality, researchers started to focus on several subtypes of PE fit. In the context of recruitment, two types of fit have received considerable research attention: person-job (PJ) fit and person-organization (PO) fit. PJ fit refers to compatibility between a person's characteristics, such as knowledge, skills, abilities and needs, and the requirements of the job or tasks that are performed at work, whereas PO fit addresses the compatibility between people and entire organizations in terms of values, goals and personality (Kristof-Brown et al., 2005)[2].

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[2] A detailed overview of these and other types of fit goes beyond the scope of this paper, and can be found elsewhere (Edwards, 1991; Kristof, 1996; Kristof-Brown et al., 2005).

Another useful distinction is that between subjective fit (also called perceived fit, Chapman et al., 2005) and objective fit. Subjective fit stems from the compatibility between a person's characteristics and the perceived job and organizational characteristics, whereas objective fit refers to the match between a person's characteristics and the actual work environment (Ehrhart and Ziegert, 2005). As research has shown that the relationship between objective fit and applicant attraction is mediated by subjective fit (Cable and Judge, 1996; Judge and Cable, 1997), we focus on the latter.

Based upon theoretical models like Schneider's (1987) attraction-selection-attrition (ASA) framework, it has been suggested that individuals are attracted to organizations that best fit their needs, values, goals, and personality. Research has convincingly demonstrated the role of PJ and PO fit perceptions in predicting several pre-hire outcomes (e.g., attraction, job pursuit intention, job offer acceptance). For example, Cable and Judge (1996) found that job seekers' PO fit perceptions significantly predicted job choice intentions. PO fit perceptions mainly emanated from the congruence between job seekers' perceptions of organizations' and their own values. Schmit and Ryan (1997), in a study on applicant withdrawal from a selection procedure for police officers, found that perceived lack of PJ and PO fit was an important reason to self-select out. Some withdrawals were of the opinion that the job was not right for them; others argued – rightfully or wrongfully – that they did not have the required qualifications for the job.

Several studies on applicant attraction measured PO fit indirectly through interactive person and organization characteristics. For example, Lievens et al. (2001) found that highly conscientious people were more attracted to large organizations than people low on conscientiousness. Turban and Keon (1993) found that upper-level students high on self-esteem were more attracted to decentralized and larger organizations. They also showed that students high on need for achievement preferred organizations with a merit-based pay system to a tenure-based pay system. Similarly, Cable and Judge (1994) found that job seekers high on self-efficacy were more likely to pursue an organization with individual-based pay than were those with low-self-efficacy. In a recent study for the Belgian military, Schreurs and Druart (2006) found that students low on conscientiousness were more attracted to the military when perceiving the organization as exciting. The reverse pattern was observed for highly conscientious students.

In a recent meta-analysis, Kristof-Brown et al. (2005) found that PJ fit correlated[3] .48 with organizational attraction; PO fit had a correlation of .46 with organizational attraction (.60 when only subjective PO fit was taken into account) and .24 with applicant job acceptance. Chapman et al. (2005) reported similar results from their meta-analysis: PO fit correlated .46 with job-organization attraction, .62 with job pursuit intentions, and .18 with job choice. PJ fit correlated .45 with job acceptance intentions. Contrary to expectations, the authors found that intention rather than attitude mediated the relationship between perceived fit and job choice (as is depicted in the model).

Based on the above findings it can be concluded that fit plays an important role in the applicant decision-making process. Individuals differ in their preferences for job and organizational attributes (e.g., size, pay and benefits, excitement) and are differentially attracted to organizations according to their own personal characteristics (needs, values, goals, personality, self-efficacy, self-esteem). Therefore, for the military (as for any other organization) it is paramount to ensure that recruitment efforts attract the kind of people the organization really wants. For instance, enlistment bonuses might be especially appealing to extrinsic-driven job seekers, whereas the military may be more interested in applicants who are motivated by other, more intrinsic work values (e.g., education, altruism, patriotism).

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[3] A correlation indicates strength of relationship. Correlations range in strength from 0 to 1.

4A.5.2.5 Perceived Alternatives

An applicant's perception of his or her employment alternatives (sometimes referred to as "perceived marketability") has also been suggested to be an important factor influencing job pursuit. According to Soelberg's (1967) generalizable decision-processing model, individuals implicitly choose a job (i.e., the implicit favorite) among an indefinite number of viable alternatives based on a set of criteria that reflect their ideal work environment. Therefore, evaluations on the attractiveness of a job (or organization) are not independent (Power and Aldag, 1985). Similarly, image theory (Beach, 1990) suggests that job choices are made based on an evaluation of how alternative options fit one's image of how things should be. Several studies provided support for the role of perceived alternatives in job choice. For example, Ryan et al. (2000) found that those who self-selected out of a selection procedure for police officers reported having more alternatives than those who stayed in and failed (but did not differ from those who stayed in and passed). Results from interviews that were held with those who self-selected out also indicated that alternatives were a major reason for withdrawing (for similar findings see, Ryan and McFarland, 1997; Ryan, Ployhart, Greguras, and Schmit, 1997; Schmit and Ryan, 1997). In some cases, those who withdrew believed they could get a better job or had already taken another offer. In other cases, one's current job was seen as the better alternative. As noted by Ryan et al. (2000), these results are consistent with findings on the role of perceived employment alternatives in turnover (Gerhart, 1990) and in military re-enlistment (Steel, 1996). Finally, Chapman et al. (2005) found that perceived alternatives predicted job choice through job pursuit intentions (instead of through attitudes). However, the overall effect sizes for perceived alternatives were marginal: .16, −.06, and −.02 for job pursuit attitudes, intentions, and job choice, respectively.

Empirical evidence from the limited research on the role of perceived alternatives in job choice suggests that applicants usually consider more than one potential employer in their job search. The military may want to explore what the most popular employment alternatives are according to military applicants (e.g., police), and why (qualified) applicants prefer the one organization to the other in order to strengthen its labor market position.

4A.5.2.6 Hiring Expectancies

Expectancy (VIE) theory (Vroom, 1966) states that individuals choose among a set of employment alternatives on the basis of the motivational force of each alternative. The motivational force is a multiplicative function of expectancy (i.e., the individual's belief that he or she would be successful in obtaining the job offer), instrumentality (i.e., the evaluation of the likelihood that the job has certain attributes), and valence (i.e., the attractiveness of those attributes). Thus, according to expectancy theory, positive hiring expectancies are predicted to lead to a greater effort to obtain employment (Rynes and Lawler, 1983). Several studies have found support for this prediction. For example, Collins and Stevens (1999) found that hiring expectancies were significantly related to applicant attraction (r = .41) and intentions-to-apply (r = .55). Even after controlling for organizational image, the relationship between expectancies and intentions-to-apply remained highly significant. Chapman et al. (2005) found that hiring expectancies predicted job choice through a positive relationship with job pursuit attitudes. The total effect sizes of hiring expectancies were .33, .26, and .06 for attitudes, intentions, and job choice. The authors refer to Janis and Mann's (1977) bolstering theory of decision making to explain these findings. According to this theory, individuals initially have a tendency to elevate choices that are more likely to happen by inflating the positive aspects of that alternative and deflating the negative aspects.

4A.6   INFORMATIONAL SOURCES

Recruitment is a series of activities, any one of which is a potential source of information and can affect an applicant's decision to (continue to) pursue employment with an organization (Barber, 1998). Dozens of recruitment practices have been scrutinized regarding their influence on applicant attraction. Recruitment research has focused on the impact of one such recruitment activity, namely the initial screening interview for a long time. More recently; however, scholars have started to examine the influence of other recruitment practices (e.g., advertising, word-of-mouth, site visits, sponsorship activities, company web sites) on applicant attraction. Although not commonly discussed as a part of recruitment research, selection procedures can also transmit organizational information, and hence, influence applicants' attitudes and behaviors toward the organization (Anderson, 2001; Ryan and Ployhart, 2000). Finally, recruitment literature has paid considerable attention to the impact of realistic job previews (RJPs) and recruitment sources on *post-hire* organizational outcomes, such as job satisfaction, performance, and turnover. Only recently, partly due to the boom of company Web sites, have scholars started to examine their influence on *pre-hire* outcomes. Before reviewing some of the literature on each of these recruitment topics (for a thorough discussion see, for example, Breaugh and Starke, 2000; Rynes and Cable, 2003; Saks, 2005), we clarify Behling et al.'s (1968) critical contact perspective on job choice, as many studies on the effect of recruitment activities on job pursuit have developed from this approach.

4A.6.1   The Critical Contact Perspective

The critical contact perspective (Behling et al., 1968) suggests that applicants' job pursuit decisions are based on their interpretation of various aspects of the recruitment and selection process (e.g., characteristics of the recruiter, perceived job relatedness of selection tests). In the absence of other information about the organization, applicants interpret information they receive in the course of the recruitment process as "signals" about what it would be like to be employed by the organization (Turban, 2001). This assumption stems from propositions from signaling theory (Spence, 1973; Spence, 1974). Spence's signaling theory, developed by applying it to the labor market, states that highly productive people will seek more education than less productive people. Specifically, his theory was developed using the problems that employers face in the recruitment process, given that they have no prior information about people's skill sets. This will prompt employers to take higher education as a signal, and offer higher salaries to such employees. Similarly, prospects and applicants will make inferences about the organization from various aspects of the hiring process if the information is not clearly provided by the organization. For example, if the computer used to test a candidate for a job broke down during testing, this may signal to the candidate that the organization does not invest money in information technology and result in decreasing attraction to the organization. As all hiring practices to some extent convey information about the organization's values and culture to some extent, it may be useful to seek for a way to classify these informational sources.

4A.6.2   A Classification of Information Sources

Traditionally, research on job information sources has drawn a distinction between formal and informal recruitment sources. The former involves the use of formal intermediaries such as placement offices, and recruitment advertisements, whereas the latter does not involve the use of formal intermediaries (e.g., friends and relatives) (Saks and Ashforth, 1997). As mentioned above, the majority of studies using this distinction (e.g., Kirnan, Farley, and Geisinger, 1989; Saks, 1994) have focused on post-hire outcomes (e.g., turnover). The results generally indicate that applicants who are recruited through informal recruitment sources tend to stay in the job longer than applicants hired through formal sources. More recently, Cable and Turban (2001) conceptualized the various informational sources along two dimensions: an internal-external dimension,

and an experiential-informational dimension. Internal sources (e.g., recruitment advertising) are largely under the control of the organization and are used to disseminate recruitment-related information to potential applicants, whereas external sources (e.g., word-of-mouth, publicity) are not under the direct control of the organization and generate information that is available to the general public. Experiential sources (e.g., interviews) require applicants to personally experience some aspect of the organization to obtain information, whereas informational sources include media coverage, advertisements, and annual reports that contain "pre-processed: information. We used Cable and Turban's internal-external continuum to classify the various sources that are included in our recruitment model. In the remainder of this section, we will briefly discuss some of the most important informational sources.

4A.6.3 Internal Sources

4A.6.3.1 The Initial Screening Interview

For over 30 years now, recruitment studies have been examining applicant reactions to recruiters conducting the initial screening interview. In general, the results indicate that applicant attraction to the organization is positively related to perceptions of recruiter warmth (also called "personableness," "affect,", 'enthusiasm,", and "empathy") and to perceptions of recruiters' willingness to provide information (i.e., recruiter informativeness).

There is evidence, although scarce, that recruiter demographics (e.g., age, gender, educational background) influence applicants' overall evaluations of organizations. Yet, the effects are small in magnitude, not often replicated across studies, and there is little evidence that recruiter demographics influence applicants' intentions to pursue jobs (Barber, 1998).

Results regarding the effects of recruiter training, experience and functional area on applicant reactions have also been mixed (Breaugh and Starke, 2000).

As mentioned above, one popular explanation for the effect of recruiter characteristics is signaling: recruiters would act as signals or symbols of broader organizational characteristics in addition to or instead of other information on the job and organization (Rynes, 1991). Hence, recruiter characteristics would essentially have an indirect effect on applicant attraction, through influencing perceptions of job and organizational attributes. Several studies provided evidence in support of signaling theory. For example, Turban (2001) found that recruitment activities (i.e., campus activity) influenced company attractiveness through influencing perceptions of the company image and the extent to which the work is challenging.

Second, recruiter credibility might help explain the differential effects of recruiters on applicants. Recruiter credibility depends on two factors, expertise and trustworthiness (Ilgen, Fisher, and Taylor, 1979; Petty and Cacioppo, 1981). Recruiter expertise refers to the extent to which applicants perceive recruiters as providing information that has direct relevance to what it is like to work as an employee in an organization. Recruiter trustworthiness refers to the extent to which a recruiter provides information that accurately, or truthfully, describes what it would be like to be an employee of an organization (Cable and Turban, 2001). Personally relevant and trustworthy recruitment messages are more likely to be processed in a systematic (as opposed to heuristic) manner (Eagly and Chaiken, 1993), and will therefore result in different perceptions of the environment.

Third, recruiters differ in the amount of information they provide. As mentioned above, recruiter informativeness is generally positively related to applicant reactions. However, some studies found the exact opposite (Schreurs et al., 2005; Turban and Dougherty, 1992; Turban et al., 1995). Thus, although informativeness is generally well

received by applicants, more information may have an inhibiting effect on job pursuit as well. For example, spending (too) much time discussing the job might be interpreted as indicative of potential problems in the organization (Turban et al., 1995; Turban and Dougherty, 1992). It is also possible that some applicants are not able to cognitively process the amount of information recruiters are providing (informational overload), resulting in a negative attitude toward the organization (Barber, 1998). Finally, it is likely that with more information provided there is an increased chance of applicants withdrawing from the selection process as the recruitment message probably contains some elements throwing doubt on whether the job will be satisfying (Breaugh and Starke, 2000). The latter explanation is also known as the "self-selection" effect (Wanous and Colella, 1989), one of the mechanisms by which RJPs are expected to influence employee turnover. In the following section, the main research findings on RJPs are discussed briefly. A detailed review of RJPs goes beyond the scope of this paper and can be found elsewhere (Breaugh, 1983; Meglino, Ravlin, and DeNisi, 2000; Phillips, 1998; Premack and Wanous, 1985).

4A.6.3.2   Realistic Job Previews

RJPs are designed expressly for the purpose of conveying realistic information about the job and/or organization to applicants (Anderson and Ostroff, 1997) and are probably the most well known recruitment technique with regard to the communication of both favorable and unfavorable job information. RJPs may range from videotaped demonstrations of the job to having the applicant talk directly with current employees, but usually RJPs are administrated via a written booklet or brochure (Saks and Cronshaw, 1990), or by recruiters during the employment interview or orientation (post-hire) (Griffeth and Hom, 2001). The military typically makes use of recruiting centres to convey realistic information to potential applicants (Schreurs et al., 2005) or alternatively includes information on RJPs as part of their regular selection and assessment program (Bradley, Lawrence, and Noonan, 1998).

RJPs have been generally found to have a small but significant effect on several *post-hire* organizational outcomes, such as employee turnover, job satisfaction, commitment, and performance (McEvoy and Cascio, 1985; Phillips, 1998; Premack and Wanous, 1985; Wanous, Poland, Premack, and Davis, 1992). Evidence regarding the effect of RJPs on *pre-entry* outcomes, in particular pre-entry attraction, is mixed. Several studies found evidence that RJPs are negatively related to job acceptance rates (Meglino, DeNisi, Youngblood, and Williams, 1988; Premack and Wanous, 1985; Suszko and Breaugh, 1986; Wiesner, Saks, and Summers, 1991). The theoretical rationale for this effect is that applicants provided with realistic information are supposed to be better able to decide whether the job is consistent with their preferences and needs, and those applicants who find the perspective described by the RJP to be unacceptable will self-select out of the process (the "self-selection" effect, Wanous and Colella, 1989). On the other hand, a meta-analysis by Phillips (1998) found a weak relationship (average correlation of −.03) between RJPs and applicant withdrawal from the selection process. Due to the large number of subjects involved, this correlation was statistically significant. However, it is likely that this correlation indicates the absence of a relationship rather than the opposite (Rynes and Cable, 2003). In addition, Highhouse, Stanton, and Reeve (2004) studied individuals' online reactions to simulated computer-based recruitment messages and found that negative information about prospective companies was discounted more than positive information. Based on these findings, the authors suggested that negative information in recruitment messages "may not be as harmful to attraction as some have suggested" (p. 94), and that the potential adverse impact of negative information is cancelled out by the positive information included in the message.

Furthermore, several studies have found that the effects of RJPs on job acceptance may depend on other variables. For example, Meglino et al. (1993) found that applicants with prior job exposure had lower job acceptance rates than those without prior job exposure, probably because applicants with prior exposure are

more likely to overemphasize negative job information. Other studies have found that RJPs are most likely to result in lower job acceptance rates when subjects have a job alternative presented to them via a traditional job preview (Saks, Wiesner, and Summers, 1994; Wiesner et al., 1991). Saks, Wiesner, and Summers (1996) found evidence that the negative effects of RJPs on attraction somewhat decrease when the pay level of the RJP job exceeds that of a traditional job preview (TJP) job alternative.

Bretz and Judge (1998) examined whether self-selection based on job expectation information may be adverse from the organization's perspective. That is, whether the best qualified applicants are most likely to self-select out when presented with negative information about the organization. The results of this study yielded mixed support for the adverse self-selection hypothesis. That is, high quality applicants placed more weight on negative information than lower quality applicants. Ryan et al. (2000) found that applicants who dropped out of the selection process for police officers tended to have less commitment to law enforcement, suggesting that self-selection was beneficial from the organization's standpoint. However, they concluded "we need better means of assessing whether self-selection is adverse, both from the organizational and the individual perspective" (p. 177).

4A.6.3.3   Advertisements

Kotler (2000) defined advertisement as any paid form of non-personal presentation and promotion of an organization as an employer by the organization itself. Examples are job postings and recruitment brochures. Advertisements are a popular, but expensive, means to attract applicants and have been the subject of a number of recruitment studies (e.g., Barber and Roehling, 1993; Belt and Paolillo, 1982; Bretz and Judge, 1994; Gatewood, Gowan, and Lautenschlager, 1993; Highhouse et al., 1998; Highhouse et al., 1999a; Mason and Belt, 1986; Roberson, Collins, and Oreg, 2005). These studies generally yield the same results as studies on the effects of job and organizational characteristics: applicants are more attracted to organizations that present a favorable image (in terms of pay and benefits, location, staffing policies, human resource systems, etc.) and include more specific information in the recruitment advertisement.

Saks (2005) recently noted that recruitment advertising research is really no different than research on vacancy characteristics "expect that an advertisement is used as the method for describing the characteristics of the job and organization" (p. 57). He suggested that future research should focus on the effects of the characteristics of advertisements (e.g., newspaper versus targeted magazines, design, color, photos) beyond job and organizational characteristics (by holding them constant). Similarly, Barber (1998) noticed that questions on advertisement style and format have largely been the monopoly of recruitment practitioners (contrary to scholars).

In an experimental study, already mentioned earlier, Allen et al. (2004) started to address this issue by investigating the effects of different types of recruitment media on applicant attraction. A recruitment message for the military was transformed into four different media types (i.e., face-to-face, video, audio, text). Participants were asked to rate several media features (i.e., amount of information, 2-way communication, personal focus, social presence, symbolism) and several indicators of organizational attractiveness. The results showed that different media resulted in differences in perceptions of media features (e.g., amount of information was higher for video than for face-to-face and text). These features were positively related to message credibility and communication satisfaction, which in turn were positively related to applicant attraction.

Boller and Blackstone (2002) reviewed some of the U.S. Navy's advertising practices. They concluded that insufficient attention is given to assessing and measuring the Navy's advertising effectiveness. They emphasized that measuring effectiveness in this regard goes further than merely evaluating ad awareness

and slogan recall. To warrant a more scientific treatment of this subject, the authors provided the Navy with a set of "alternative" measures of effectiveness (e.g., attitude and intention measures, comparative beliefs). We believe that not only does the U.S. Navy suffer from inefficient measurement, other militaries may profit from these recommendations as well.

4A.6.3.4   Military Career Office

The military typically uses career offices to establish the first interpersonal contact with potential applicants. The objective of the career office consultation is to generate applicants, that is, to get a sufficient number of visitors interested in applying to the military. However, career counselors are not allowed to coarsely distort reality. In many nations' militaries, the career office consultation has a mere recruitment-focus, contrary to a mere selection-focus or a dual focus. Until now, only one study (Schreurs et al., 2005) has examined the effects of military career counselors' behaviors on applicant attraction. Consistent with previous findings from research on applicant reactions to the initial screening interview, career counselor warmth was positively related to prospects' attitudes and intentions to pursue a job with the military. Career counselor competence was positively related to actual job pursuit behavior. Contrary to earlier findings was the observation that career counselor informativeness correlated negatively with job pursuit attitudes and intentions. The authors suggest that the negative relationship may indicate a self-selection effect (Wanous and Colella, 1989), or, alternatively, point towards "informational overload."

4A.6.3.5   Company Web Sites

Nowadays, organizations have widely accepted the use of Internet-based recruitment. In fact, in 2001, it was estimated that more than 90 percent of large U.S. firms had established company Web sites that are primarily dedicated to communicating recruitment information to potential applicants (Cappelli, 2001). In 2003, 94 percent of the world's largest 500 companies (Global 500) had a corporate career Web site (iLogos Research, 2003). Moreover, these Web sites are consulted by millions of job seekers to acquire pre-contact organizational information (Cober, Brown, Levy, Cober, and Keeping, 2003). The military has not lagged behind and has also turned to the Internet to address recruiting issues (Boller and Blackstone, 2002; Newman, 2000).

Despite the widespread use of company Web sites by both job seekers and organizations, research on the effects of Web site characteristics on applicant attraction is still in its infancy. One of the key findings from the few available studies is that job seekers are more attracted to organizations when they are satisfied with the company's Web site style. In particular, there is some evidence on the favorable effect of navigational ease or usability on applicants' perceptions of the organization (Braddy, Thompson, Wuensch, and Grossnickle, 2003; Cober et al., 2003; Williamson, Lepak, and King, 2003).

In another study, Dineen, Ash, and Noe (2002) found that feedback regarding individuals' potential PO fit conveyed through company Web sites influenced their level of attraction in the direction of that feedback. The authors concluded that if applied well, such a feedback tool "might strengthen the psychological contract between a new employee and the organization (Rousseau, 1995) or lead to greater commitment (e.g., Breaugh, 1983)" (p. 733). In addition, PO fit feedback might enhance an organization's reputation through perceptions of honesty, and might decrease adverse self-selection.

Like many other organizations, militaries in many countries use the Internet to communicate organizational values to potential applicants. Given the importance of credibility in recruitment research (Cable and Turban, 2001) it is paramount that the message and the medium used are congruent. For example, the military may claim that it is forward-thinking, technologically advanced, and consisting of a world wide team of highly

trained professionals on its Web site. However, when that same Web site also includes a short recruiting video game that is below the current industry standard (Boller and Blackstone, 2002), it is unlikely that the Web site is going to be effective in attracting the employees it is targeting.

4A.6.3.6   Selection Methods

Traditionally, selection methods have been considered as neutral predictors of applicant suitability and subsequent job role performance ("psychometric perspective" Borman, 2001; Guion, 1998; Schmidt, Ones, and Hunter, 1992). Obviously, selection methods do act as predictors, but at the same time they are much more than that. A completely new research area has developed since the 1980s that focuses on how applicants perceive and react to selection procedures. Similar to signaling theory, a fundamental postulate of applicant reaction research is that organizations, often unintentionally, convey information to applicants through their selection practices. Applicants will further actively extend and extrapolate from the available information to develop enduring expectations and obligations of the future work relationship (Anderson and Ostroff, 1997). According to this "social process perspective" (Herriot, 1989), recruitment and selection practices represent the cornerstones on which the psychological contract (Rousseau, 1995) is built. It is further suggested that selection practices can have a substantial impact on applicants' attitudes and behaviors (e.g., Iles and Robertson, 1997). For example, Macan et al. (1994) examined the influence of manufacturing applicants' perceptions of an assessment center on their attitudes and intentions toward the hiring organization. They found that applicants' perceptions were significantly related to job acceptance intentions, even after controlling for applicants' pre-test attitudes toward the organization.

Although many theories have been proposed studying applicant reactions to selection procedures ("social psychological process," Herriot, 1989; "social validity," Schuler, 1993; Rynes, Bretz, and Gerhart, 1991, "signaling theory"), the organizational justice framework (Greenberg, 1990) is by far the most popular among applicant reaction scholars. Gilliland (1993) was the first to apply this organizational justice framework to a selection context, proposing a model of applicant reactions to employment selection systems. According to the model applicants' perceptions of the selection process fairness (i.e., procedural justice) and outcome fairness (i.e., distributive justice) would be significantly related to applicants' self-perceptions (e.g., self-esteem, self-efficacy) and several important pre- and post-hire outcomes (e.g., test motivation, recommendation intentions, job acceptance). Several studies (e.g., Bauer, Maertz, Dolen, and Campion, 1998; Ployhart and Ryan, 1997) provided support for Gilliland's model, and more recent models of applicant reactions (Chambers, 2002; Hausknecht, Day, and Thomas, 2004; Ryan and Ployhart, 2000) continue borrowing from his framework.

In Saks' (2005) definition, recruitment only involves actions and activities initiated by, and under the direct control of the organization. The information sources we described so far are to a large extent under the direct control of the organization (internal sources). However, organizational information can also be obtained from sources that are not under the direct control of the organization (external sources) (Cable and Turban, 2001). As this information has the potential to influence job seekers' attitude-intentions-behavior toward the organization, we will briefly discuss the most important external sources (i.e., word-of-mouth, publicity), although most recruitment researchers would probably argue that these can hardly be considered as recruitment activities.

4A.6.4   External Sources

4A.6.4.1   Word-of-Mouth

Recently, research attention has shifted from internal sources to sources that are not under the direct control of the organization. Word-of-mouth is an example of the latter. "Word-of-mouth involves an interpersonal

communication, independent of the organization's recruitment activities, about the organization as an employer or about specific jobs" (Van Hoye and Lievens, 2005, p.180). Based upon evidence from marketing research (e.g., Cobb-Walgren, Ruble, and Donthu, 1995) and a few available recruitment studies (e.g., Collins and Stevens, 2002; Van Hoye and Lievens, 2005), it seems that word-of-mouth has a strong effect on influencing potential applicants' attitudes toward the organization and their perceptions of job and organizational attributes. Information conveyed through word-of-mouth is found to be more credible than information conveyed by sources under the direct the control of the organizations (Fisher, Ilgen, and Hoyer, 1979), yet until now there is no evidence that credibility mediates the relationship between word-of-mouth and applicant attraction (Van Hoye and Lievens, 2005).

In a recent qualitative study, Lievens and Van Hoye (2005) found that potential applicants for the Belgian military relied mainly on word-of-mouth to obtain information about the organization. Information provided by these "social" sources (e.g., friends, relatives, acquaintances) was generally positive and more credible than organizational information sources (e.g., Web site). Furthermore, social sources had a greater impact on potential applicants' attitudes toward the organization than non-social information sources. Interestingly, most social sources worked or had once worked for the Belgian Defence. From a practical point of view, the authors recommend the military take advantage of this observation by ensuring that all employees have easy access to accurate and complete information about the organization and possible jobs. They also advise increasing the impact of non-social information sources by improving their credibility, formulating clear expectations, and being more personal.

4A.6.4.2   Publicity

Recruitment-related publicity refers to information about an organization as an employer, typically conveyed by editorial media, such as newspaper articles and television news items, and usually not under the direct control of the organization (Collins and Stevens, 2002; Van Hoye and Lievens, 2005). Despite the apparent importance of publicity on organizational attractiveness, recruitment scholars have only very recently started to center on this topic. Collins and Stevens (2002) found that positive publicity was positively related to job seekers' attitude toward the organization and to their intentions-to-apply (but not to their actual application decisions), and that the effect of publicity was stronger when it was used in conjunction with other recruitment sources. Van Hoye and Lievens (2005) examined the effects of negative publicity followed by a second information source (i.e., advertising, word-of-mouth) on organizational attractiveness. The results showed that potential applicants' perceptions of organizational attractiveness improved significantly by exposing them to a second information source, and that the effect of negative publicity was at least partially canceled out.

To the best of our knowledge, no studies have been published that address the issue of recruitment-related publicity in a military context. There is; however, some anecdotal and preliminary research evidence that movies that portray the military in a favourable way (e.g., *Top Gun*) can have a serious impact on military recruitment (Gouden, Devitt-Chacon, McGuire, and Rivas, 2001; Trammell, Turner, and Briggs, 2000). Besides films, several military video games are on the market (e.g., *Pearl Harbour*) that may influence youth attitudes toward the organization. It is not clear to what extent these media are under the direct control of the organization (Robb, 2004). As these media are part of everyday life of most teenagers in most Western countries, it is clear that individuals do not enter organizations as "blank slates" (Cable and Turban, 2001).

4A.7   SUGGESTIONS FOR FURTHER RESEARCH

In addition to the suggestions already formulated throughout this paper, we now present several other promising avenues for future research.

Without a doubt, recruitment has been influenced by technological advances (Chapman and Webster, 2003). For example, the use of organizational Web sites as a recruitment source has already become standard, organizations receive applications through the Web and e-mail, job seekers share job and organizational information through chat rooms, and resumes are screened and scored automatically. The military utilizes advanced recruitment technology as well. For instance, on-line talent auctions and on-line video games presented on the U.S. Navy's Web site were developed to increase the fill rate of unpopular occupations by increasing their attractiveness (see topic chapter *Compensation: U.S. Navy Research Initiatives and Applications*; Boller and Blackstone, 2002). Yet, with the exception of Internet recruiting (see Lievens and Harris, 2003), virtually no research has explored the effects of recruitment-related technology on applicant attraction. As noted by Anderson (2003), little research, if any, has critically evaluated whether more highly advanced technological hiring methods actually perform better than traditional methods in terms of quantity and quality of applicants. The use of new technology may influence job seekers' perceptions of the organization and their job pursuit decisions in a different manner than more traditional forms of recruitment. Furthermore, as accessibility to new technologies is likely to differ according to socio-economic differences (Sharf, 2000, cited in Anderson, 2003), the potential for new technology to influence adverse impact in recruitment and selection must be considered.

Only recently research started to examine how information sources other than recruitment practices influence job seekers' early impressions of employing organizations. Word-of-mouth and media coverage are two external sources that offer many interesting avenues for future research. For example, as the military traditionally has high annual turnover rates, future studies might want to investigate the impact of former recruits' word-of-mouth on the attractiveness of the military in their environment. Furthermore, the media usually comments critically on the military. Although there is some preliminary experimental evidence suggesting that the impact of negative publicity can be mitigated by influencing potential applicants' perceptions of organizational attractiveness through other (internal) sources (Van Hoye and Lievens, 2005), future research is needed to generalize this finding to real-life situations.

To increase its attractiveness as an employer, militaries in several nations offer short-term monetary incentives (e.g., signing bonuses). Future research should investigate the impact of these incentives on post-hire outcomes, such as commitment, job satisfaction, performance, and turnover. It is possible that individuals attracted most by these incentives hold values that differ significantly from the organization's values. To avoid mismatches and their damaging organizational consequences, the military should not only select applicants that are compatible in terms of personality, but also in terms of (work) values. In addition, future research may examine fit issues with respect to cognitive ability (Rynes and Cable, 2003), as some military occupations may demand different cognitive abilities (e.g., spatial orientation) than others.

4A.8 PRACTICAL RECOMMENDATIONS

Some practical recommendations are presented in the following section. All recommendations made are listed in Table 4A-1. Rather than developing an endless list of recommendations, we present a selection of measures that are firmly supported by the literature that illustrate how the recruitment model can be helpful in strengthening organizational recruitment programs.

Table 4A-1: Recruiting Issues

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
Job and organizational characteristics	Large main effects for job and organizational variables, such as pay level, performance-based pay, individual- rather than team-based pay, flexible benefits, fair treatment, concern for others, and achievement orientation. Main effect of location on applicant attraction.	Applicants are mainly attracted to organizations based upon what they offer in terms of pay and benefits, and other employment inducements. Potential applicants screen out jobs located outside their preferred geographic area.	Offer flexible work arrangements, opportunities for training, benefits, and, if possible, high pay. Recruit within the area in which the job is located or within areas that are similar to the job's location in terms of city size, climate, recreational opportunities, and so forth. Conduct job satisfaction and employee opinion surveys to modify those job and organizational characteristics that are most likely to result in discontent among employees.
Image	The image of the organization explains variance over and above the variance explained by job and organizational characteristics.	Applicants are not only attracted by what organizations offer in terms of tangible, instrumental attributes, but also by non-instrumental (symbolic) perceptions of the organizations.	Develop a strong recruitment image by focusing on attributes that differentiate the military from competing organizations. Conduct image audits on a regular basis to gather information regarding which subjective attributes to focus on.
Familiarity	Familiarity is positively related to attractiveness.	Better known organizations tend to be more popular among job seekers.	Use a variety of recruitment sources to increase job seekers' familiarity with the military.
Recruitment advertising	The amount and specificity of recruitment messages are positively related to applicant attraction.	Job seekers prefer advertisements that contain information highlighting more positive and more specific job attributes.	Provide adequate concrete information on what the organization offers. Consider advertising starting salaries.
Perceived alternatives	There is a negative relationship between perceived alternatives and job choice.	As applicants consider more than one potential employer in their job search; the more possibilities they have, the less likely they are to apply for the military.	Explore what the most popular employment alternatives are according to military applicants, and why (qualified) applicants prefer one organization over another.
Realism	Unmet expectations stem from a discrepancy between the recruitment message and reality. They are negatively	Unrealistic information leads to inflated expectations. Unmet expectations lead to dissatisfaction with the job, low commitment, and ultimately to turnover.	Provide realistic information. Involve jobholders in fine-tuning and updating the recruitment materials.

Topic	What the research says	Practical explanation of the research	Recommendation(s) to address the issue
	related to job satisfaction, commitment, and retention.		Examine the views of current employees to get an indication of the 'internal image' of the military.
Recruiters	Recruiter warmth and informativeness correlate positively with applicant attraction.	Applicants prefer recruiters that are knowledgeable about the organization and are willing to provide information in a friendly, personable way.	Select recruiters that are knowledgeable about the entire organization who can provide correct and detailed information. Select recruiters that have a customer-oriented attitude. Invest in recruiter training.
Selection	Selection methods implicitly convey information about the organization's values and culture.	Applicants use selection methods to derive information on how it would be to work in that organization.	Use work samples, situational judgment tests, and assessment centers to inform applicants about their future jobs. Ensure that equipment and materials used in the selection process are of good quality and use up-to-date technology.
Time delays	Time delays are positively related to applicant withdrawal from the hiring process.	Applicants who are facing long time delays between selection hurdles are more likely to withdraw from the process.	Avoid long delays between selection hurdles as much as possible. Maintain contact with applicants throughout the process.

The most effective (but probably not the most economical) way to increase the number of applicants is to make the organization more attractive in terms of objective job and organizational characteristics. It is true that person-environment interaction (i.e., fit) contributes significantly to predicting attraction, yet it is equally true that most studies found even larger main effects for job and organizational variables, such as pay level, performance-based pay, individual- rather than team-based pay, flexible benefits, fair treatment, concern for others, and achievement orientation (Rynes and Cable, 2003). Rynes and Barber (1990) introduced the term "employment inducements" to refer to job and organizational attributes that are deliberately modified by the organization for the explicit purpose of increasing the organization's attractiveness as an employer. They also conclude that employment inducements are major determinants of applicants' attitudes and behaviors. Saks (2005) recommended hiring organizations to "offer a variety of employment inducements (e.g., flexible work arrangements, opportunities for training, benefits, etc.), especially high pay" (p. 55). However, raising pay may not be the best possible solution for the military for the following reasons. First, at this point it is still unclear whether the "right people" are attracted by monetary incentives (as discussed above). Second, as a government organization, the military cannot autonomously determine its members pay levels. As an alternative, we advise the military to conduct job satisfaction and employee opinion surveys, and to modify those job and organizational characteristics that are most likely to result in discontent among its jobholders (e.g., OPSTEMPO). This will not only increase employee job satisfaction and retention (see "A proposed model of military turnover"), but also organizational attractiveness, as the positive organizational changes are communicated to the target population through internal (e.g., web site, news letters) and external (e.g., positive word-of-mouth) information sources.

From a practical point of view, organizational image may be more malleable than objective job and organizational characteristics. Barber (1998) noticed that changing image in the minds of naïve job seekers (in contrast to executives) may simply be a question of increasing exposure through advertising campaigns, campus visits, or other means. However, she also added "existing image research only begins to scratch the surface of what we ought to know" (p. 37). Saks (2005) is somewhat less optimistic. He recommend advisable to minimize the time gap in between selection hurdles and to maintain contact with applicants throughout the recruitment process.

4A.9   CONCLUSIONS

In this article, a conceptual model of military recruitment is proposed based on a review of recruitment research conducted on both military and non-military samples, and on the efforts of members of the NATO Task Group on Recruitment and Retention of Military Personnel. The model consists of organizational-level and individual-level predictor variables, and outcome variables. The organizational-level predictor variables relate to the actual environment in terms of objective job (e.g., pay level) and organizational (e.g., size) characteristics. The individual-level predictor variables refer to the perceived environment in terms of individuals' subjective interpretation of the job and organizational characteristics (e.g., image, familiarity). The model's outcome is defined as job pursuit, which can take many forms (e.g., applying, accepting a job offer) according to the recruitment stage an individual is going through. Job pursuit is broken down into the triad attitude-intention-behavior to indicate the mediating role of attitude and intention in the relationship between individual-level variables and job pursuit behavior. Principles from information and communication theory were relied on to describe how information about the organization is communicated through various information sources to the target population. A distinction is made between sources that are under the direct control of the organization (e.g., advertisements) and sources that cannot be controlled by the organization (e.g., word-of-mouth). Several suggestions for future research are also presented. The paper concludes with a list of practical recommendations and guidelines to help our military decision-makers solve the recruitment problems our organizations are facing today and will be facing in the future.

Chapter 4B – A PROPOSED MODEL OF MILITARY TURNOVER

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4B.1   EXECUTIVE SUMMARY

Turnover which is voluntary and dysfunctional is seriously costly to organizations. Hence, understanding the process within which turnover unfolds is vital for especially the military. Models of voluntary turnover have conventionally been attitude-centered, aiming to capture the psychological processes involved in voluntary turnover. That is, in these models, job-related attitudes, mainly job satisfaction and organizational commitment, are stated to influence turnover behavior through intervening cognitive processes such as thinking about quitting and turnover intentions. Recently, these models have been criticized for not being able to fully account for turnover behavior that rather develops quickly as a result of unexpected life events, or shocks, in the person's work or non-work life. Furthermore, available models of voluntary turnover focus largely on the withdrawal processes involved in the civilian context.

This paper presents a conceptual model of military turnover based on the reviewed military and non-military literatures and the work done by the members of the NATO Task Group on Recruitment and Retention of Military Personnel. In the proposed model, factors expected to play a critical role in military turnover are grouped under three categories: distal factors, (i.e., job and organizational characteristics and perceived job alternatives), intermediate/mediating factors (i.e., person-environment – P-E – fit, quality of life – QOL – perceptions; and work attitudes, namely job satisfaction, continuance commitment, and affective commitment), and proximal factors (i.e., turnover intentions, unemployment rate, and shocks).

Job and organizational characteristics are hypothesized to influence job attitudes mainly through QOL perceptions. Consistent with the previous turnover models, the probability of finding a satisfactory job alternative, which is largely influenced by unemployment rate, is expected to influence turnover intentions both directly and indirectly, through work attitudes. Empirical evidence suggests that P-E fit, especially in terms of congruence of values and personality, influences employee withdrawal through work attitudes. Accordingly, in the proposed conceptual framework, P-E fit is hypothesized to affect employee withdrawal through job satisfaction and affective commitment. Furthermore, based on the evidence, the nature of the relationship between affective commitment and satisfaction is hypothesized to be a cyclical one in the military turnover process, and both types of commitment and job satisfaction are stated to contribute to turnover intentions, which are directly linked to turnover behavior.

Consistent with the unfolding model of turnover, shocks, as an important group of proximal factors, are expected to influence turnover behavior directly. Finally, unemployment rate is expected to influence voluntary turnover both directly and through perceived job opportunities.

The proposed model has important practical implications:

- First, systematic large-scale surveys tapping into quality of life perceptions, values congruence, and satisfaction and commitment levels of the members can be used as proactive tools to minimize dysfunctional turnover and different courses of action can be taken depending on the sources of problems.

- Second, related to the macro level factors playing a role in voluntary turnover, strategies can be developed to forecast the rate of turnover so that appropriate proactive actions can be taken to compensate for the expected losses.

- Third, assuming that the role of shocks has been established, more thorough, systematic approaches can be adopted to examine factors contributing to the decision to stay or leave.

Exit interviews and broad based surveys could be designed to understand the types of shocks as well as to identify groups of leavers distinguished based on the nature of shocks experienced.

4B.2   INTRODUCTION

Retention of the qualified military members is a major, if not number one, priority of most countries. Since, retaining qualified personnel requires a deeper understanding of the process of turnover, the retention issue is approached from a turnover perspective in this paper. Not all types of voluntary turnover are negative, yet, voluntary turnover that is dysfunctional can be very costly for the military, considering the scale of investments made in the recruitment, selection, classification, and training of the members. Identifying critical organizational, job, and individual factors in the turnover process has obvious utility implications for military organizations.

Early models of turnover were relatively simple, relating turnover directly to job attitudes like satisfaction and commitment (Newman, 1974; Porter, Steers, Mowday, and Boulian, 1974). Later models were more complex, yet still attitude-centered. In these models decision-making processes involved in withdrawal were emphasized (e.g., Dalessio, Silverman, and Schuck, 1986; Fishbein and Ajzen, 1975; Hom and Griffeth, 1991; Hom, Griffeth, and Sellaro, 1984; Mobley, 1977; Mobley, Horner, and Hollingsworth, 1978). Among the latter models, Mobley's (1977) model, which proposes several intermediate linkages between job satisfaction and turnover, has received considerable research attention. The original formulation was later modified/ simplified by Mobley and colleagues (Mobley, Horner, and Hollingsworth, 1978), and the revised model has contributed significantly to the accumulation of the turnover literature. In the Mobley et al. model, job satisfaction is said to have an influence on thinking of quitting, which in turn leads to intention to search. Intention to search is hypothesized to influence intention to quit, which leads to turnover. In this model, in addition to its mediated/indirect influences on search intentions and intention to quit, job satisfaction is hypothesized to have direct effects on these two variables. Furthermore, probability of finding a satisfactory alternative is expected to influence both intention to search and intention to quit. Finally, age and tenure are proposed to influence turnover behavior through job satisfaction and probability of finding an acceptable alternative. Following the introduction of Mobley et al.'s (1978) model, several alternative models have been proposed (Bannister and Griffeth, 1986; Dalessio, Silverman, and Schuck, 1986; Hom and Griffeth, 1991; Hom, Griffeth, and Sellaro, 1984). These models can be conceived as offsprings of the revised Mobley model since they largely share the same structural network; they involve basically the same parameters, with changes in the direction and/or directness of a few parameter estimates.

Recently, Griffeth and Hom (2001) proposed a comprehensive model of turnover in which satisfaction and organizational commitment are treated as the major mediators in the turnover process. In this model job

satisfaction, which is assumed to be influenced by job-related factors (e.g., job complexity and group cohesion), individual-related factors (e.g., negative affectivity), and labor market conditions, influences turnover through perceptions of the costs and benefits of job seeking and turnover, job search, and finally, evaluation of alternatives. Organizational commitment, on the other hand, is influenced by job- and organization-related factors (e.g., procedural justice and job security) and individual-related factors (e.g., commitment propensity). Effects of commitment on turnover behavior are mediated by thoughts of quitting.

Many researchers have argued against the conventional wisdom that accumulated job dissatisfaction is the major and immediate cause of voluntary turnover (Holtom, Mitchell, Lee, and Inderrieden, 2005; Lee and Mitchell, 1994). Holtom et al. state, "…organizational leaders … must develop clear strategies for attracting and retaining good employees. However, these plans must move beyond methods to combat job dissatisfaction if they expect to be effective. They also must systematically address shocks and the critical role of these shocks in the voluntary turnover process" (p. 337-338). Grounded in image theory (Beach, 1990), Lee, Mitchell, and colleagues proposed the "unfolding model" of voluntary turnover, which basically states that unexpected life events, or shocks, cause voluntary turnover more often than accumulated job dissatisfaction. Shocks, scripts, image violations, job satisfaction, and job search are the main components of this model. A shock is a jarring event that initiates the thoughts of quitting. Shocks vary in their valence and content. That is, they can be positive (e.g., an unsolicited job offer), neutral (e.g., change in supervisor), or negative (e.g., harassment), and also they can be personal, work-related, or professional. A script is a pre-existing plan of action; a plan for leaving that could be activated in response to a shocking event. Image violations take place "when an individual's values, goals and strategies for goal attainment do not fit with those of the organization or those reflected in the shock" (Holtom et al., 2005, p. 340). According to the model, job satisfaction decreases when the person feels that his/her job falls short of providing the desired intellectual, emotional, and/or financial benefits.

The unfolding model proposes four potential courses of actions or paths leading to turnover. In Path 1, a shocking event triggers the realization of a pre-existing plan of action, and the person leaves without considering alternatives or his/her attachment/commitment to the organization. In this path, job satisfaction/dissatisfaction is basically irrelevant in turnover. For example, receiving an irresistible job offer that you had been hoping for may make you take the offer and go without evaluating your current feelings and attitudes toward your employer. In Path 2, a shock, usually a negative one, leads to image violations, which in turn forces the person to re-evaluate his/her attachment to the organization. In this path, the person is expected to leave without searching for alternatives. For example, a person may quit after being passed over for promotion. Job satisfaction levels before the shocking event is again irrelevant in this path. It could be relatively high, yet it is expected to fall after the negative critical event. In both Path 1 and Path 2, the process of turnover unfolds rather quickly.

In Path 3, there is again a shock resulting in image violations. This, in turn, initiates a search for alternatives, resulting in quitting the job. A job offer which makes the person seriously think about it and compare and contrast it with the current job and other available alternatives is an example for Path 3 type quitting or turnover. Although relative dissatisfaction is a possibility in Path 3, the person may be quite satisfied with the current job before the shock. The path to turnover takes longer in Path 3. In Path 4, turnover is an end product of mainly lower levels of job satisfaction. The person who is not satisfied with his/her job decides to leave with or without searching for alternatives.

Empirical evidence has in general yielded support for the unfolding model or the role of shocks in turnover (Holtom, et al., 2005; Kammeyer-Mueller, Wanberg, Glomb, and Ahlburg, 2005; Morrell, Loan-Clarke,

and Wilkinson, 2004). For example, Holtom et al.'s study indicated that in a sizeable proportion of decisions to quit, shocks, but not job dissatisfaction, played a critical role, and that Path 3 represented the most widely experienced shock-based pathway to turnover. Similarly, studying a sample of practicing accountants, who had either quit or thought about quitting, but had decided to stay in their jobs, Donnelly and Quirin (2006) were able to classify 86% of their respondents into one of the four decision paths theorized by the unfolding model.

Most of the turnover models presented in the literature have been based on civilian samples/organizations and, as stated above, they are largely attitude-centered, with few exceptions like the unfolding model. Although there have been some attempts to specifically understand turnover in the military context (e.g., Knapp, McCloy, and DiFazio, 1993), these attempts have not gone beyond examining the links between satisfaction, intentions, and turnover. Furthermore, as argued by Morrell, Loan-Clarke, and Wilkinson (2004), current literature on voluntary turnover is still largely descriptive in nature, and fails to offer decision makers the longed for prediction power concerning an individual's decision to stay or leave. The purpose of this paper is to develop a conceptual model of military turnover, amenable to empirical testing, based on the reviewed literature and the work done by the members of the NATO Task Group on Military Recruitment and Retention. An earlier version of the proposed model was presented at the Annual Meeting of Military Testing Association in Brussels (Sümer, 2004).

The proposed model classifies the factors expected to play a critical role in military turnover under three categories: distal factors (i.e., job and organizational characteristics and perceived job alternatives), mediating factors (i.e., P-E fit, QOL concerns, and work attitudes, job satisfaction, continuance commitment, and affective commitment), and proximal factors (i.e., turnover intentions, unemployment rate, and shocks). Figure 4B-1 depicts how these factors are hypothesized to be related to one another in the military withdrawal process. The model presented here aims to capture primarily the social-psychological processes involved in military turnover. Although labor-market conditions, especially unemployment rate, are acknowledged among the factors contributing to voluntary turnover, the proposed military turnover model is not an economy-based, or objective-indices-based model. However, it is important to note that there are theories focusing purely on macro-level labor market conditions in explaining turnover. For example, as stated by Kim (1999), standard competitive economic theory suggests that if the market wage rate is not matched in an organization, employees are likely to be lost to higher-paying competitors in the market. The major implication of job search and efficiency wage theories is that the number of quits will increase if "the expected discounted lifetime earnings in an alternative job are greater than the expected discounted lifetime earnings in the present job plus the disutility and cost of changing jobs" (Kim, 1999, p. 585). Nevertheless, Kim's own research indicated that absolute wage level and wage growth, but not relative wage level, had significant large effects on turnover rates.
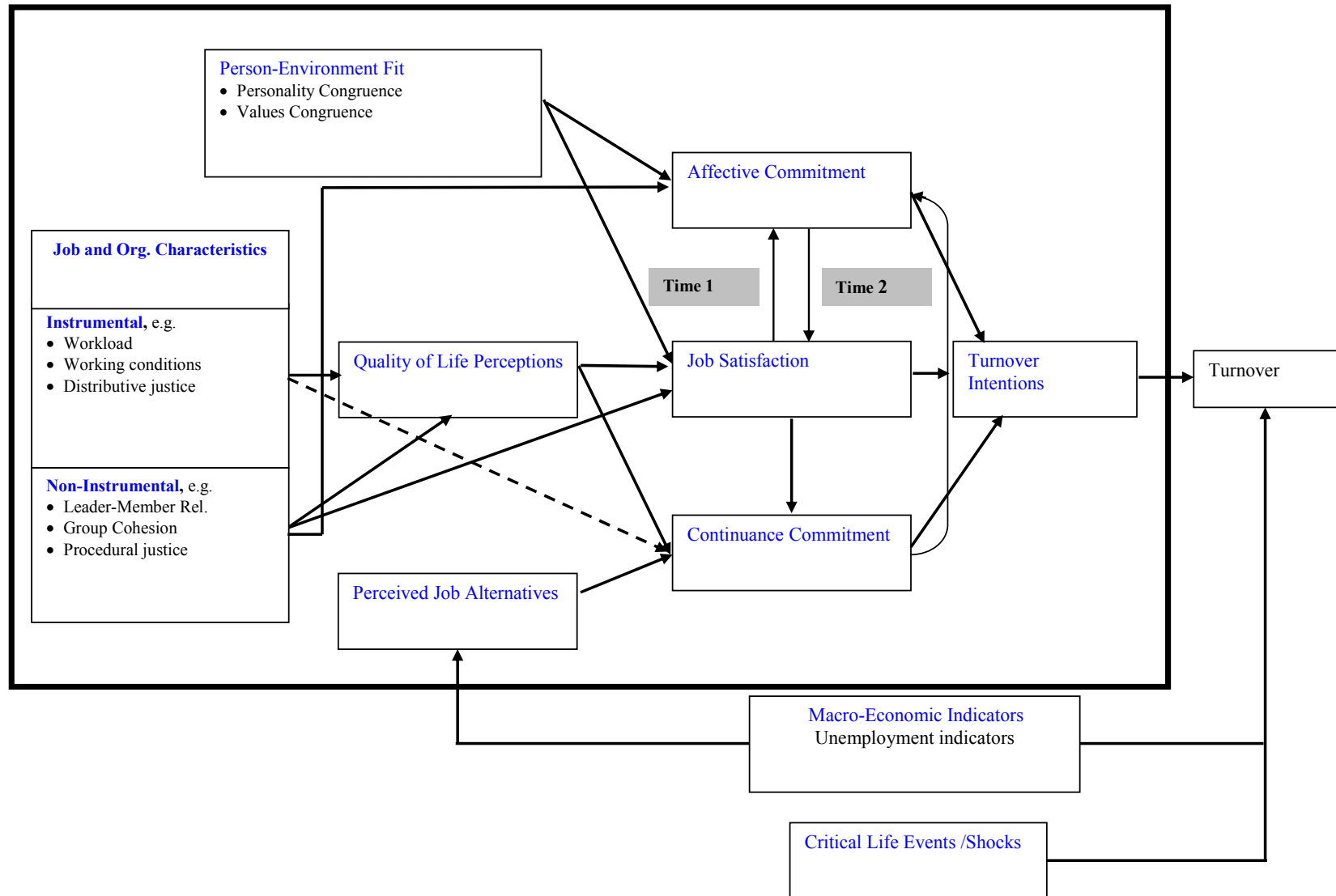
Figure 4B-1: Proposed Structural Model of Military Turnover.

In the proposed model, voluntary turnover is treated as a product of an individual subjective experience of the job and the organization, which exists within the broader social, economic, and cultural milieu. In other words, acknowledging the potential impacts of some macro-level labor market parameters, a micro-level, decision-making approach is adopted in explaining the military turnover process. This individual-centered approach is believed to have certain advantages over adopting a purely macro-level approach. First of all, it reflects the complex nature of the turnover phenomenon, which, in many cases, cannot be fully understood using macro algorithms only. Morrell et al. (2004) argued "leavers are not economic agents, who make rational choices to maximize expected utility. Instead they are actors, who negotiate complex social scenarios with reference to habit, learned schemata, and values." (p. 345) Second, an individual-centered approach helps decision-makers understand the role of relatively proximal factors playing a role in turnover. Finally, such an approach treats turnover as a more manageable and predictable phenomenon by the organization through the coordination of critical human resources management activities such as recruitment, selection, classification, and continuous monitoring.

4B.2.1   Distal Factors

4B.2.1.1   Job and Organizational Characteristics

It needs to be emphasized at the outset that in the proposed model, job and organizational characteristics refer to the perceptions of the person rather than the actual job and organizational characteristics. Job and organizational characteristics cover a broad range of factors. A distinction can be made between instrumental (e.g., compensation and workload) and non-instrumental (e.g., leader-member relations and work group cohesion) job and organizational characteristics relevant for the military turnover. This distinction between instrumental and non-instrumental characteristics can be better understood using the terms from psychological contract literature (see topic chapter *The Psychological Contract: A Big Deal!* for more details), where a distinction is made between transactional and relational contracts. Transactional contracts are more likely to be short-term, fixed contracts with well-specified performance terms, requiring relatively narrow involvement in the organization. The basis of such contracts is mostly instrumental/economic in nature. Relational contracts, however, are open-ended, have loosely defined performance terms, and require mutual loyalty and long-term stability. The basis of such contracts can be both emotional and economic. Instrumental characteristics playing a role in military turnover seem to reflect violations of transactional contracts, whereas non-instrumental characteristics seem to reflect violations of relational contracts.

There exists empirical and/or theoretical evidence concerning the role of instrumental factors in the development of negative work attitudes, which are well-established antecedents of turnover in general and military turnover, in specific. Among these factors are workload and/or job pressure, role clarity (e.g., Bliese and Castro, 2000; Dunn and Morrow, 2002; Sanchez, Bray, Vincus, and Bann, 2004), shift-work (Demerouti, Geurts, Bakker, and Euwema, 2004), OPSTEMPO and PERSTEMPO (e.g., Castro and Adler, 1999; Dunn and Morrow, 2002; Huffman, Adler, Castro, and Dolan, 2000), role stress (e.g., Griffeth and Hom, 2001), unmet expectations (e.g., Griffeth and Hom, 2001; Richardson, 2003; van de Ven, 2003), pay grade (Sanchez et al., 2004), and distributive justice (DeConinck and Stilwell, 2004; McIntyre, Bartle, Landis, and Dansby, 2002). Literature reviewed suggested criticality of three groups of instrumental factors in the military turnover process. These are workload related factors, working conditions, and distributive justice.

Using qualitative methods, Dunn and Morrow (2002) examined the members' reasons for leaving the Canadian Forces (CF). Workload as it related to PERSTEMPO and OPSTEMPO was identified to be the second most commonly mentioned reason for leaving the CF. In a relative recent study using a comprehensive data base collected from 24881 members of the Active Duty and Reserve/Guard components, Sanchez et al. (2004) examined psychological, demographic, and physical predictors of job satisfaction among military

personnel across the Armed Forces in the U.S. Job pressure was identified to be the most important predictor of job satisfaction for both Active Duty and Reserve/Guard members. Personnel with higher levels of job pressure were more likely to experience lower levels of job satisfaction. In another study on 1,786 lower enlisted soldiers in the U.S. Army, Bliese and Castro (2000) found that both workload and role clarity contributed significantly to the prediction of psychological strain experienced by the soldiers. As discussed below, role clarity buffered the negative effects of workload under certain conditions.

Although conditions of work can be examined under workload-related factors, unlike typical workload-related factors, they seem more representative of physical aspects of work, and hence, have a relatively independent impact on the process of work withdrawal. Frequent and long deployments, geographical isolation from family, overnight duty, long work hours, and high tempo, typical of most military jobs (see Dunn and Morrow, 2002; Sanchez et al., 2004), are likely to play a role in the process of turnover. Demerouti et al. (2004) examined the effects of rotation and timing of shifts on job attitudes, turnover intentions, work-home conflict, health, and absenteeism among the Dutch military police officers. They found that rotating shift workers held less positive attitudes toward their jobs. Those with fixed shifts, however, reported higher levels of job satisfaction and professional efficacy, lower turnover intentions, and cynicism.

Distributive justice, which basically refers to "fairness of outcome allocation" (Tepper, 2000, p. 179), is the third group of instrumental factors expected to be critical in the proposed model. The other two types of justice perceptions widely studied in the literature, namely, *procedural justice* [fairness of the procedures used to make allocation decisions" (Tepper, 2000, p. 179)] and *interactional justice* [fairness of interpersonal treatment individuals receive during the enactment of procedures" (Tepper, 2000, p. 179)] are not typical instrumental factors. DeConinck and Stilwell (2004) examined the relationships among organizational justice perceptions (both distributive and procedural), role states (role ambiguity and role conflict), pay satisfaction, supervisor satisfaction, organizational commitment, and withdrawal cognitions on a sample of 222 advertising managers. They found a positive relationship between distributive justice and pay satisfaction, which in turn had both a direct and indirect effect (through organizational commitment) on withdrawal cognitions. Along the same lines, McIntyre et al. (2002) used three random samples (each comprising 5000 records) from the U.S. Military Equal Opportunity Climate Survey database to examine the relationships between distributive justice perceptions (labeled "Organizational Equal Opportunity Fairness") and work group equal opportunity fairness, work group efficacy, organizational commitment, and job satisfaction of military members. These authors found that distributive justice at the organizational level influenced distributive justice at the group level, which influenced perception of work group efficacy. Perception of work group efficacy, in turn, had a strong effect on job satisfaction.

Reviewed empirical evidence and the conceptual work on the QOL (Dowden, 2000), reviewed below, suggest that instrumental characteristics influence job satisfaction (and possibly continuance commitment) through their effects on the quality of life perceptions/concerns of military personnel.

Among non-instrumental characteristics deemed relevant in the military turnover process are leader-member relations and/or person-supervisor fit (e.g., Britt, Davison, Bliese, and Castro, 2004; DeConinck and Stilwell, 2004; Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhoades, 2002; Ferris, 1985; Frone, 2000; Kristof-Brown et al., 2005; Sanchez et al., 2004), group fit or group cohesion (e.g., Griffeth and Hom, 2001; Kristof-Brown et al., 2005), and procedural justice (e.g., Clay-Warner, Reynolds, and Roman, 2005; DeConinck and Stilwell, 2004; Griffeth and Hom, 2001).

Leadership is critical not only for boosting motivation and performance, but also for improving general adaptation of military members (Britt, Davison, Bliese, and Castro, 2004). In a meta-analytic study examining

the effects of different types of fit, Kristof-Brown et al. (2005) found a relatively strong relationship between person-supervisor fit and job satisfaction (.44). In this review the relationships between person-supervisor fit and organizational commitment (.09), tenure (.09), and overall performance (.18) were relatively weak. Also, in their study on the U.S. Army soldiers, Bliese and Castro (2000) found that the effects of workload on psychological strain were moderated by role clarity only when organizational support from leaders was high. Similarly, Britt et al. argued and provided empirical evidence for the buffering effects of supportive leader behaviors against the effects of stress in the military context.

Kristof-Brown et al.'s (2005) meta-analytic study indicated that the relationships between person-group fit and the three widely studied outcome variables, namely job satisfaction (.31), organizational commitment (.30), and intention to quit (–.22), were considerable. Consistently, McIntyre et al. (2002) reported that perceived work group efficacy was especially predictive of job satisfaction ($\beta = .61$, $p < .000$) for the U.S. military members. Although significant, the effect of group efficacy on organizational commitment was relatively weak ($\beta = .06$, $p < .001$).

The third non-instrumental factor considered to be relevant in the process of military turnover is perceptions of procedural justice. Clay-Warner et al. (2005) examined the relationships between distributive and procedural justice and job satisfaction. They found that procedural justice was a more important predictor of job satisfaction than was distributive justice. Supporting this finding, on a sample of salespeople, Flaherty and Pappas (2000) found that perceptions of procedural justice related positively to trust in supervisor, and that trust in supervisor was related to job satisfaction. Distributive justice, on the other hand, had a relatively weak relationship with supervisory trust. DeConinck and Stillwell (2004) found that while distributive justice was predictive of pay satisfaction, procedural justice was predictive of supervisory satisfaction, which then was predictive of both organizational commitment and withdrawal cognitions.

Based on the reviewed military and non-military literatures and on Dowden's (2000) QOL model described below, non-instrumental job and organizational characteristics are expected to influence job satisfaction and affective component of organizational commitment directly. Furthermore, non-instrumental attributes are expected to have an indirect effect on job satisfaction through their influence on QOL concerns.

4.B.2.1.2 Perceived Job Alternatives

Individuals may develop intentions to quit their current job on the basis of their impressions/perceptions that they can find a job, probably a better suiting job (Kammeyer-Mueller, et al., 2005). Although perceived job alternatives may not be a precise reflection of actual probability of finding a job elsewhere, it has been shown to influence turnover intentions both directly (e.g., Mobley, Horner, and Hollingsworth, 1978) and indirectly (Dalessio et al., 1986; Griffeth and Hom, 2001; Mobley, Horner, and Hollingsworth, 1978) through work attitudes, mainly job satisfaction. In a recent methodologically sound longitudinal analysis, however, Kammeyer-Mueller et al. (2005) reported the effects of perceived job alternatives to be minimal especially as compared to actual occupational unemployment rates.

Despite the equivocal nature of the findings concerning the role of perceived alternatives in the turnover experience, in the proposed conceptual framework, perceived job alternatives are included as one of the distal factors influencing turnover intentions. Perceived alternatives, which are hypothesized to be directly influenced by unemployment rate, are proposed to have an effect on turnover intentions through their effects on continuance commitment (CC). As discussed below, CC represents an exchange-oriented bond to the employing organization, and taps into perceptions of the costs associated with leaving the organization. An increase in alternatives outside the organization is expected to reduce the cost associated with ending membership in the organization.

4B.2.2   Intermediate/Mediating Factors

4B.2.2.1   Person-Environment Fit

According to Mumford and Strokes (cited in Gustafson and Mumford, 1995), the fit between person and environment (i.e., P-E fit) can be expressed as the degree of adaptation an individual exhibits with respect to his/her vocational niche. Increased fit can be expected to result in positive organizational and personal outcomes such as increased satisfaction, motivation, morale, job performance, commitment, and retention. Both empirical and theoretical evidence suggests that the fit between the person (as represented by the personality attributes, interests, skills, abilities, and values) and the environment (as represented by the job or occupation, or the organization) play a critical role in a number of organizational outcomes, including job satisfaction, organizational commitment, career involvement, career success (all positively), and turnover intention and behavior (negatively) (see Kristof, 1996; Lauver and Kristof-Brown, 2001; Westerman and Cyr, 2004). Two different forms of P-E fit seem to be especially relevant within the context of military retention: fit in terms of personality attributes and fit in terms of person-organization (P-O) congruence (i.e., values congruence). Based on the reviewed literature summarized below, these two forms of fit are expected to be critical in the military turnover process.

4B.2.2.1.1   *Fit in Terms of Personality Characteristics*

Although not directly included in most turnover models, personal dispositions are acknowledged in the literature as critical factors in the process of turnover. For instance, Griffeth and Hom (2001) included negative affectivity, the tendency to perceive oneself and the environment negatively, among the factors contributing to job dissatisfaction in employee turnover. Similarly, in his conceptual model of QOL outcomes, Dowden proposed that personal dispositions are likely to influence three organizational outcomes (i.e., retention, absenteeism, and individual performance) through their effects on attitudinal factors, moral, motivation, and perceived stress.

Schneider's attraction-selection-attrition (ASA) model, lends support for the criticality of personality fit in the turnover process (Schneider, 1987; Schneider, Goldstein, and Smith, 1995). The model states that individuals are attracted to, selected by, and stay with organizations that suit their personality characteristics. The major assumption of the ASA model is that both the attraction and retention processes are based on some kind of person-environment (i.e., organization) fit. Schneider and colleagues state that people select themselves into and out of work organizations, and that environments are function of persons working in them. Furthermore, they assert that attraction to, selection by, and withdrawal from an organization result in trait homogenization in that organization.

The effects of personality in the employee withdrawal process have been examined either using a predictive/ regression approach or a commensurate measurement approach. Generally, the predictive/regression approach involves examining the effects of single personality characteristics on the outcome variables, such as satisfaction, turnover intentions, and actual turnover. Commensurate measurement approach to personality fit, on the other hand, requires measuring the congruence between the person's personality and the organization's ideal personality type using the same content domain.

Using the predictive approach, Boudreau, Boswell, Judge, and Bretz (2001) found that personality characteristics, such as agreeableness and neuroticism were predictive of employee withdrawal. Another attribute, called *job embeddedness,* has also been shown to predict voluntary turnover over and above organizational commitment and job satisfaction (Mitchell, Holtom, Lee, Sablynski, and Erez, 2001; Mitchell and Lee, 2001). Job embeddedness refers to an employee's:

1) Association with other people, teams, and groups within the organization;

2) Perceptions of his/her fit with the job, organization, and community; and

3) Perceived cost of leaving the job (i.e., what the person says he/she has to sacrifice if he/she leaves the job).

Although there exists some evidence concerning the predictive ability of personality characteristics in the turnover process, usually these variables fail to explain a significant portion of the variance in employee withdrawal. According to Westerman and Cyr (2004), because of their relatively weak direct effects on withdrawal process, personality variables are generally assumed to have indirect effects on turnover, through their effects on job satisfaction and organizational commitment. Westerman and Cyr further argue that "… it may be overly simplistic to assume that any single individual difference variable, acting in isolation from consideration of its relevant environment, would have significant effects on complexly determined withdrawal cognitions and behaviors" (p. 259). These authors recommend the use of commensurate-measurement approaches in studying the effect of personality on employee withdrawal. According to Westerman and Cyr, commensurate approach "… provide(s) a more comprehensive picture of the 'chemistry' resulting from congruence between individual differences and organizational situations and may indicate potential to explain more of the variance in withdrawal cognitions and behavior" (p. 259). Consistently, in their study Westerman and Cyr measured personality congruence by correlating the personality profile of the prototypical successful firm member (by aggregating the "ideal personality" ratings given by participants from a given organization) to each individual's own personality profile. They found that personality congruence contributed directly to intention to remain with the organization.

Along the same lines, using data obtained from a sample of Navy subordinates and their immediate supervisor, Gustafson and Mumford (1995) tested the effects of person-environment fit in predicting job performance, job withdrawal, and job satisfaction. Using hierarchical cluster analysis technique they identified eight characteristic patterns of personality (i.e., *externally focused non-impulsives, overall uninvolveds, anxious unmotivated impulsives, anxious defensives, comfortable non-strivers, non-anxious strivers, low self-esteem impulsives,* and *internally controlled rigids*) and five subgroups of environment (i.e., *independent-simple, structured-complex, unstructured-unsupported, directed-undemanding,* and *protected-certain*). As an example, while anxious defensives were characterized by low job involvement and anxiety, non-anxious strivers were characterized by high job involvement, high achievement motivation, and low anxiety. Results suggested differential effects of personality type-on the three organizational outcome variables (satisfaction being the most critical one followed by performance and withdrawal). For instance, while non-anxious strivers reported high job satisfaction and their supervisors rated their performance as high, anxious defensives reported low levels of satisfaction and also their performance was rated low by their supervisors. Results also suggested differential effects of person subgroup (i.e., personality type) – situation subgroup (i.e., environment type) fit on the three organizational outcomes.

Although further studies are needed to advance our understanding of the interplay between person-environment fit and organizational outcomes, results of Gustafson and Mumford's (1995) study have important implications for personnel management practices in the military. That is, if best-fitting personality type(s) could be identified for given organizational/environmental types, then selection and classification efforts can be geared toward selection and classification of individuals into their ideal environmental types.

4B.2.2.1.2   Fit in Terms of Values: Values Congruence

Before discussing the role of P-O fit in the military withdrawal process, a distinction should be made between P-O fit and person-job (P-J) fit (see Cable and DeRue, 2002; Kristof, 1996; Kristof-Brown et al., 2005; Lauver

and Kristof-Brown, 2001). While P-O fit refers to the extent to which an employee's personal values and the employing organization's values/culture are congruent or compatible, P-J fit refers to the extent to which abilities of the person and the demands of the job match or the needs of the person and what is provided by the organization are congruent (Lauver and Kristof-Brown, 2001). In other words, while P-O fit involves the compatibility of the individual with the employing organization, mostly at the level of values, P-J fit refers to a person's compatibility with the job in question (Kristof, 1996). Empirical evidence indicates that these two fit types are weakly but positively correlated (e.g., Cable and DeRue, 2002; Lauver and Kristof-Brown, 2001). P-O fit seems to be especially critical in understanding the military turnover process as it refers to the similarity between deeply seated individual and organizational characteristics.

Several researchers reported P-O fit as being a sound and/or better measure of P-E fit predictive of important organizational outcomes, such as job satisfaction, organizational commitment, and turnover intentions (e.g., Cable and Judge, 1996; Lauver and Kristof-Brown, 2001; O'Reilly, Chatman, and Caldwell, 1991). Using a values profile matching process to assess person-environment fit, O'Reilly et al. (1991) found that P-O fit predicted job satisfaction and organizational commitment a year after the measurement of fit and that it predicted actual turnover even after two years. Similarly, Lauver and Kristof-Brown (2001) found that perceived P-O fit was a significant predictor of job satisfaction ($\beta = .40$) and intention to quit ($\beta = -.47$) for employees working in a large national trucking company. Predictive ability of P-O fit seemed stronger than that of P-J fit for especially intention to quit ($\beta = -.22$).

In another study, Cable and DeRue (2002) made a distinction between three types of fit perceptions: *P-O fit perceptions* (i.e., values congruence between the person and the organization); *needs-supplies fit perceptions* (i.e., match between what is needed by the person and what is offered by the organization); and *demands – abilities fit perceptions* (i.e., congruence between the demands of a job and the person's abilities). These authors examined whether these three types of fit were differentially related to organizational outcomes. The needs-supplies and demands – abilities fit perceptions tap into the P-J fit construct. Among the important findings of this study was that P-O fit perceptions were good predictors of turnover decision ($\beta = .48$), perceived organizational support ($\beta = .44$), organizational identification ($\beta = .42$), job satisfaction ($\beta = .28$), and citizenship behaviors ($\beta = .20$).

Westerman and Cyr (2004) examined the effects of values congruence (i.e., P-O fit), work environment congruence (needs-supplies fit), and personality congruence on job attitudes and turnover intentions using a sample of sales people in a number of organizations. They measured fit using commensurate measurement approach rather than relying on perceptions of congruence. They found that values congruence and work environment congruence were both predictive of job satisfaction and organizational commitment. Also, job satisfaction and commitment mediated the relationship between these two types of congruence and turnover intentions. In addition to its influence through satisfaction and commitment, values congruence had a direct effect on turnover intentions. Finally, as mentioned before, personality congruence had only a direct effect on turnover intentions.

More recently, in their multiple meta-analyses on different types of fit, Kristof-Brown et al. (2005) found that P-O fit had substantial correlations with job satisfaction (.44), organizational commitment (.51), and turnover intentions (–.35). Although majority of the studies included in this meta-analytic study employed value-based P-O fit measures, there were some studies, using multidimensional, personality-based, or goal-based P-O fit measures. When value-based, goal-based, and personality-based P-O fit measures were compared in terms of their relationships with organizational attitudes, value-based fit measures were found to have stronger relationships with both satisfaction and commitment than both goal-based and personality-based P-O fit measures.

To summarize, based on the reviewed literature, both dispositional factors (in the form of personality congruence) and values congruence (i.e., value-based P-O fit) are expected to play a role in military turnover, and hence they are incorporated into the proposed conceptual framework as part of intermediate (as opposed to proximal or distal) factors influencing military turnover. P-E fit, as the generic term for both personality-fit and value-based fit, is hypothesized to influence military turnover especially through its influence over work attitudes, mainly job satisfaction and affective commitment.

However, it is important to note that the impact of values congruence is expected to be stronger than that of personality congruence because of two reasons, at least. First, the evidence concerning the primacy of values congruence as a predictor of work attitudes and turnover intentions over the other measures of fit, including personality, is quite convincing (e.g., Cable and Judge, 1996; Lauver and Kristof-Brown, 2001; O'Reilly, Chatman, and Caldwell, 1991; Westerman and Cyr, 2004). Second, as stated by Puente (2004, see also the topic chapter *Values Research*), values are especially crucial in the military context, in both recruitment and retention processes. According to him, as deeply seated individual differences factors, values influence individual and collective behavior, both directly and indirectly, through intervening variables such as attitudes and norms.

4.B.2.2.2   Quality of Life Perceptions

According to the results of U.S. Department of Defense's 2004 survey of both active-duty and reserve members, 14% of the respondents (20% for Army members) report that their desire to stay decreased as a result of tempo, or being away more than expected (U.S. Department of Defense, 2005). Similarly, the British Airmen and Non-Commissioned Aircrew Leaver's survey results indicated that "family stability" was the factor with the highest importance rating in the decision to leave especially for personnel with more than six years of tenure. Furthermore, high workload, lack of notice for postings, and frequency of detachments were among factors that had increased recently in importance as reasons for leaving (Brackley, 2003).

Research in the CF on retention has also examined the links between PERSTEMPO, OPSTEMPO, and attrition of military personnel. As discussed above, in focus groups conducted to determine members' reasons for leaving the military, the second most commonly mentioned reason for leaving CF was the workload as it related to PERSTEMPO (Dunn and Morrow, 2002). "It was frequently stated that primary duties, coupled with secondary duties and a high deployment tempo, were leading to some members feeling burnt out and to others leaving the CF. Members often stated that the high PERSTEMPO and workload were putting people in the position of having to choose between staying in the CF or losing their families. It was stated that the amount of time members had to spend away from home due to deployments, exercises, courses, and overtime was in many cases beyond the coping ability of their families" (Morrow, 2004, p. 1).

As the above experiences of the member countries indicate, aspects of both work (e.g., workload, tempo, and time away from home) and non-work (e.g., marital status, number of children, time for leisure, and recreation) domains and the way these domains interact are critical factors in the development of the decision to stay in or leave the military. Hence, it is vital to understand the role of work/non-work balance in military turnover.

Based on the work done by Kerce (1995) in the U.S. Marine Corps, and Dowden (2000) in the CF, QOL perceptions could be defined as an individual's global sense of well-being nourished by his/her feelings about various life domains, such as standard of living, job itself, leisure and recreation, health, marriage/intimate relationship, and relations with children. According to Kerce, perceptions of global QOL have behavioral consequences and contribute to organizational outcomes such as turnover and performance. QOL variables do influence people's intentions to remain in the military; they, for example, account for 10 – 20% of the

variance in people's stay – leave decisions over and above the influence of other variables in the CF (for more detail see Morrow, 2004 and the topic chapter *PERSTEMPO/OPSTEMPO and Quality of Life*).

Among the assumptions underlying Dowden's (2000) model of QOL are:

1) QOL domains such as income, job characteristics, marriage/intimate relations, and friends and friendship, are strong contributors of global QOL perceptions;

2) Personal dispositions influence global QOL perceptions;

3) Enhancing global QOL perceptions has an impact on subjective variables like satisfaction, commitment, and motivation; and

4) Global QOL perceptions influence important organizational outcomes, mainly retention, absenteeism, and performance through the mediating effects of subjective organizational variables.

In both Kerce's (1995) and Dowden's (2000) models, QOL perceptions are expected to mediate the relationship between environmental, dispositional, and individual factors and organizational outcomes.

Based on the available literature on QOL and turnover, it is hypothesized that QOL factors mediate the effects of, job, and organizational characteristics on job satisfaction and continuance commitment. The effects of QOL on job satisfaction seem self-explanatory. That is, satisfaction with different facets or domains of life, as expressed by the global QOL perceptions, is likely to influence satisfaction with one's work life. Continuance commitment, as discussed in the next section, represents an exchange-oriented bond to the employing organization. It is an end product of a cost-benefit analysis about continued membership in the organization. Perceptions concerning life domains, such as income and standard of living, health, and accommodation are likely to be in the equation in determining the continuance commitment of the person. Hence, it seems logical to expect continuance commitment to be influenced by global QOL perceptions. Since affective commitment reflects an emotional bond to the employing organization, it seems less likely to be influenced by the global QOL perceptions.

4B.2.2.3   Work Attitudes: Job Satisfaction, Continuance Commitment, and Affective Commitment

In most models of turnover, job satisfaction is assumed to influence turnover behavior through turnover thoughts and intentions (e.g., Dalessio, Silverman, and Schuck, 1986; Hom, Griffeth, and Sellaro, 1984; Mobley, 1977). However, meta-analytic findings as well as theoretical arguments suggest that because of contractual obligations, satisfaction is likely to have a weaker (yet still significant) influence on withdrawal cognitions and actual turnover for military samples than for civilian samples (e.g., Carsten and Spector, 1987; Farkas and Tetrick, 1989; Hom, Caranikas-Walker, Prussia, and Griffeth, 1992). Carsten and Spector, for example, found that predictability of turnover especially by satisfaction decreased with time, and this decrease was more evident in the military samples. Furthermore, the unfolding model of voluntary turnover suggests that a considerable portion of voluntary turnover is not induced by job dissatisfaction; shocks or significant life events seem to have more explanatory power in the experience of turnover (Holtom et al., 2005; Lee and Mitchell, 1994; Morrell et al., 2004). Yet, as stated by Holtom and colleagues themselves, the concept of shocks does not replace job dissatisfaction as an antecedent of voluntary turnover. Even in studies supporting the role of shocks in the turnover experience, dissatisfaction was the major predictor of turnover for some participants. In other words, irrespective of shocking events, when satisfaction levels are low, quitting can be anticipated. Hence, in the proposed model, job dissatisfaction (along with or irrespective of shocks) is expected to play a critical role in the process of withdrawal.

Organizational commitment, which refers to a relatively stable and more global attitude toward the employing organization, has been consistently shown to be related to variables associated with employee withdrawal. Commitment is assumed to affect actual turnover behaviors through its effects on behavioral intentions (e.g., Sjoberg and Sverke, 2000). In a meta-analysis Griffeth, Hom, and Gaertner (2000) reported that organizational commitment predicted turnover (average corrected correlation coefficient = –.23) better than did overall satisfaction (–.19). The predictive power of commitment was even larger for military samples (–.28).

Meyer and Allen's (1997) conceptualization of commitment as a three-component structure (i.e., affective commitment, AC; continuance commitment, CC; and normative commitment, NC) seems to offer a framework to explore the nature of the relationships between satisfaction, commitment, and turnover in the military turnover process. Within the military context, AC refers to a soldier's emotional attachment to, identification with, and involvement in the military service or unit, it is the *want to* part of the construct of commitment. CC refers to perceptions of the costs associated with leaving the military, and it is related with *need to* aspect of commitment. CC taps into perceptions of both available job alternatives and the personal sacrifices to be made by leaving the organization. Finally, NC refers to a soldier's (or significant other's) felt moral obligation to stay with the military. NC refers to *ought to* aspect of commitment (Gade, 2003). All three commitment dimensions were reported to have correlated negatively with turnover intentions (e.g., Meyer, Allen, and Smith, 1993; Meyer, Stanley, Herscovitch, and Topolnytsky, 2002), yet empirical evidence suggests that among these three dimensions, AC is a better predictor of variables associated with military withdrawal than the other two dimensions of commitment (Tremble, Payne, Finch, and Bullis, 2003).

Although both satisfaction and commitment have been identified as critical variables in the turnover process, there seems to be a lack of agreement concerning the nature of the relationship between these variables in relation to employee withdrawal. Some studies suggest that satisfaction is a precursor of organizational commitment and that commitment mediates the relationship between satisfaction and turnover intentions (e.g., Heffner and Gade, 2003; Williams and Hazer, 1986). However, the relationship between commitment and satisfaction seems much more complicated than a simple unidirectional relationship. A cyclical relationship has been suggested by Farkas and Tetrick's (1989) longitudinal study on a sample of Navy enlisted personnel. An important implication of the Farkas and Tetrick's (1989) study is that the relationships between satisfaction, commitment, and turnover intentions are not static at all, especially in the military context, and hence, in order to reveal the true nature of the developmental processes underlying turnover intentions, longitudinal research designs need to be employed. Similarly, Tremble, Payne, Finch, and Bullis (2003) emphasize the benefits of longer tracking periods in fully capturing the development of organizational commitment. For example, Van Maanen's study, cited by Tremble et al., using a sample of police officers indicated that it was not before the first 30 months of employment that organizational commitment stabilized.

Based on the available evidence it seems plausible to make the following assertions:

1) Both AC and CC (AC to a greater extent than CC) and job satisfaction contribute to turnover intentions;

2) The nature of the relationship between AC and satisfaction is likely to be cyclical in nature (i.e., satisfaction is expected to play a role in the development of AC, but once established, AC can be expected to have an influence on satisfaction); and

3) CC is expected to be influenced by satisfaction/dissatisfaction with specific, especially, extrinsic aspects of job, such as pay and benefits.

No predictions concerning the role of normative commitment have been made because of the conceptual overlap between AC and NC items (see Allen, 2003).

4B.2.3   Proximal Factors

4B.2.3.1   Turnover Intentions

Starting with the early models of employee turnover (Fishbein and Ajzen, 1975; Mobley, Griffeth, Hand, and Meglino, 1979; Mobley, Horner, and Hollingsworth, 1978), turnover intentions have been reported to mediate the relationship between job-related attitudes, especially job satisfaction, and turnover behavior. Almost all of these models suggested that job dissatisfaction influenced actual turnover through its effects on intentions to quit. In a meta-analysis of research on the relationship between intention to quit and turnover, Steel and Ovalle (1984) reported a weighted average correlation coefficient of .50 between behavioral intentions and attrition. This study also indicated that intentions were stronger predictors of turnover than overall satisfaction, satisfaction with the work itself, and organizational commitment.

In an earlier attempt to understand the process of military turnover, Knapp et al. (1993) reported that although predictive ability of satisfaction concerning turnover behavior was weaker, the association between turnover intentions and turnover seemed stronger in the military context. It seems plausible to argue that once turnover intentions grow, the path to turnover seems more definite in the military, most likely because of the contractual nature of the jobs. Accordingly, in the proposed model, turnover intentions, which are directly influenced by satisfaction and affective commitment, are treated as one of the direct determinants of turnover behavior.

4B.2.3.2   A Macro-Economic Factor: Unemployment Rate

Conventionally, voluntary turnover has been conceptualized as an act largely developing from an individual's subjective experience of organizational life and labor market conditions. Accordingly, in most models of turnover, perceived opportunities in the labor market, as a proxy for actual opportunities, have been included among the contributors of turnover behavior. However, as stated by Kirschenbaum and Mano-Negrin (1999), there exists convincing evidence regarding the impact of objective labor market conditions, such as general unemployment rate, occupational unemployment rates, pay levels, and hiring rates, on turnover rates. In fact, studies examining both subjective and objective indices of alternative jobs available in the labor market have identified objective indices, namely unemployment rate, to be a stronger predictor of actual turnover behavior (e.g., Kammeyer-Mueller and Wanberg, 2003; Kirschenbaum and Mano-Negrin, 1999). For example, in a longitudinal analysis, Kammeyer-Mueller et al. (2005) found that occupational unemployment rates had a substantial impact on turnover behavior, and that perceived alternatives were not significant predictors of turnover.

Based on aggregated data from cross-sectional and longitudinal studies, Hulin, Roznowski, and Hachiya (1985) presented strong evidence concerning the relationship between unemployment and voluntary turnover. They reported that unemployment rate and voluntary turnover rate were "strongly and negatively" correlated, sharing up to 70% of the variance. In a meta-analysis, Carsten and Spector (1987) reported that correlations between job satisfaction and voluntary turnover were stronger when unemployment rate was lower. This finding suggests job dissatisfaction is more likely to eventually lead to turnover when unemployment rate is relatively low. According to Hulin et al. (1985), market conditions seem to act as a releaser allowing job satisfaction to best predict employee turnover during periods of low unemployment. Using an occupation-specific linear combination of local and occupational unemployment rates, Trevor (2001) also found that satisfaction had a greater negative effect on voluntary turnover when jobs were plentiful.

Kirschenbaum and Mano-Negrin (1999) emphasized the need for inclusion of objective job opportunities at the organizational (i.e., internal organizational opportunities for advancement) and labor market level within a voluntary turnover model. Hence, based on the reviewed literature, unemployment rate is expected to influence voluntary turnover both directly and through perceived job opportunities.

4B.2.3.3   Critical Life Events/Shocks

Recently there has been an increased recognition that turnover is not always a "slow burn," deliberative process (Kammeyer-Mueller et al., 2005, p. 646). As mentioned in the introduction section of this paper, according to the "unfolding model" of voluntary turnover (Lee and Mitchell, 1994), unexpected life events, or shocks, cause voluntary turnover more often than accumulated job dissatisfaction. Shocks are jarring, usually unexpected, events that prompt thoughts of quitting. Three of the four paths suggested by the unfolding model involve a shock as the triggering event for turnover. In Path 1, the shock leads to the execution of a pre-formulated script. In Path 2, the shocking event is negative and leads to a rather quick decision without a search for alternatives. In Path 3, the triggering event can be positive, negative, or neutral, and unlike the first two paths, resulting dissatisfaction initiates a search for and an evaluation of alternatives. Compared to the first two paths, Path 3 requires considerable deliberation. In Path 4, turnover process is not initiated by a shock; the decision to quit evolves rather gradually. In this path to turnover, lack of a compatible fit with the organization results in dissatisfaction and reduced commitment, which, in turn, leads to quitting with or without searching for alternatives (Donnelly and Quirin, 2006). In an empirical test of the unfolding model's predictions on a sample of voluntary stayers and quitters, Donnelly and Quirin found that when a shock event prompted the process, there was a much greater likelihood that the employee would quit.

In a relatively recent study, using cluster analysis technique Morrell et al. (2004) classified nurse leavers based on the nature of the shocks experienced. The leavers were classified into two clusters along five dimensions/items. In Cluster 1, shocks were typically more expected, more positive, more personal, more specific, and less avoidable, whereas in Cluster 2, shocks were typically less expected, less-positive, more work-related, less specific, and more avoidable. Among some of the specific findings of this study were:

1)   Shocks that were expected were more likely to be positive, personal, and resulted in decisions to quit that were unavoidable;

2)   Negative shocks were more likely to be work-related, and associated with dissatisfaction, and resulted in decisions to quit which were avoidable; and

3)   Work-related shocks were less likely to be salient, associated with dissatisfaction, and search for an alternative and resulted in decisions to quit that were avoidable.

There are critical practical implications of Morrell et al.'s findings concerning the interventions that could be undertaken by the organizations. For example, it could be worth investing on interventions targeting shocks that are work-related and less salient (which usually result in avoidable quits). Morrell et al. argue that in such cases there is more scope for organizations to intervene as the decision to quit unfolds rather slowly.

Based on the reviewed literature, shocks are expected to play a role in the military turnover process, either along with or independent of the progression from dissatisfaction and reduced commitment. However, in the absence of a reliable taxonomy for shocks that is more relevant for military members, at this point a generic category of shocks is included in the model. Studies are needed to identify the categories of turnover initiating life events/shocks in the military context so that depending on the type of events (e.g., negative vs. positive, expected vs. unexpected, personal vs. work-related) different courses of decision-making can be predicted and different courses of interventions can be planned.

4B.2.4   Conclusions and Practical Implications

Evidence suggests existence of different dynamics for military withdrawal as well as the importance of individual differences factors other than attitudes in military turnover. The proposed military turnover model

is believed to contribute to the existing literature in several ways. First of all, it represents one of the rare attempts to capture the complex decision-making processes involved in military turnover. Second, departing from the descriptive approaches conventionally used to explore and understand military turnover, the proposed model presents a comprehensive causal framework that allows for prediction. Third, although the model focuses mainly on the psychological processes and the individual's subjective experiences, it also recognizes importance of at least one critical macro-level factor, namely unemployment rate, as one of the critical determinants of military turnover. In this sense the model establishes a link between micro-level, individual-focused psychological approach and macro-level, labor market-focused economic approach. Finally, by incorporating the concept of shocks, this model aims to account for turnover that is not necessarily attitude-based.

All told, we believe that the proposed model is a small step in the right direction. However, we also believe that the model presented here needs to be further refined before it is subjected to empirical testing. Refinement/revision efforts may focus on four issues. First, the proposed model implicitly focuses on late turnover, and factors playing a role in early turnover (e.g., turnover occurring during or right after initial training) are not specifically addressed or separated from the factors critical in late turnover. So, efforts may be directed at identifying antecedents of early turnover and, perhaps, linking them to both recruitment and late turnover processes.

Second, in the proposed model, demographic variables, such as gender and ethnicity, are not directly addressed; they are assumed to have an influence on work attitudes especially through quality of life perceptions. However, a more thorough examination of demographic variables critical in military turnover should be done and the mechanisms through which these demographic variables contribute to employee withdrawal need to be examined.

Third, at present the only macro factor included in the model is unemployment rate. Potential effects of other labor market conditions, such as absolute and relative pay levels, occupational unemployment rates, and hiring rates, need to be examined and, if necessary, should be incorporated into the model. Finally, studies are needed to develop a "shock" taxonomy to be able to make more precise predictions concerning the role of shocks in military turnover.

Following the finalization of the conceptual framework, the model should be subjected to empirical testing, preferably using a longitudinal approach. Since the proposed model is a generic one, the fit of the model in varying military contexts should be tested and compared. Result of this empirical testing is expected to both contribute to existing knowledge on turnover and have implications for military recruitment, selection, and retention practices. Keeping these potential avenues for improvement in mind, it is critical to mention some of the implications of this model for practice.

One major implication of this model is that military organizations should routinely monitor employee attitudes, mainly satisfaction and commitment (of both types), and factors contributing to the development of these attitudes. Systematic large-scale surveys tapping into quality life perceptions, values congruence, and satisfaction and commitment levels of the members could be used as proactive tools to minimize dysfunctional turnover. Strategies could be developed based on the sources of problems. For instance, while identification of problems concerning person-organization fit (i.e., values incongruence) may call for strategies directed at recruitment and selection (and perhaps training), problems associated with QOL perceptions, or work/non-work balance, may require strategies aiming to improve working conditions.

This model also allows for the possibility that turnover may not result from dissatisfaction or lack of commitment. Both macro-level external factors, such as unemployment rates, and/or unexpected life events

with or without job dissatisfaction (or reduced commitment) may play a major role in quitting. Concerning macro factors, although military cannot exercise control over labor-market dependent turnover, strategies can be developed to forecast the rate of turnover so that appropriate proactive actions can be taken to compensate for the expected losses.

Assuming that the role of shocks has been established, more thorough, systematic approaches can be adopted to examine factors contributing to the decision to stay or leave. Exit interviews and broad based surveys could be designed to understand the types of shocks as well as to identify groups of leavers distinguished based on the nature of shocks experienced. According to Holtom et al. (2005), broad-based surveys and follow-ups can help organizations to proactively address recurring issues concerning turnover. These authors present the following 6-step plan of action for dealing with shocks, which seems applicable to military situation.

1) Analyze exit interview data to assess the shocks that caused good people to leave.

2) Conduct surveys of current employees to better understand shocks they have experienced in the current organization as well as shocks that prompted them to leave their former employers.

3) Develop plans to specifically address shocks as they occur. Different types of life events require different interventions.

4) Train and encourage line managers to intervene as soon as possible after learning that a good employee has experienced a shock.

5) Measure the success of interventions and make revisions when necessary.

6) Proactively predict possible future shocks (e.g., frequent deployments).

Finally, an important practical implication of the proposed model is that it allows for making a distinction between types of voluntary turnover likely to be observed in the military context. It is critical to understand for whom and under what conditions a "slow burning, dissatisfaction-based" withdrawal is more likely and for whom and under what conditions critical life events (of different types) are likely to trigger turnover. Different strategies can then be developed to target different types of potential quitters. Such analyses may also help decision makers identify cases for which interventions are unlikely or unnecessary, resulting in significant cost savings.

Chapter 5 – REFERENCES

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5.12   CHAPTER 4B – A PROPOSED MODEL OF MILITARY TURNOVER

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**NATO Human Factors & Medicine
Task Group on "Recruiting & Retention of Military Personnel" (HFM 107 / RTG 034)**

Task Group Introduction

Participants

Participants	Country
Dr. Tanja Blackstone	United States
Capt (Navy) Santos Blanco	Spain
Ms Dawn Johansen	United Kingdom
Lt Col Psych Francois Lescreve	Belgium
Major Rob Morrow	Canada **(Co-Chair)**
Capt Psych Jose Puente	Spain
Mr. Bert Schreurs	Belgium
Dr. Gerhard Storm	Germany **(Chair)**
Joanne Suddaby-Smith	United Kingdom
Dr. Canan Sumer	Turkey
Ms. Fariya Syed	Canada **(Co-Chair)**
Mr. Cyril Van de ven	Netherlands

Outline

- Task Group Background
- Terms of Reference
- Deliverables
- Status

Background

· Exploratory Team met twice in 2002 to develop a Terms of Reference (ToR) and Program of Work (POW) for the Task Group

· These documents provided the detail for the group to begin its work

Purpose

- The main goal of the TG is to foster a true understanding of the mechanisms that influence recruitment, selection and classification, retention and turnover outcomes. In order to achieve this goal, a generic military model will be developed.

Research Questions

- Why do people join the Military?
- Why do they decide to stay in or leave the Military?

Topics

- The psychological contract
- The influence of information on turnover
- Management of recruitment, selection and classification (RS&C) (management of the selection process, selection standards, and classification issues)
- Values research
- Individual needs

Other Topics

- Transition
- Pers tempo/Ops tempo & Quality of life
- Pay and benefits
- Gender & minority issues
- Advertising & Marketing in Recruiting

Deliverables

- A final report of its activities which will include:
  - current information about the R&R strategies of the member countries; and
  - the generic model
- A database of recruitment/retention research by country.
- A workshop or symposium as an RTO activity to disseminate its results.

Status

- Work on the model continues
  - "Work in progress"
  - Research literature review of topics
- R&R Strategies have been gathered by most countries and this will continue
- Research database is growing (>130 articles)
- Conducting the workshop now

Presentations

- Organized by spanning across a person's career from:
    - Attraction/recruiting;
    - Selection/classification;
    - Career/organizational issues; and
    - Transition/turnover
- Conclude by discussing the models and links to the topics

Appendix A1: ADVERTISING

**Advertising
HFM 107 RTG 034N**

Tanja F. Blackstone

Overview

NPRST

Critical examination of DoN's Advertising Strategy, August 2002

Evaluate Navy's Advertising Strategy FY99-00

Positioning

Audience

Creative

Implementation

Assessment of Navy's Metrics

Recommendations for Assessments and Metrics

Navy Personnel Research, Studies, & Technology   2
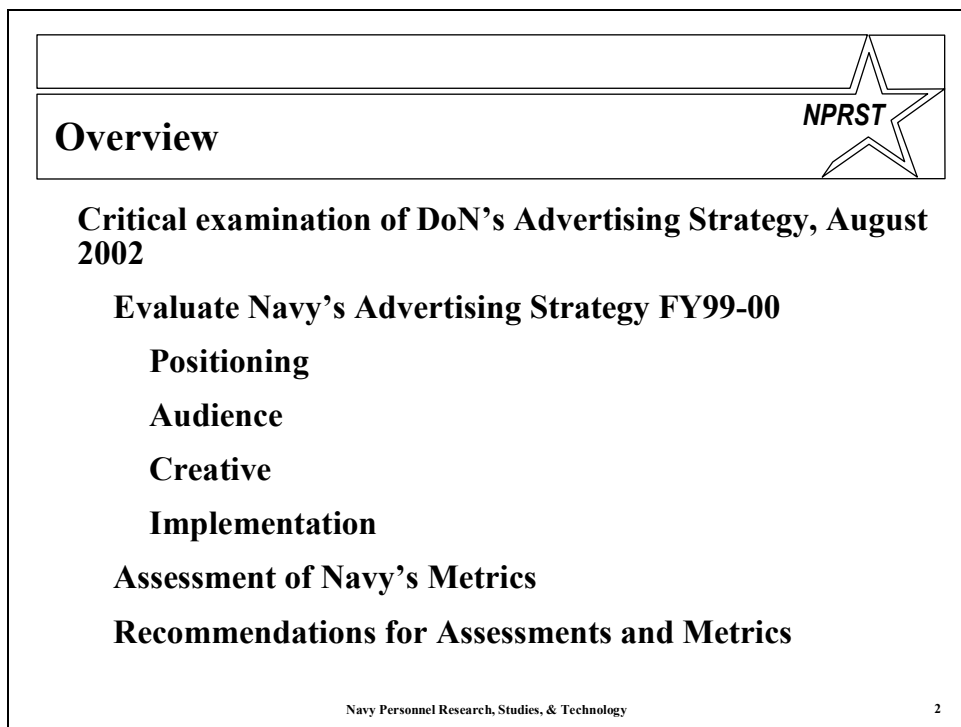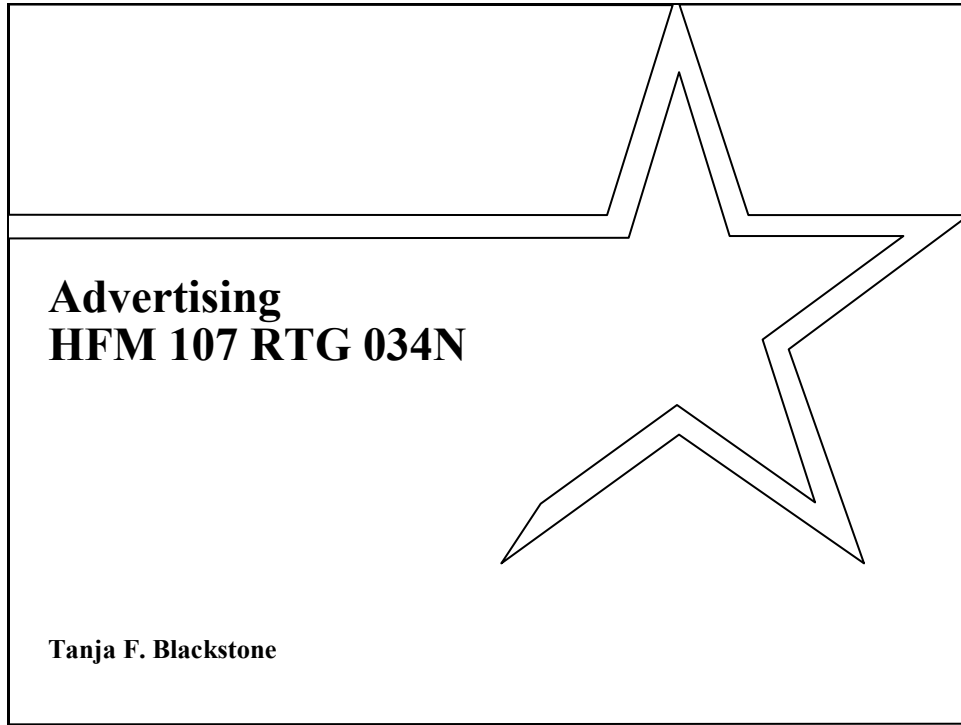
NPRST

Background

Advertising Budget for DoN > $100M

    TV, radio, print,

Inconsistent in expenditures across media types

Inconsistency in advertising message

    Turnover in slogans and campaigns

Navy did not (does not) focus on consistent positioning, creative, and audience.

Navy Personnel Research, Studies, & Technology   3

NPRST

Navy's FY99-00 Advertising Strategy

Positioning – unique branding that consumers commonly associate with a slogan, tag line and headers.

    Positioning via slogan

        "Let the Journey Begin' vs. 'Accelerate your life'

    Positioning via imagery

        Very few visual ads had images of ships, sea or sailing

            Imagery not linked to Navy's mission

    Positioning via the internet

    Positioning contradictions

        Jobs (immediate and short term) vs. journey (which implies long term)

Navy Personnel Research, Studies, & Technology   4

Navy's FY99-00 Advertising Strategy

NPRST

Audience

Ads targeted by sex/ethnicity

Navy does not consider alternative market segmentations:

Values and lifestyles

Quality of life

Attitudes, interests and opinions

Doesn't capture regional differences in above segmentations

Navy Personnel Research, Studies, & Technology   5

Navy's FY99-00 Advertising Strategy

NPRST

Creative – print, radio, video, TV, direct mails

Creative should be designed to convey stimulation, excitement, and challenge

Instead convey sense of being sedentary

30 second TV add included 10 second shot of Arizona Memorial – not relevant to target audience

Inserted because of political pressure

Contact information displayed on screen for less than 2 seconds

Navy Personnel Research, Studies, & Technology   6

NPRST

Recommendations

Less emphasis on general awareness and more emphasis on specific behavioral responses.
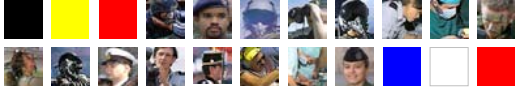
Navy doesn't have an awareness problem had a recruiting problem

Navy Personnel Research, Studies, & Technology   **7**

Appendix A2: MANAGEMENT OF SELECTION AND CLASSIFICATION

Problem definition

- Goal: Improve the P-J fit
  - Manning
  - SKA's
  - Interest
  - Individual level
  - Group level

Problem definition

- Decisions
  - Applicant rejection
    - For a single criterion
    - For combined assessment
  - Assignment

Single criterion rejection

- Categorical vs Metric
- Pros
  - For the Military
  - For the applicant
- Cons
  - No compensation
  - Supply demand issues
  - Justification

Single criterion rejection

Multiple critera rejection
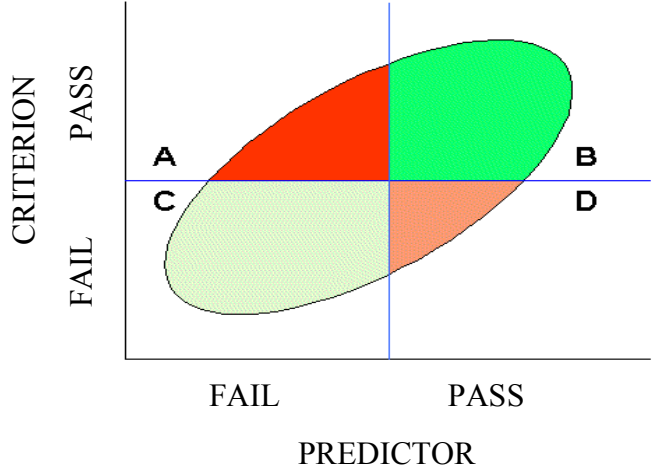
- Compensatory approaches
  - E.g. Weighted sums of scores, intermediate scores, ...
- A.I. approaches

The cut-off paradox

Aptitude vs interests

- Rationale:
- Job Interest is related to:
  - Job satisfaction
  - Job performance
  - Intentions to remain with organization

Aptitude vs interests

Quality versus Preferences
Recruitment: Flemish NCO Level 2, 2000
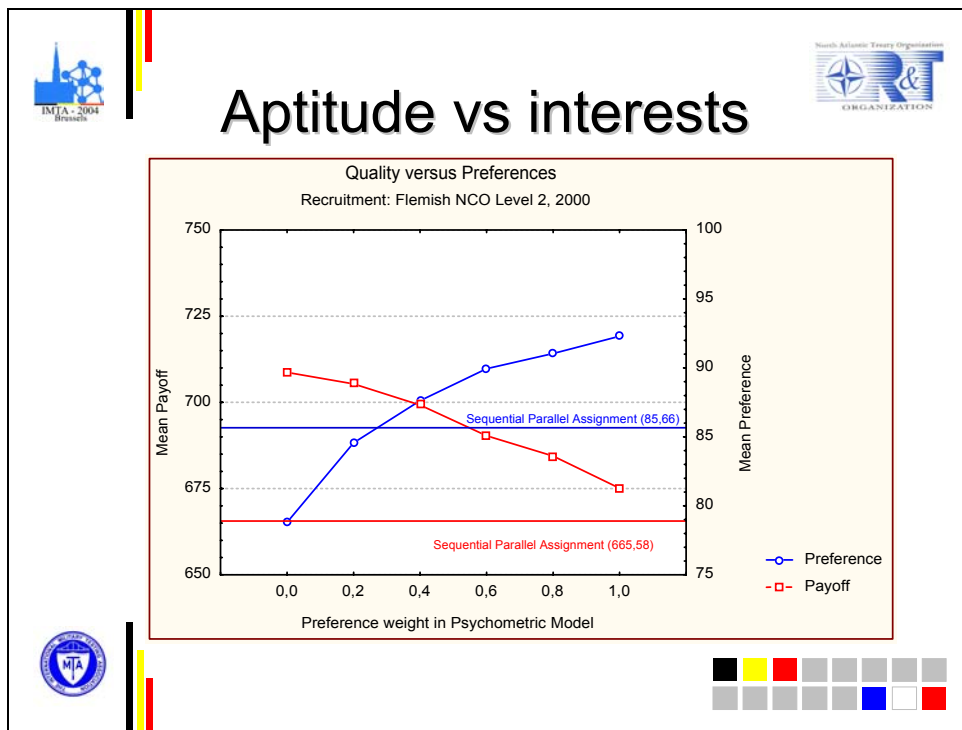
Aptitude vs interests

- Measurement:
  - By negotiation
  - Direct
  - Indirect: Interests profile
    - Work environment
    - Job content
    - Communities
    - Locations
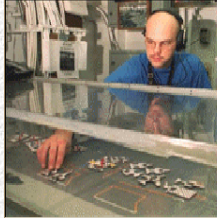
Jobs and Occupational Interest in the Navy (JOIN)

Work Activity Preference

Direct Aircraft

Organize, dispatch and guide airplanes and helicopters.

Very Interested

86%

Not Interested

Ask for help   Next >>

Classification

- From individual P-J fit to P-J fit at group level
- Methods
  - Sequential
  - Batch
    - + trade specific utility
    - + optimization algorithm
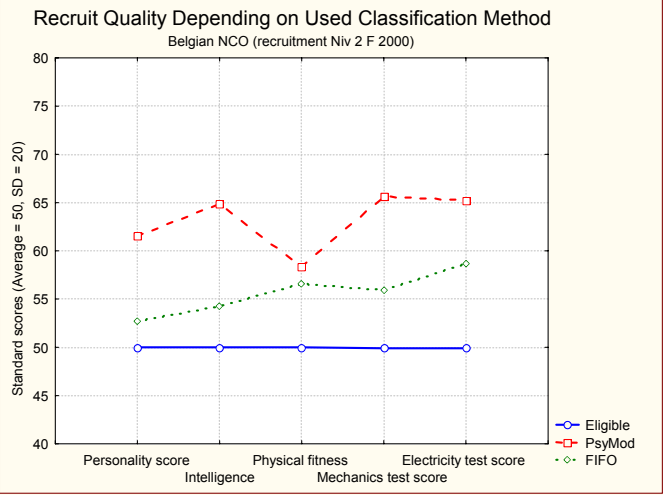
Smart Classification

Classification

Recruit Quality Depending on Used Classification Method
Belgian NCO (recruitment Niv 2 F 2000)

Conclusions

- To maximize P-J fit:
  - Use <u>low</u> single criterion cut-offs
  - Use <u>sophisticated</u> compensatory methods to determine eligibility/aptitude
  - <u>Integrate</u> aptitude & interests
  - Use a <u>smart</u> classification method

Appendix A3: SHORT TERM CONSEQUENCES OF (MIS)INFORMATION

Belgian Defence

Background

- **Screening interviews**
  Applicants' reactions to **recruiter** behaviors and personality

  Attraction positively related to:
  - Recruiter warmth
  - Recruiter competence
  - Amount of information

- **Other types of initial face-to-face contacts?**
  - Open houses
  - Job fairs
  - Career offices
  - ...

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Belgian Defence

Relevance

- Difficulties in attracting and enlisting recruits
- Focus on demographic, biographic, educational, and family background factors and attitudes about military service
- Specific factors that determine perceived attraction to the military as an employer in early recruitment stages have been ignored
- Military career offices
  - First interpersonal contact with *potential* applicants
  - *Information* about job characteristics and working conditions (attractive, though realistic)
  - No evaluation, nor screening context!
  - Effects of initial face-to-face contact?

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Belgian Defence

Measures of attraction

- · **Direct**
  - <u>Behavioral</u>: application and choice making
- · **Indirect**
  - <u>Non-behavioral</u>: attitudes and intentions

→ Fishbein and Ajzen's (1975)
Theory of Reasoned Action (TRA)
→ Ajzen's (1985)
Theory of Planned Behavior (TpB)
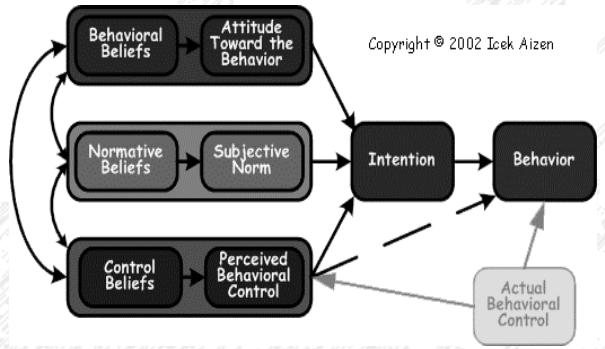
DGHR   IMTA - NATO RTG 2004 Brussels   5

Belgian Defence

Measures of attraction

DGHR   IMTA - NATO RTG 2004 Brussels   6

Belgian Defence

Hypotheses

- · **Hypothesis 1**
  CCC → Attitude & Intentions

- · **Hypothesis 2** (TRA)
  CCC → Attitude → Intentions

- · **Hypothesis 3**
  CCC → Applying

- · **Hypothesis 4** (TRA)
  CCC → Intentions → Applying

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Belgian Defence

Method

- · Survey (N = 1144)
- · Recently visited career office of Belgian Defence and had an information session with a career counselor
- · Measures
  - ‣ Autobiographic form
  - ‣ Career counselor characteristics (1 = *strongly disagree*, 8 = *strongly agree*)
  - ‣ Attitude (1 = *not attractive at all*, 6 = *very attractive*)
  - ‣ Intentions (0 = *I do not intend to apply*, 1 = *I intend to apply*)
- · Application behavior (0 = *did not apply*, 1= *did apply*)
- · Response rate: 57% (651)
- · Analyses: 418

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Results

	M	SD	α	1.	2.	3.	4.	5.
Characteristics								
1. Warmth	7.21	.70	.89					
2. Informative	7.29	.88	.77	.70**				
3. Competence	7.08	.88	.81	.72**	.59**			
Pot. Appl. Attr.								
4. Attitude	5.18	.90	--	.27**	.16**	.26**		
5. Intentions	.85	.35	--	.12*	.02	.14**	.40**	
6. Application	.43	.50	--	.05	-.03	.11*	.28**	.32**

* $p < .05$ (2-tailed) ** $p < .01$ (2-tailed)

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Hyp 1: Attitude

		b	SE(b)	β	t	p	R² increment
Step 1	Age	-.03	.02	-.10	-1.15	.25	
	Gender	-.02	.12	-.01	-.13	.89	
	Work experience	.01	.07	.01	.21	.83	
	Selection experience	-.15	.10	-.08	-1.49	.14	
	Educational level	-.04	.06	-.05	-.76	.44	.04*
Step 2	Warmth	.37	.11	.29	3.37	.01*	
	Informativeness	-.12	.07	-.12	-1.63	.10	
	Competence	.05	.08	.05	.69	.49	.07**

$N = 346$ * $p < .05$; ** $p < .001$

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Hyp 1: Intentions

		b	SE(b)	Wald	p	Exp(B)	CI(odds)
Step 1	Age	-.03	.08	.17	.68	.97	.82 - 1.14
	Gender	-1.00	.36	7.54	.01*	.37	.37 - .75
	Work experience	-.17	.23	.59	.44	.84	.84 – 1.31
	Selection experience	-.44	.27	2.65	.10	.64	.64 – 1.09
	Educational Level	-.03	.21	.02	.87	.97	.97 – 1.45
Step 2	Warmth	.78	.37	4.38	.04*	2.17	1.05 – 4.49
	Informativeness	-.58	.30	3.87	.05*	.56	.31 – 1.00
	Competence	.26	.24	1.14	.29	1.30	.80 – 2.10

N = 345   CI = Confidence interval   * p < .05

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Belgian Defence

Hyp 2: Mediation

Three conditions (Baron and Kenny, 1986)
1. Independent variable (career counselor characteristics) affects the mediator (attitude)
2. Independent variables must be shown to affect the outcome variable (intentions)

✍ Hypothesis 1

3. Effects of independent variable on outcome variable should decrease when effects of mediator are taken into account

✍ Career counselor characteristics no longer significant when attitude taken into account

CCC → ATTITUDE → INTENTIONS

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Hyp 3: Behavior

		b	SE(b)	Wald	p	Exp(B)	CI(odds)
Step 1	Age	-.11	.06	3.30	.07	.89	.79 – 1.01
	Gender	-.02	.29	.00	.95	.98	.55 – 1.75
	Work experience	-.13	.17	.55	.46	.88	.63 – 1.23
	Selection experience	-.30	.29	1.06	.30	.74	.42 – 1.31
	Educational level	.04	.15	.06	.81	1.04	.78 – 1.38
Step 2	Warmth	-.06	.28	.04	.84	.94	.55 – 1.62
	Informativeness	-.40	.19	4.43	.03*	.67	.46 - .97
	Competence	.58	.22	6.75	.01*	1.78	1.15 – 2.76

N = 346   CI = Confidence interval   * p < .05

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Hyp 4: Mediation

- When intentions toward the organization was controlled for in the analysis, the set of career counselor characteristics was no longer significant

CCC → INTENTIONS → BEHAVIOR

- Competence, however, remained significant…

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Discussion

First direct contact with an organizational representative also has an influence on *potential* applicants' attraction to the organization!

- **Warm & friendly**
  - More positive attitude
  - More willing to apply
  - No direct effect on application behavior…

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Discussion (2)

- **Competent & reliable**
  - No effect on attitude…
  - No effect on intentions to apply…
  - More likely to actually apply

  Perception of career counselor **competence** on application behavior remained significant even when controlling for intentions to apply…
  → direct effect on behavioral decision to apply?

- **Informativeness** ☝ contrary to earlier research!

  - No effect on attitude…
  - Decreased intentions to apply!
  - Decreased application behavior!

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Discussion (3)

- **Possible explanations:**
  - › Self-selection mechanism (RJPs)
  - › Informational overload

- **Future research:**
  - › TpB (Ajzen, 1985)
  - › Focus on expectations
    - – Antecedents (previous experiences, …)
    - – Consequences (withdrawal, …)

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Questions?

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Outline

- Background

- Realistic information

- Amount of information

- Choice of recruitment source

- Relationship with R&R model

- Questions

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2

Background

- **High annual turnover rates**

- **Testimonies:**
  - Not what I expected
  - Misinformed
  - Insufficient information

- **Critical decisions:**
  - Realism of information
  - Amount of information
  - Source of information

- **Outcomes**
  - Post-hire (turnover, absenteeism, performance)
  - Pre-hire (attractiveness, self-selection)

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Realistic information

- **Realistic Job Previews (RJPs)**
  - Through the use of RJPs, both favorable and unfavorable information is provided to applicants in order to reduce post-hire turnover
  - Several meta-analyses: McEvoy & Cascio (1985); Phillips (1998); Premack & Wanous (1985); Wanous et al. (1992)
  - Several studies on RJPs within the military: Ganzach et al. (2002); Ilgen & Seely (1974); Meglino et al. (1988)
  - Results show that effects on post-hire outcomes are relatively small

  ☞ **Economic savings can be fairly large**

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Realistic information

- **Theoretical rationales for RJP effects**
  - Self-selection (Wanous & Colella, 1989): RJPs screen out those whose needs are incompatible with the demands of job or organizational culture
  - Trustworthiness, honesty, and care (Schein, 1968, Wanous, 1977): RJP transmits meta-message that leads to greater commitment
  - Ability to cope, pre-rehearse (Dugoni & Ilgen, 1981), reduction of ambiguity (Horner et al., 1979)
  - Met expectations (Porter & Steers, 1973), 'inoculation' or 'vaccination' hypothesis (Wanous, 1977): RJPs reduce overly optimistic expectations to levels more consistent with actual work conditions

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Realistic information

- **Empirical research on RJPs**
  - › Support for self-selection and honesty hypothesis
  - › Mixed support for coping hypothesis
  - › Substantial support in favor of met expectations hypothesis
  - › However, methodological problems (Irving & Meyer, 1994, 1995, 1999) similar to P-O fit research
    - – Difference scores
    - – Retrospective measures
    - – Residual scores
    - – **Polynomial regression** 👍
  - › Overstatement of the role of met expectations

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Amount of information

- **Recruitment materials**
  - › Should be informative (Barber & Roehling, 1993)
  - › Should address range of job & organizational attributes
  - › Specific information
  - › Less qualified applicants will lose interest
  - › Barber (1998): possibility of informational overload!
- **Recruiter**
  - › Informative recruiters are preferred (Maurer, Howe & Lee, 1992)
  - › Civilian vs. military setting
  - › Informational overload (Schreurs et al., in press)

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Amount of information

- **Insufficient information**
  - › Signaling theory (Spence, 1973, 1974)
  - › Indicators of goals, values, climate, culture, fairness, justice, type of job duties, HRM policy,… (e.g., Herriot, 1984; Iles & Robertson, 1999)
  - › Accuracy - intentionality
  - › Recruiter traits and behaviors
    - – Warmth, competence, informativeness
  - › Pre-screening and selection methods
  - › Time delays

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Amount of information

- **Consequences of applicant perceptions**
  - › Setting of expectations
    - – About job and organizational attributes
    - – About chance of getting job offer
  - › Perceptions of fit
    - – Poor fit → self-selection
    - – Good fit → job acceptance
  - › Attitudes & beliefs
  - › Behavior

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Choice of recruitment source

- **Formal vs. informal recruitment sources**
  - Formal: The vacancy is publicly announced (e.g., employment agencies, advertisements, internet)
  - Informal: Only a selective public is informed (e.g., employee referrals, "walk-ins", rehires, schools and training centres)
  - Relationship between recruitment source and turnover is one of the most intensely researched aspects of recruitment
  - 'Informal' applicants tend to have lower turnover than 'formal' applicants (e.g., Blau, 1990; Breaugh & Mann, 1984; Saks, 1994)
  - However, other studies only found moderate support (e.g., Caldwell & Spivey, 1983), or failed to find a relationship (e.g., Linnehan & Blau, 2003)

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Choice of recruitment source

- **Theoretical rationales for source effects**
  - Realistic information hypothesis (Breaugh, 1981): Informal sources provide more accurate and specific information
  - Individual differences hypothesis (Schwab, 1982): Applicants drawn from alternative sources constitute samples from different applicant populations
  - Example: Advertisement aired only on daytime television vs. during heavy commuting hours
- **Empirical research on source effects**
  - Evidence for both hypotheses (Blau, 1990; Breaugh & Mann, 1984; Griffeth et al., 1997)

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Relationship with recruitment model

Recruitment, selection, and classification practices → Perceptions of R&S&C practices → Perceptions of Job and Organizational Attributes

Perceptions of R&S&C practices → Hiring Expectancies

Perceptions of Job and Organizational Attributes → Fit Perceptions

Hiring Expectancies → Job Pursuit Intentions Behavior

Fit Perceptions → Job and Organizational Attractiveness

Job and Organizational Attractiveness → Job Pursuit Intentions Behavior

Job Pursuit Intentions Behavior → Enlisment (Yes/No)

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Relationship with retention model

Job and Organizational Attributes

Instrumental
Compensation
Workload
Tempo
Role Stress
Unmet Expectations
Distributive Justice

Non-Instrumental
Leader-Member Relations
Group Cohesion
Procedural Justice

Turnover Intentions → Turnover

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Questions?

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Appendix A4: TRANSITION

North Atlantic Treaty Organization

IMTA - Oct 2004

NATO HFM 107

*Research Task Group 034 extended meeting
on
"Recruiting and Retention of Military Personnel"*

Research Topic: TRANSITION

1

North Atlantic Treaty Organization

Transition

1) Definition of Transition

- Transition refers to positive/negative reactions to significant changes in life circumstances.
  - Movement from civilian to service culture.
  - Changes in attitudes, expectations, etc. during his/her service.
  - Organisational changes (technology, policy, operational stance).

2) Transition Process

- The central aspect of transition is the matching of the individual and the organisation.

- This period of early entry is one of the most critical phases of organisational life.

- Recently hired workers are the most likely to turn over.

2

Transition

3) Phases of Transition

- Concept for the step from outside to inside the organisation.

- The literature provides a distinction into four phases separated for the perspective of the newcomer and the organisation.

  - Two pre-entry phases: *recruitment* and *selection*.
  - Two post-entry phases: *orientation* and *socialisation*.

4) Models of Transition

- Two models have been chosen, which conceptualise the inter-action of the main factors which are relevant in this phase.

3

Transition

4.1) Matching Model by Wanous (1992) [i]

- The crucial variables are *job performance* and *job satisfaction*.

- Evidence is given, for the following main factors:

  - *Job Performance* is related to the match between the individual's *capabilities/potential abilities* and those required by the organi-sation.

  - *Job satisfaction* is directly and *organisational commitment* is indirectly related to the match between the *specifically wanted job outcomes* and the capacity of *organisational climates* to reinforce those wants.

4

Transition

4.2) Conceptual Model by Kammeyer-Mueller & Wanberg (2003) [2]

- It is based on three sets of variables:

  - *Antecedents of Newcomer Adjustment* (pre-entry knowledge, proactive personality, influence of socialising agents, perceived alternatives).

  - *Proximal Adjustment Outcomes* (task mastery, role clarity, work group integration, political knowledge).

  - *Distal Adjustment Outcomes (*commitment, work withdrawal, turnover).

- The model was examined by means of LISREL, which confirmed the majority of its relations.

5

Appendix A5: THE PSYCHOLOGICAL CONTRACT

The psychological contract: a big deal?

A tentative study into the role of the psychological contract in Recruitment &Retention

Cyril van de Ven
Behavioural Sciences Service Unit
Ministry of Defence
The Netherlands

Consequences of violations of the psychological contract:

❑ Strong emotional reactions and feelings of betrayal (Robinson & Rousseau, 1994)
❑ Lower trust and job satisfaction (Robinson & Rousseau, 1994)
❑ Lower commitment to the organization (Guzzo et al., 1994)
❑ Less Organizational Citizenship Behaviour (Robinson & Morrison, 1995)
❑ Higher turnover intentions (Schalk et al., 1995)
❑ Higher turnover (Guzzo, 1994)

Content presentation

- ❑ Defining psychological contract
- ❑ Function
- ❑ Development
- ❑ Content
- ❑ Sorts of contracts
- ❑ Violations
- ❑ Responses to violations
- ❑ The "new deal"
- ❑ Practical and theoretical implications
- ❑ Concluding remarks

Formal contract

- • Written
- • Job description
- • Salary
- • Work location
- • Job duration

Completing "contract"

- Reduce uncertainty
- Filling up the gaps
- Different sources

- Selective
- Chance of false expectations

Definition

Psychological contracts are the beliefs individuals hold regarding the terms and conditions of the exchange agreement between themselves and their organisation.

(Rousseau, 1995)

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RTO

Functions Psychological Contract
(Mc Farlane, Shore and Tetrick, 1994)

❑ reduction of insecurity by filling up the gaps
❑ psychological contract shapes behaviour
❑ gives employee feeling of influence

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Basis

Originate from generally from two sources (Turnley &
Feldman, 1999)

➢ interactions organisational representatives during
anticipatory socialization
➢ perceptions of organisation's culture and standard
operating procedures

Development

First 3 to 6 month's rudimentary contract brought more into reality (Thomas & Anderson, 1998)

Typically high expectations towards the employer and lower expectations about themselves (Rousseau, 1995)

Study recruits British Army opposite; significant increase of employers expectations (Thomas & Anderson, 1998)

high expectations Army of employees

realise more possibilities

Multi-dimensional construct

(De Vos et al., 2001)

Organisational promises
- Career development
- Job content
- Social environment
- Financial compensation
- Work-private life balance

Employee promises
- Effort and performance
- Flexibility
- Loyalty
- Ethical conduct
- Availability

Sorts of Psychological Contracts

Transactional versus Relational (Rousseau, 1995)

Transactional
➢ Limited duration (2 to 3 years at most)
➢ Well specified performance terms

Relational
➢ Open ended
➢ Loosely specified performance terms

Transactional   vs. Relational

Transactional	Relational
•Little organizational loyalty	•High organizational loyalty
•Employees develop marketable skills	•Employees develop company-specific-skills
•Unstable employment	•Stable employment
•Flexibility/easy exit	•Willing to commit to one company
•Less willing to take additional responsibilities	•High intent to stay with organization
•Reward system focuses on short term	•Members highly socialized

Content presentation

- ❑ Defining psychological contract
- ❑ Function
- ❑ Development
- ❑ Content
- ❑ Sorts of contracts
- ❑ Violations
- ❑ Responses to violations
- ❑ The "new deal"
- ❑ Practical and theoretical implications
- ❑ Concluding remarks

Breaches

Employee perceives that the organisation has failed to
fulfil one or more of its obligations comprising the
psychological contract (Rousseau & Parks, 1993)

Common Causes
➢ Recruiter may over-promise
➢ Eager job seekers hear what they want to hear
➢ Managers act different from what they say
➢ Change of boss
➢ Change of mission statement

Forms of Breaches

Three forms (Rousseau, 1995)

• Inadvertent   able and willing

• Disruption   willing but unable

• Breach of contract   able but unwilling

Understanding of the source has tremendous impact on how breach is experienced and what victims do in response (Bies & Moag, 1986)

Framework responses on violations

Exit, voice, loyalty and neglect (EVLN) typology (Hirschman, 1970)

	Constructive	Destructive
Active	Voice	Neglect / Destruction
Passive	Loyalty / silence	Exit

Relationship psychological contract with outcome variables

Poor state of the psychological contract is related to lower commitment to the job and to the organisation, less identification with the organisation and higher turnover intentions (Schalk, 1995).

Occurrence of breaches was negatively related with trust, job satisfaction, intentions to remain and positively with turnover (Robinson, Kraatz & Rousseau, 1994)

Longitudinal study revealed a negative relationship between psychological contract breaches and OCB, performance, intentions to stay and a positive relationship with turnover (Robinson, 1996).

Other relationships

Procedural justice (e.g., Turnley & Feldman, 1999)
➢ Plays a role in the evaluation of the breach

Health (Gacovic & Tetrick, 2003)
➢ Breach important source of emotional exhaustion

Downsizing (Parks & Kidder, 1994)
➢ Breach remaining employees/reduced commitment.

Transactional versus relational (Herriot & Pemberton, 1996)
➢ Transactional – explicit negotiations/adjustment/ quit
➢ Relational – more transactional/economical aspects

Content presentation

- ❑ Defining psychological contract
- ❑ Function
- ❑ Development
- ❑ Content
- ❑ Sorts of contracts
- ❑ Violations
- ❑ Responses to violations
- ❑ The "new deal"
- ❑ Practical and theoretical implications
- ❑ Concluding remarks

The "New Deal"

Because of economical, political and social changes working relationships are also changing.

New Deal (e.g., Herriot & Pemberton, 1994)
➢ Old features – security, continuity, and loyalty
➢ New features – business like exchange, employability

Research finding (Van den Brand et al., 2002)
➢ Partly the case
➢ More privileged, highly educated and ambitious group

Managing the Psychological Contract

- Specify expectations regarding performance (examples)
- Specify review process and timeframe
- Describe training (examples)
- Describe expected lengths of employment (e.g., how long in first job, typical length of employment)
- Explore candidate expectations (reality check)
- Check with candidate how accurately you have understood what he or she expects
- Convey behavioural expectations (e.g., interpersonal task norms such as individual initiative or teamwork)

  (from Rousseau, 1995)

Theoretical implications

- Research conducted in civil settings – generalise to military?
- British Army recruits adjusted during initial training - attrition?
- Relevance for retention and performance – morale?
- Transactional versus Relational
  (Soldier versus Career officers?) – Pilot Dutch Army
- New Deal
- Psychological contract with respect to recruitment – advertising
- Measuring the same giving it another name?
- New research initiated

Concluding Remarks

➢ Psychological contract has shown relevance with respect to retention

➢ Theoretical implications about conceptualising and measuring have to be addressed

➢ Further exploration by acquiring empirical data in military settings for quantitative analyses

Questions or Suggestions?

Appendix A6: VALUES RESEARCH

NATO Human Factors & Medicine
Task Group on "Recruiting & Retention of
Military Personnel" (HFM 107/RTG 034)

Values Research

Capt. Psychologist José M. Puente
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IMTA-Brussels - 10/27/2004

Introduction: Development of the Theory of Human Values

- Values play a crucial role in human life, whether personal or social life
- Thomas and Znaniecki (1918-1920) rescued values from the prevailing biological influence to give them a cognitive nature. Values (inter-subjective) connect attitudes (intra-subjective) with social structure
- For Parsons (Parsons & Shils, 1951) values instigate behavior. Later in the nineties Parsons' causal assumption was recognized that values were on top of the cultural control: values control norms, which in turn control behavior
- Maslow's hierarchy of human needs would set the grounds for Inglehart's (e.g., 2000) model about materialist vs. post-materialist values
- Rokeach (1973) holds that values are cross-situational beliefs that are hierarchically organized and make the ground for our behavior. They are not descriptive nor evaluative but prescriptive beliefs. Terminal vs. instrumental values. Technique of self-confrontation.

Introduction: Development of the Theory of Human Values

- Triandis (1985) extends concepts of individualism & collectivism to include two dimensions: horizontal vs. vertical
- Cross-cultural theories about values emerged in the 1980s
  - Hofstede (1980). Societies solving the dilemma of individual autonomy vs. adaptation to groups by giving priority to individual autonomy (individualism) or to group norms (collectivism)
  - Schwartz (1994). Values are desirable cross-situational goals of variable importance as guiding principles in people life
  - Inglehart (2000). On the basis of Maslow's theory of needs, he develops his theory of the shift in contemporary society from materialist to post-materialist values

Introduction: Development of the Theory of Human Values

Two authors have focused exclusively on the characteristics of modern military, which have a great impact on values:

- Janowitz (1960, 1971) formulated five basic hypothesis of the contemporary armed forces:
  - Changing organizational authority
  - Narrowing skill differential between military and civilian elites
  - Officer recruitment base widening from a narrow, relatively high social status to a broader base, more socially representative.
  - Significance of career patterns
  - Trends in political indoctrination

Introduction: Development of the Theory of Human Values

- Similarly, Moskos (2000) describes the Postmodern Military according to Inglehart's theory about postmodern society, in the following terms:
  - The postmodern military has undergone five major changes: an inter-penetrability of civilian and military fields, both structurally and culturally; a decline in differences within the armed services based on branch, rank and combat vs. support roles; a shift of military goals from war fighting to non traditionally military missions; a subordination of military forces in international missions to supranational command; and an emergence of supranational military entities (e.g., the Eurocorps)

  - Military plays new roles other than traditional ones, such as separation of belligerents, resettling refugees, delivery of food and medical supplies, provision of security for humanitarian organizations and the like

Introduction: Development of the Theory of Human Values

  - Moskos believes then that the cultural shift that has taken place in advanced societies has permeated to the military organization, giving rise to deep-rooted changes, such as the aforementioned. By and large, postmodernism has subverted absolute values –18th Century faith in reason, 19th Century faith in the nation-state and 20th Century confidence in science and technology, leading to a deep relativism

  - The so called "revolution of military affairs" –the impact of information technologies on the armed forces, has brought a greater agility, precision and potency of operations, but also dramatic force reductions and a growing shift of the emphasis on the rank to the emphasis on competence. There is also an increasing convergence of military and civilians, more frequently seen working together. NGO's are assuming more martial attitudes. A postmodern motivation has even emerged –a desire to have a meaningful personal experience rather than the patriotism or other occupational incentives.

Introduction: Development of the Theory of Human Values

Table 1. Armed Forces in three eras (Moskos, 2000)

Forces Variable	Modern (Pre-Cold War)	Late Modern (Cold War)	Postmodern(1990-)
Perceived threat	Enemy invasion	Nuclear war	Sub-national (ethnic violence, terrorism, etc.)
Force structure	Mass army conscription	Large professional army	Small professional army
Major mission definition	Defense of homeland	Support of alliance	New missions (peace-keeping, humanitarian)
Dominant Mil Professnl	Combat leader	Manager or technician	Soldier-statesman, soldier-scholar
Public attitude tow. Mil.	Supportive	Ambivalent	Indifferent
Media relations	Incorporated	Manipulated	Courted
Civilian employees	Minor component	Medium component	Major component
Women's role	Separate corps/ excluded	Partial integration	Full integration
Spouse and military	Integral part	Partial involvement	Removed
Homosexuals	Punished	Discharged	Accepted
Conscientious objection	Limited or prohibited	Routinely permitted	Subsumed under civilian service

Introduction: Development of the Theory of Human Values

- Summarizing (not to divert from our topic)
  - Values are cognitions that may define a situation, elicit goals and guide action (Verplanken and Holland, 2002)
  - Values are motivational constructs –living up to a value fulfills a particular abstract goal
  - Most values are culturally shared but individuals differ in how they rank the importance of particular values
  - A small set of values are important components of the self-concept, hence contributing to a person's sense of identity.
  - Specific values may form the basis for moral and ethical rules of conduct (e.g., the Armed Forces Regulations)
  - Although some authors (e.g., Meglino et al., 1989) assume a direct relation values-behavior, others contend that this relationship is most times inconsistent, unlike attitude-behavior relationship. Verplank and Holland (2002) hold that this relationship is mediated by other variables such as personal norms, personal involvement, moral reasoning, attitudes or preferences, etc.

Values involvement in recruiting

- Values may influence choice by influencing the weigh of information related to them and hence determining the attractiveness of choice alternatives (Verplanken and Holland, 2002)

- Only central values –making up part of the self– help an individual define and interpret a situation, pay attention to relevant information and elicit a motivation to act. Only these central values will influence behavior. Self mediates between values and behavior: self makes up motivation.

- Such a concept of values being so influential on behavior has may important implications for people's attraction into organization and their decision-making about joining

Values involvement in recruiting

- Despite the fact that information about organizational values is normally conveyed in recruitment messages, few studies have being done on information persuasiveness in recruitment.

- Highhouse et al. (2002) found that potential applicants appear to prefer evidence that is more representative and verifiable (statistical evidence) when it comes form the company's promotional materials but are more likely to be influenced by anecdotal influence when it comes from outside sources.

- Therefore, companies would attract more potential applicants if they considered the compatibility between the type of recruitment messages and the source they use to transmit them.

Values involvement in recruiting

- ASA model (Schneider, 1995) holds that people's preference for an organization is based upon an implicit estimation of their own personal characteristics and the organization's attributes. Attraction stems from the perceived congruence between organizational goals and own personality –put in other words, the appraisal of the match of individual's characteristics and needs with organizational characteristics and supplies (Kristof, 1996).
- Person-organization fit as it concerns recruitment can thus be considered as value congruence (Kristof, 1996). An example is type A and type B personality. Type A individuals (ambitious, competitive, impatient, high achievers, hostile) appear to prefer organizations that have high performance standards, spontaneity, ambiguity and toughness. Therefore, people are more inclined to seek jobs in organizations where value orientation match their own.

Values involvement in recruiting

- Not until the late eighties there was a shift in selection focus from person-job fit to person-organization fit, from hiring the best people for the job to hire those who met organizational demands –people usually leave organizations not just jobs.
- Cable and Judge (1995) found that it was perceived rather than actual value congruence by interviewers what predicted interview outcomes.
- This apply particularly to recruitment/selection processes – where what matters is perceived rather than actual fit, probably owned to the short period of time that both applicants and organization has to show their values, goals and personalities.

The contribution of values to retention

- Literature on the contribution of values to retention is more abundant and varied. As part of the person-organization fit processes, values has a great impact on outcomes such as commitment or satisfaction.

Person-organization fit. Goal congruence

- Person-organization fit (P-O fit) framework by Chapman et al. (1989, 1991) attempted to explain individual behavior in organizations by predicting individual satisfaction, commitment, performance and turnover. Similar outcomes have been predicted if there is congruence between individuals and supervisor values and goals (Meglino, Ravlin and Adkins, 1989; Vancouver and Schmitt, 1991).

The contribution of values to retention

- For the ASA model, what determines organizational behavior is the collective attributes of people in the organization –especially top management–, those attributes being personality, attitudes and values and the homogeneity of personality attributes within organizations as a result of the ASA cycle.

- Support for personality homogeneity comes also from Chatman (1989) who found that when personal-organizational value fit is high employees are less inclined to turnover –or more satisfied, committee and productive (although Meglino et al. 1989 did not find a significant relationship between congruence and performance).

The contribution of values to retention

- Meglino, Ravlin and Adkins (1989) found the strongest value congruence relationships at the lowest level of the organization, between supervisor and subordinate, which lead to increased job satisfaction and organizational commitment.

- Vancouver and Schmitt (1991) compared the differential impact of member-constituency congruence (i.e., peer agreement) and supervisor-subordinate congruence (conceptually similar to leader-member exchange, LMX) on job/organization attitudes (satisfaction, commitment and intention to quit). Results of the study indicated that member-constituency had greater impact on job attitudes than supervisor-subordinate.

The contribution of values to retention

- Hui, Cheng and Gan (2003) in a study of supervisor-subordinate congruence, remind us of the importance at the time of making a hiring or placement decision to consider personal values, personality and attitudes of all members of the future team.

- Parkes and Bochner (2001) test implications of individualism-collectivism for person-culture fit and for affective work-related outcomes. They focused on the empirical consequences of I-C for a variety of work practices, attitudes, motivation and behavior. For example, in individualistic cultures the employee-employer relationship is calculative and tasks are given priority over relationships, competition and achievement are encouraged.

The contribution of values to retention

- Considering the interaction between organizational and cultural fit, it seems that individualistic employees in individualistic organizations and collectivistic employees in collectivistic organizations show greater job satisfaction, organizational commitment and tenure.

- Locke (1976, ctd. in Taris and Feij 2001) hypothesizes that the relationship between organizational supplies and job satisfaction varies as a function of work values –whether intrinsic, extrinsic or social work values.

The contribution of values to retention

- Warr's (1987, ctd. by Taris and Feij, 2001) vitamin model concerning work values states that increments of all kinds of jobs elements (intrinsic, extrinsic aspects and social relations) benefit job satisfaction, psychological well-being, and intentions to leave of employees until a certain level is attained. Beyond this satiation level the effects of these environmental factors may reverse or have no further effect

- Although values may have some direct effects on work outcomes, they will primarily moderate the influence of organizational supplies on work outcomes.

- The implications of Taris and Feij study are that rewards supplied by the organization result in positive work outcomes, especially when the employee values those rewards. But excessive amounts of supplies may have a detrimental effect on job satisfaction and increase the intention to quit.

North Atlantic Treaty Organization

ORGANIZATION

The contribution of values to retention

- One of the most outstanding efforts to integrate conceptualizations, operationalizations and measurements of P-O fit has been that of Kristof (1996).
- She takes into account the important differentiation between complementary and supplementary fit.
- Another important distinction is made between need-supplies and demands-abilities.
- According to the need-supplies perspective, P-O fit occurs when an organization satisfies individual's needs, desires or preferences. In contrast, the demands-abilities view suggests that fit occurs when a person has the abilities required to meet organization demands.

North Atlantic Treaty Organization

ORGANIZATION

The contribution of values to retention

Kristof's integration model on P-O fit conceptualizations
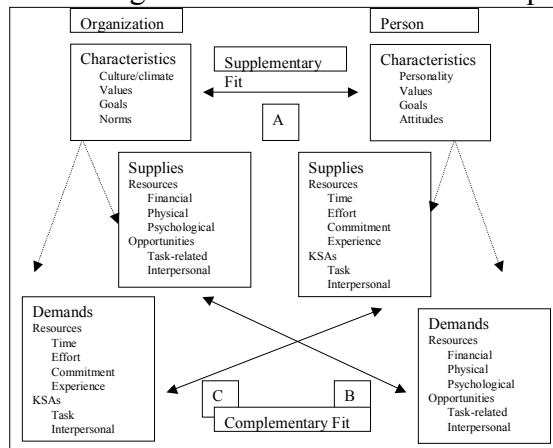
The contribution of values to retention

- The ideal P-O fit may be fulfilled when each entity's needs are fulfilled by the other and they share similar major characteristics. Perception of organizational characteristics is likely to have a greater influence on individual outcome such as stress, satisfaction or commitment than fit with organization's actual characteristics, particularly applicable to characteristics difficult to verify, such as values or goals.

- Three aspects of employment practices affect or are affected by P-O fit. During organizational entry P-O fit encourages organizational homogeneity (e.g., ASA model). P-O fit also determines job search and choice behaviors and selection decisions. Organizational tenure and socialization practices normally lead to increased levels or supplementary P-O fit. Finally, long-term outcomes attributed to P-O fit include turnover, work attitudes, pro-social behaviors, work performance and organizational outcomes.

The contribution of values to retention

Organizational commitment

- Commitment can be defined as a strong belief in and acceptance of organizational goals and values, a willingness to exert considerable effort on behalf of the organization and a definite desire to maintain organizational membership

- Organizational commitment has been associated with absenteeism (Gellatly, 1995, ctd. in Finegan, 2000), extra-role behaviors (as citizenship behavior; e.g., Organ and Ryan, 1995), turnover intentions and actual turnover.

- Multidimensionality of the construct: affective, normative and continuance component.

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ORGANIZATION

The contribution of values to retention

- Each component has different effects:
  - Affective commitment is linked with higher productivity, more positive work attitudes and higher probability of engaging in extra role activities.
  - Same effects can roughly be expected for normative commitment.
  - But continuance commitment has poor relations with performance indicators and with job satisfaction.
- Finegan (2000) advocates than instead of treating values as a large, single continuum, we should consider that different values or clusters of values might have different effects on commitment. In her study, a cluster analysis yielded four value factors: humanity, adherence to convention, bottom-line and vision.

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ORGANIZATION

The contribution of values to retention

- Perception of organization's values is more important in determining one's level of commitment than one's personal values or P-O values match.
- Value profiles which predict affective and normative commitment are different from those affecting continuance commitments. The former were better predicted by humanity and vision values whereas the latter were associated with convention and bottom-line values.
- It easy to accept that an organization which projects an image of courtesy, consideration, fairness, etc. or of development, initiative, creativity and openness will get their employees emotional attached.

The contribution of values to retention

- On the other hand, adherence to convention reflects an organization that is perceived as valuing obedience, cautiousness and formality a great deal and therefore its employees are less affectively committed. These values do little to inspire employee loyalty. If they were held moderately, employees would be more likely to be affectively committed.

- Employees who thought that their organization valued mainly business would like to work elsewhere.

- A recommendation is that organization should encourage values that inspire affective commitment (humanity and vision) and discourage those associated to continuance commitment.

Questions?

Appendix A7: GENDER AND MINORITY ISSUES

Influence of Gender & Minority Issues on Recruiting and Retention

Extended Meeting of NATO Task Group on
Recruiting & Retention of Military Personnel

Brussels, Belgium

October, 2004

Fariya Syed

NATO Task Group on Recruiting & Retention of Military Personnel

• Mechanisms that influence recruiting, selection and classification, retention and turnover outcomes

• Military model of recruitment and retention

Situation

Demographic Shifts in Western Countries:
1) Increase in ethnic minority population
2) Increase in female employment

Need to acknowledge shifts to:
1) Recruit and retain sufficient numbers of minorities and women to sustain operations
2) Ensure equal opportunities for all qualified members of society to have a career in the military

Research Topics

I. Present Situation
   1. Representation of minorities & women in military occupations
   2. Military members' attitudes toward cultural and gender diversity in the military

II. Recruiting
   1. Advertising and Marketing
   2. Applicant attraction and job choice
   3. Selection & Classification

III. Retention
   1. Equity Theory
   2. Equal Opportunity Fairness

Representation of Designated Groups in Canada

Canada (Holden, 2004a; Holden, 2004b)

- Employment Equity Act (EEA)

  - Work force analysis
  - Employment Systems Review (ESR)

Representation of Women in U.S. Military

- US (Hareel, Beckett, Chien, & Sollinger, 2002)
  - Early 1990s – more military occupations opened to women
  - Research:
    - **Quantitative** – representation of women in newly opened occupations
    - **Qualitative** – focus on barriers to employment for women in 10 occupations

Behaviour & Attitudes Towards Diversity in the Military

- Evaluation of affects of policies in the CF (Pike, Maclennan & Perron, 2003)
- Attitude and behaviour measurement (MAS, MEOCS, MGOQ)
- Compared to 1996 baseline
- Findings – Improvement in attitudes and behaviours

Recruiting

1. Advertising & Marketing

2. Applicant Attraction & Job Choice

3. Selection & Classification

Advertising & Marketing

- Social Marketing
  - Military recruitment = social marketing

- Marshall & Brown III (2003)
  - Telephone surveys with young adults (18 to 24 years)
  - Found gender differences in importance ratings of benefits to joining the military

Applicant Attraction & Job Choice

- Chapman et al. (in press)
  - Meta analysis
  - Race and gender as moderators between predictors (job/organisation attraction, job pursuit intentions, acceptance intentions, and job choice) and outcomes
  - Findings:
    - Gender as a moderator
    - Race as a moderator

Selection & Classification

- Ensure selection and classification measures are not biased against minorities

Retention

- Equity Theory
- Equal Opportunity Fairness

Equity Theory

Based on 3 assumptions:

1) People have beliefs about what an equitable return for their contributions is.

2) People compare their input – outcome ratio to others.

3) When a person perceives inequality between their input – outcome ratio compared to that of others, the person will be motivated to take action (such as quitting the job)

Equal Opportunity Fairness

- Distributive Justice Theory
  - Whether outcomes in the workplace are distributed fairly based on input or investment

- McIntyre, Bartle, Landis, & Dansby (2002)
  - Used Distributive Justice Theory approach
  - Sample = military and civilian personnel of U.S. military
  - Analysis = structural equation modelling

Factors
McIntyre, Bartle, Landis, & Dansby (2002)

- OEOF = Organizational Equal Opportunity Fairness
- WGEOF = Work Group Equal Opportunity Fairness
- PWGE = Perceived Work Group Efficacy
- OC = Organizational Commitment
- JS = Job Satisfaction

Model
McIntyre, Bartle, Landis, & Dansby (2002)
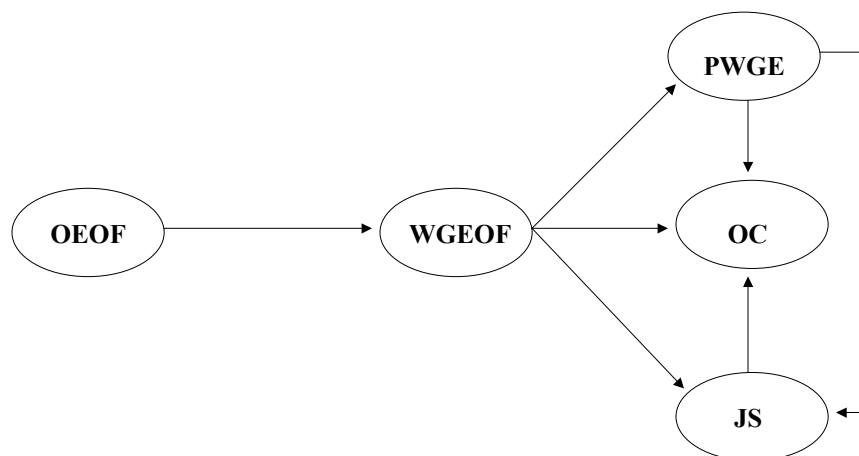
Summary

- Legislation and policy
- Attitudes towards cultural and gender diversity improved
- Recruiting
  - Attraction/marketing and job choice
  - Selection and Classification
- Retention
  - Perceived equity

Appendix A8: PAY AND BENEFITS

Compensation: U.S. Navy Research Initiatives and Applications HFM 107 RTG 034N

Tanja F. Blackstone
IMTA October 2004

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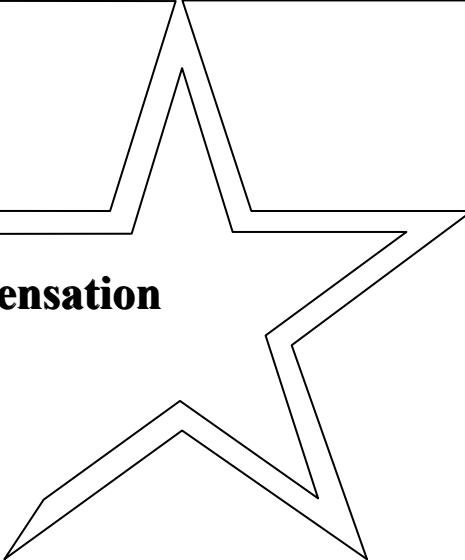
Overview

- **Current compensation**

- **Retention Models**

- **Auctions**

- **Cafeteria Style Compensation Packages**

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Models of Navy Compensation (MODOMP)

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Selective Reenlistment Bonus (SRB) Program - Enlisted

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Fiscal Year to Date Retention Rates by Zone U.S. Navy

	Dim_Time_Period								
LOS Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Zone A	24.30%	23.50%	23.80%	23.90%	27.80%	35.20%	34.50%	38.90%	37.30%
Zone B	56.00%	55.60%	53.00%	54.80%	58.30%	65.50%	69.50%	70.70%	67.80%
Zone C	78.00%	77.00%	74.80%	76.50%	78.80%	81.90%	83.60%	81.70%	84.00%
Zone D	70.80%	82.80%	85.80%	80.90%	94.40%	95.80%	96.60%	96.40%	96.00%
Zone E	18.10%	17.50%	16.40%	17.00%	18.10%	22.10%	25.90%	18.60%	25.20%

Retention rate set by Zone – typically SRB targeted to Zone A (< 6 years of service) and Zone B (7-11 years of service)

      Zone A retention rate is 36%

      Zone B retention rate is 50%

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SRB Program - Enlisted

Average SRB Award by Paygrade

Reenlist Average SRB Amount				
Dim Fiscal Year Dim_Paygrade	2000	2001	2002	2003
All Dim Paygrade	$27,013.36	$26,487.21	$25,600.36	$22,033.40
E-2	-	-	-	$1,858.88
E-3	$16,433.75	$17,729.22	$16,481.23	$12,344.91
E-4	$24,965.71	$25,130.32	$23,898.44	$19,322.76
E-5	$29,839.60	$27,780.06	$26,370.97	$21,699.58
E-6	$26,930.01	$28,827.33	$29,430.72	$30,091.91
E-7	$16,062.12	$19,564.49	$23,001.23	$24,729.64
E-8	$18,284.16	$22,380.24	$22,027.16	$23,134.63

Officer Bonus for critical skill groups - $65K

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Retention Model

- **ACOL model (Warner and Goldberg, 1984)**
  - **Present value difference military and civilian pay**
  - **If military pay > civilian pay individual stays**
  - **Increased SRB makes it more expensive to leave military service**
    › **ACOL models under/over estimate reenlistment**
- **SRB**
  - **Only available at decision point**
  - **Paid to all individuals in eligible skill group**
    › **Pay individuals even if intended to stay**
    › **SRB pays equal dollar amount to all individuals**
      • **Note: SRB determined by LOS/paygrade and number of years
        reenlisted**

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Auctions: Bidding Behavior in a
Multi-Attribute First-Price Auction

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Auctions

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- **SRB vs. Auction**
  - **Individual reveals "*what it will take*"**
  - **Available at rotation vice decision point**
  - **Target skills/location**
- **Job Market Labor Allocation Model**
  - **Precursor to Distribution Incentive Pay (DIS)**
    › **Tests market assumptions**

- **Assignment Incentive Pay**
  - **U.S. Congress support effective Summer 2003**
    › **Limited – assigned by skill/locale**
    › **Max offer $200-$1200**
- **DIS – Sea Warrior Initiative**
  - **Considers Navy Constraints**
  - **Sailor's qualifications/preferences**
  - **Budgetary tradeoff analysis**
  - **Detailer input**

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Job Market Labor Allocation Model

- **Can a competitive market approach help allocate labor?**
  - **Allocation Efficiency**
    - › **Allocate to those that want it the most**
      - *Sailors have an opportunity to express preferences*
      - *Focus is on attributes of the job*
    - › **Allocate at the lowest possible cost**
      - *Command offers minimum necessary incentives*
      - *Flexibility: combine pecuniary and non-pecuniary rewards*
  - **Informational Efficiency**
    - *Two-way interaction and decision making*
    - *Consolidation of "market orders"*

Sailor signals preferences through bids that are easily evaluated by all other market participants, at NO cost to the Navy (of evaluating preferences) and little risk of misjudgment of preferences
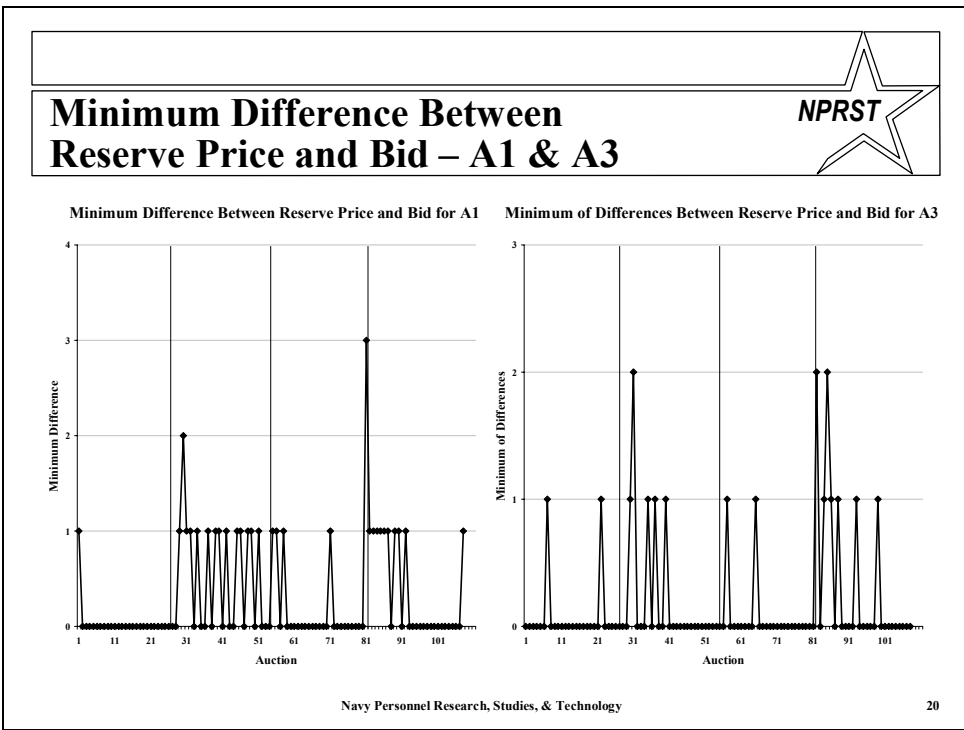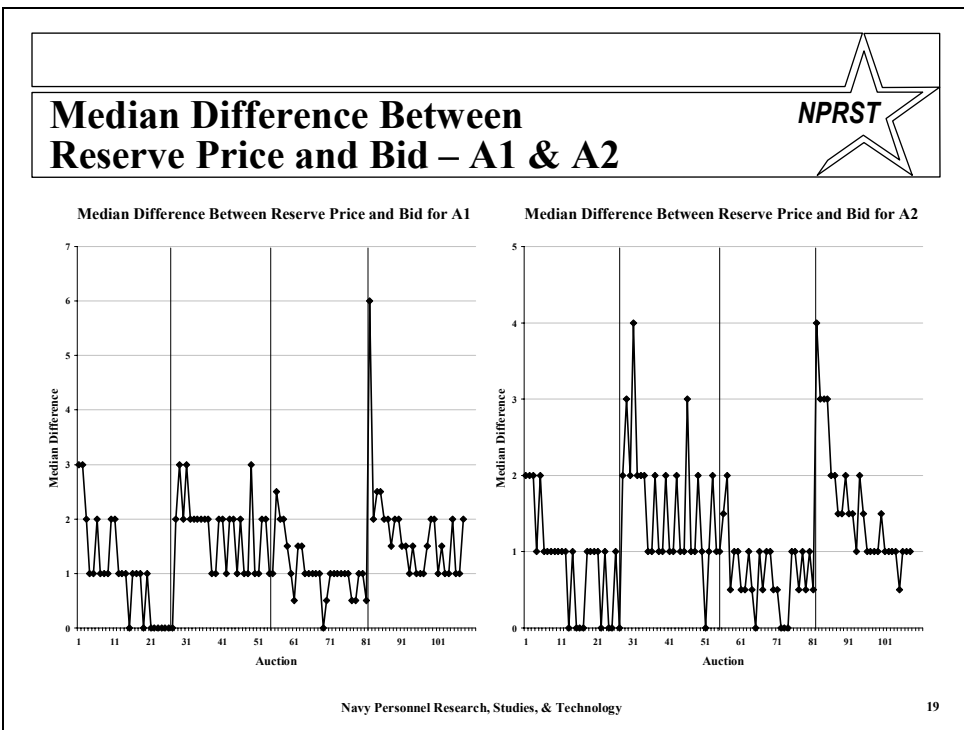
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Experimental Setting

- **A good with three attributes: A_1, A_2, A_3**
  - *e.g., cash bonus, promotion credit, reduced S&S rotation*
  - *But abstract attributes in the experiment*

- **Buyer has values v_1, v_2, v_3**   *Command buys of labor*
  - *v_k is maximum willingness to pay for attribute k*
  - *if buyer buys, profit = ? $_{k=1,3}$ ($v_k - p_k$)*
  - *higher v_k means the attribute is of higher importance to Command*

- **Multiple sellers; i^{th} seller has costs c_{i1}, c_{i2}, c_{i3}**   *Sailors sell labor*
  - *c_{ik} is minimum willingness to accept for attribute k*
  - *if seller sells, profit = ? $_{k=1,3}$ ($p_k - c_{ik}$)*
  - *lower c_k means the attribute is of lesser importance to the Sailor*

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Feasible Bids

v_k **Buyer Reservation Price**

Bid

c_k **Seller Reservation Price**

# of Bids

First Price
Only Feasible Bids Considered

First Price Winner Based on DEA Cross Efficiency Algorithm

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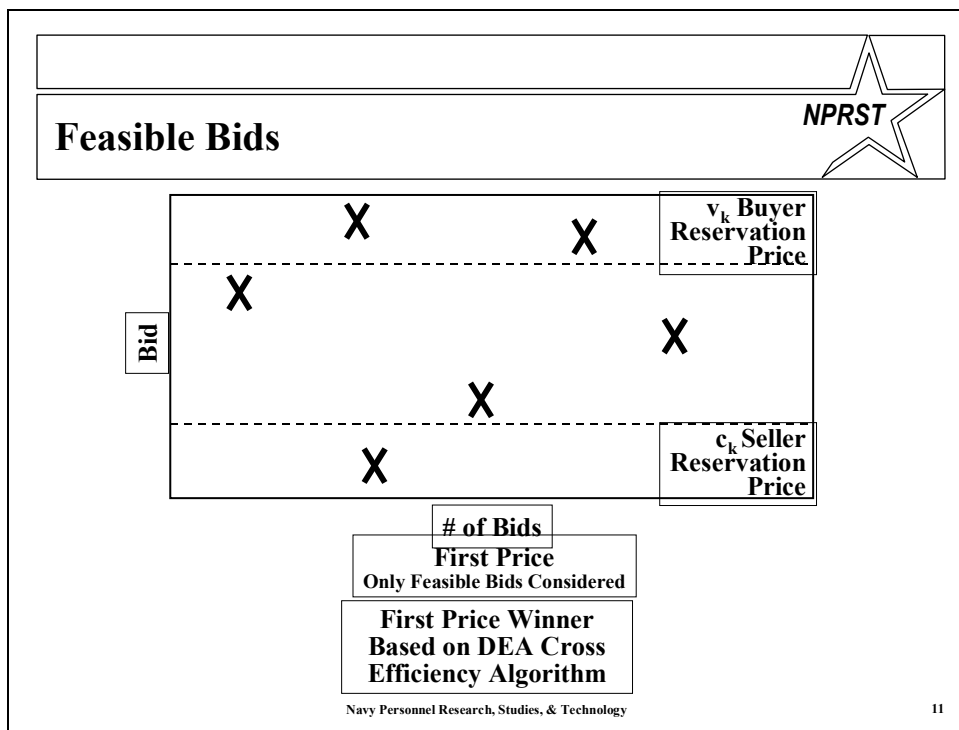
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JMLAM Experimental Parameters

- **First-Price Auction Sealed Bid Auction**

  - **Number of jobs unknown/known**

  - **Constant seller reservation price**

  - **Vary seller reservation price**

  - **Seller quality (seller weight) takes on value $0 \rightarrow 1$**

  - **Distribution of Seller weights known/unknown**

  - **Buyer reserve price known/unknown**

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Experiment 1 Parameters

Seller Value	1
Reserve Prices, N = 360	(10, 5, 2)
Reserve Prices, N = 408	(10, 5, 2) or (13, 7, 3) or (18, 9, 4)
Job Openings	2, unknown to the seller
Seconds for Play	90-105 seconds
Conversion Rate	.05, $1 Experimental Dollar = $0.05 USD
Maximum Number of Rounds	10, unknown to seller
Buyer Reserve	(100, 50, 25), unknown to a seller
Maximum Number of Sellers	9, average subjects per session was 7

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Experiment 1
Median Difference in Composite Bid

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Experiment 2 Parameters

Seller Value	**.6, .8, or 1, randomly assigned session/auction/subject**
Reserve Prices	**(13, 10, 6) if seller value = .6**
Reserve Prices	**(16, 12, 8) if seller value = .8**
Reserve Prices	**(20, 15, 10) if seller value = 1**
Job Openings	**2, unknown to the seller**
Seconds for Play	**60 seconds**
Conversion Rate	**.10, $1 Experimental Dollar = $0.10 USD**
Maximum Number of Rounds	**10, unknown to seller**
Buyer Reserve	**(100, 50, 25), unknown to the seller**
Maximum Number of Sellers	**9, average subjects per session was 7**

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Experiment 2
Median Difference of Composite Bid

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Experiment 2
Minimum Difference of Composite Bid

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Conclusion

- **Higher seller weight greater bid submitted**

- **Introducing asymmetric information into market relatively little impact on bids**

  - **Knowledge of Buyer Reserve had no impact on bids**

  - **Knowledge of distribution of seller weights – no impact on bids**

  - **Knowledge of number of jobs – no impact on bids**

- **In call experiments convergence to reserve very rapid**

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Assignment Incentive Pay
Overall AIP Stats as of 9 Apr 04 After 19 Requisition Cycles

	ALL JOBS		AIP JOBS	
Jobs Advertised	277235		9323	
Applications	97469	35.2%	3756	40.3%
Applicants	49337		2977	
Selections	23296	47.2%	1080	36.3%

	Naples		Sigonella		Misawa		Guam*		Lamad	
AIP Jobs	3006		2824		963		610		246	
Applications	1039	34.6%	1235	43.7%	264	27.4%	287	47.0%	158	64.2%
Applicants	888		983		257		200		123	
Selections	272	30.6%	265	27.0%	83	31.4%	109	38.0%	62	39.2%

*Includes both sea and shore AIP jobs.

Total Involuntary Assignments: 43 (up from 41)

Lowest Bid: $0   Highest Bid: $1200   Average Bid: $310
(Up from $286)

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Jobs vs. Bids - NCTAMS Naples

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E 1-3 $350
E 4-6 $400
E 7-9 $450

E 4-6 $600
E 7-9 $650

E 4-6 $700
E 7-9 $900

E 4-6 $1200

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DIS Technical Approach

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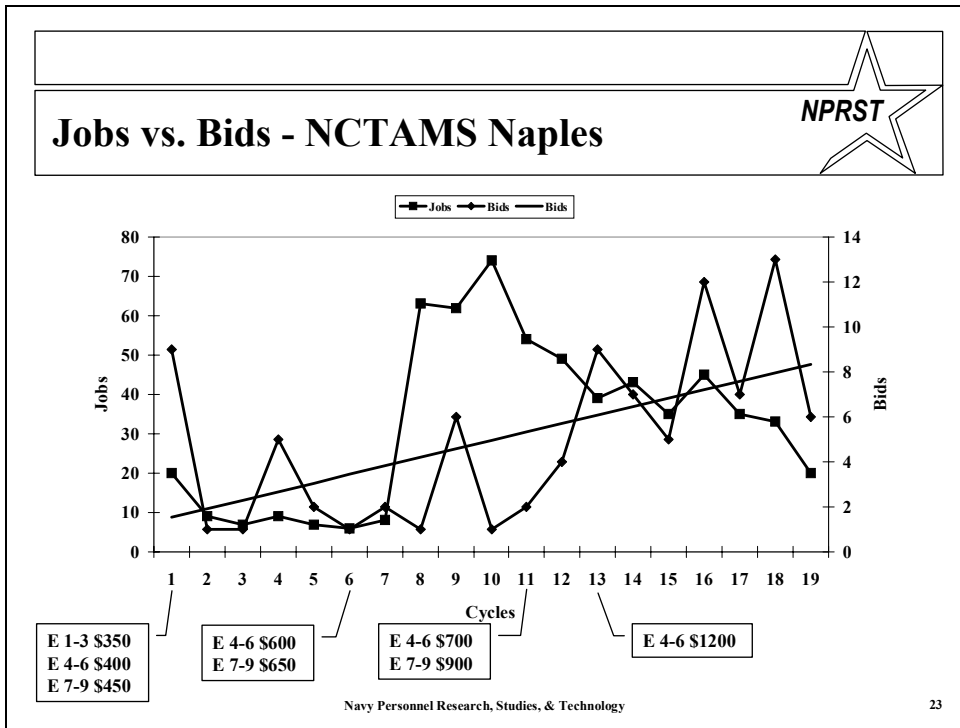
- **Basic Structure of the DIS:**
  - **Multi-attribute auction**
    - › **Currently uses EMF and JASS data**
      - • **Future – insertion of SkillsObjects**
    - › **Considers Bids + Navy MOEs**
      - • **MOEs – PCS, training, NEC reutilization, critical fills**
      - • **Total Score = Fitness Score (Navy MOEs) + bid**
        - **- Bids/Navy MOES – weighted**
      - • **Individuals can bid on multiple jobs – based on qualifications**
        - **- System provides Fitness Score**
      - • **Early experimentation shows**
        - **- Higher bid weight > bid submitted**
        - **- Greater number of jobs – relative lower bids**
        - **- Second-Price auction - bids closer to reservation price**
    - › **First-Price Sealed Bid Auction**
      - • **Auction rules driven by bandwidth constraints**

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DIS Technical Approach (con't)

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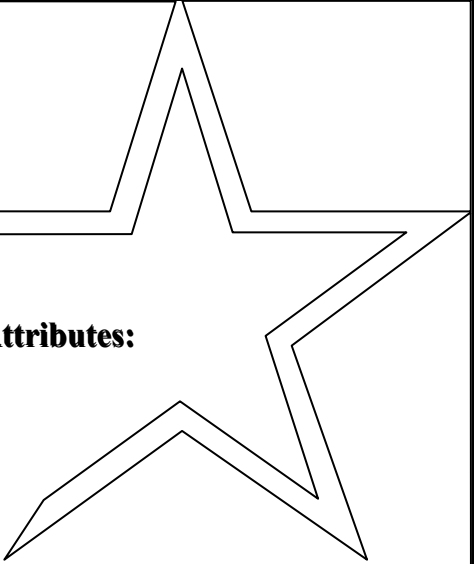
- DIS Tools
  - › Career Policy Administrator
    - • Incentive Budget Forecasting
    - • Sets Timeline for job fills
    - • Sets Requisition Groupings and Weights
  - › Detailer
    - • Eligibility Screening
    - • Reviews requisition cycle process
    - • Finalizes assignments
  - › Sailor Interface
    - • Edits Preferences
    - • Applies/bids for jobs
    - • Checks status of assignments
- STATUS
  - Spiral 1 Prototype complete
  - Begin insertion into Sea Warrior December 2004

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Discrete Choice
Discrete Goods with Multiple Attributes:
An Experimental Study

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Flexible Benefits

- **Current compensation plans are fixed**
  - **Monetary + Benefits**
    - › **Some flexibility in Monetary (SRB, tax incentives, special duty pays)**
      - **Benefits fixed**
- **CBO Report (January 2004)**
  - **Non cash compensation – 60% of military pay package**
  - **Can flexible plan be more cost effective than a fixed plan?**
    - › **Depends on metric**
      - **Retention/Recruiting tool**
        - **Individuals value cash vice in-kind subsidy**
    - › **Part of non-cash compensation – medical care, housing, grocery**
      - **More cost effective if provided by private sector**
      - **Antiquated compensation system**
- **Opponents of flex plan – individuals cannot make optimal decisions**
  - **Design of experiment to test individual decision making ability in complex multi-attribute environment**

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Employee value of fixed benefits package

Value of having a particular type of coverage

Round # 1 Conversion Rate: .0001 Cell Payoff: 35.000 Cell Value Weight: 35.000 Moves are: Revocable

Experimental $$ = Cell Payoff + (Cell Value Weight X Cell Value)

Monetary value for each $1.00 of coverage

450	122920	3500	0
Fixed Payoff	**You could earn this or more**	**Value Limit**	**Current Earnings**

☐ Decline Play - Accept Fixed Payoff

You can choose to Decline Play and accept the Fixed Payoff at any time during the round.

0

Value of Selected Cells

End Round

9:58 **Time Remaining for Playing Round**

Red = A cell that is selected   **Green** = A cell that is not selected

Employers budget constraint

Potential value of cafeteria benefits plan

☐ 496	☐ 406	☐ 430	☐ 277	☐ 284
☐ 533	☐ 132	☐ 525	☐ 553	☐ 498
☐ 149	☐ 343	☐ 579	☐ 541	☐ 321
☐ 631	☐ 583	☐ 155	☐ 624	☐ 316
☐ 401	☐ 529	☐ 153	☐ 437	☐ 372

Matrix represents menu of benefit choices
Cells represent a component of benefits package
Cell value presents dollar value of coverage for each component

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Experimental Model

The subject's reward from selecting *k* cells is the sum of the rewards from each of the cells that s/he selects

Subject maximizes:

(1a) $\quad \sum_{i=1}^{k} [\text{Cell Payoff} + (\text{Cell Weight} \times \text{Cell Value}_i)]$

Rearranging

(1b) $\quad k \times \text{Cell Payoff} + [\text{Cell Weight} \times \sum_{i=1}^{k} \text{Cell Value}_i]$

Subject to

(2) $\quad \sum_{i=1}^{k} \text{Cell Value}_i \leq \text{Value Limit}$

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Experimental Sessions

Experimental Treatment Constant Across Sessions							
Matrix Dimensions	**Cell Values**		**Cell Weight**	**Value Limit**	**Revocable Moves?**	**Seconds per round**	**Conversion Rate**
	Lower Bound	**Upper Bound**					
5x5	100	1000	1.2	2000	Yes	240	0.001

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Experimental Sessions

Experimental Treatments Varied Across Sessions				
	Session			
Treatments	**S1**	**S2**	**S3**	**S4**
Cell Payoff	20	100	20	100
Fixed Payoff Percentage	80%	80%	50%	50%
Number of Rounds	9	8	10	11
Fixed Deduction (US$)	$17.00	$18.00	$20.00	$27.00

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The Use and Effectiveness of Heuristics

Six Heuristics

H_S. Select the highest remaining cell value until the value limit prohibits further selection

H_A. Select three cells that (nearly) exhaust the value limit, focusing on cell values in the 800-1000 range, but also selecting outside this range

M_S. Select four cells in the 400-699 range that (nearly) exhausts the value limit

M_A. Select five cells that (nearly) exhaust the value limit, focusing on cell values in the 400-699 range, but also selecting outside this range

L_S. Select the lowest remaining cell value until the value limit prohibits further selection

L_A. Select six or more cells that (nearly) exhaust the value limit, focusing on cells in the 100-399 range, but also selecting outside this range

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Categorization of Subject Heuristics

Categorization of Subject Heuristics from the Data

Heuristic	Across Sessions	By Individual Session			
		S1	S2	S3	S4
High Numbers (chooses 3 cells or less)	**5%** (4/80)	**10%** (8/80)	**10%** (8/80)	**14%** (11/80)	**9%** (7/80)
Medium Numbers (chooses 4 or 5 cells)	**16%** (13/80)	**26%** (21/80)	**28%** (22/80)	**25%** (20/80)	**29%** (22/80)
Low Numbers (chooses 6 or more cells)	**51%** (41/80)	**61%** (49/80)	**61%** (49/80)	**60%** (48/80)	**63%** (50/80)
Mixed (uses multiple strategies)	**28%** (22/80)	n/a	n/a	n/a	n/a
Unable to Categorize	n/a	**3%** (2/80)	**1%** (1/80)	**1%** (1/80)	**1%** (1/80)
Column Total	**100%** (80/80)	**100%** (80/80)	**100%** (80/80)	**100%** (80/80)	**100%** (80/80)

Note: Subjects who receive the High, Medium or Low designation in the Across Sessions column are identified as using that heuristic in each of the four sessions. Of the 23 subjects who use the Mixed strategy, 6 use a combination of Low/Medium, 13 use Medium/High, 2 use Low/High, and 1 uses Low/Medium/High. In the Unable to Categorize row, the subjects who could not be categorized were different in each session, i.e., these are five separate subjects. See text and Appendix 4).

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Heuristics

Rewards to Heuristics as a Percent of the Maximum Possible Reward

Session	Simple Heuristics			Advanced Heuristics		
	High H_S	Middle M_S	Low L_S	High H_A	Middle M_A	Low L_A
S1	**90.8%**	**97.2%**	**88.8%**	**96.4%**	**98.1%**	**99.7%**
S2	**80.0%**	**89.9%**	**92.8%**	**86.6%**	**93.1%**	**99.9%**
S3	**90.9%**	**97.6%**	**92.1%**	**96.6%**	**93.1%**	**99.9%**
S4	**79.1%**	**88.4%**	**99.8%**	**85.2%**	**91.5%**	**99.8%**
Column Average	**85.5%**	**93.3%**	**93.4%**	**91.2%**	**95.3%**	**99.8%**

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Slide 35 — Results

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Earnings Summary for n = 3040 Rounds

	Chose Fixed Payoff	Earned 0% (Timed Out)	Earned Less Than 80%	Earned 80-89%	Earned 90-96%	Earned 97-99%	Earned 100%
Number	107	23	41	299	855	1451	264
Frequency	3.5%	0.8%	1.3%	9.8%	28.1%	47.7%	8.7%

Note: Earnings expressed as percentage of maximum possible reward

1. Four minute constraint not binding
2. Subjects opt to play the game
3. When subject opt to play game majority earn > 97% of potential

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NPRST

Fixed Effects Regression Model

Fixed Effects Model:

$$Y = \beta_0 + \beta_F \text{Fixed} + \beta_T \text{Timeout} + \sum_{i=2}^{4} \beta_{Si} \text{Session}_i$$

$$+ \sum_{j=2}^{11} \beta_{Rj} \text{Round}_j + \sum_{k=2}^{80} \beta_{Subk} \text{Subject}_k + \varepsilon$$
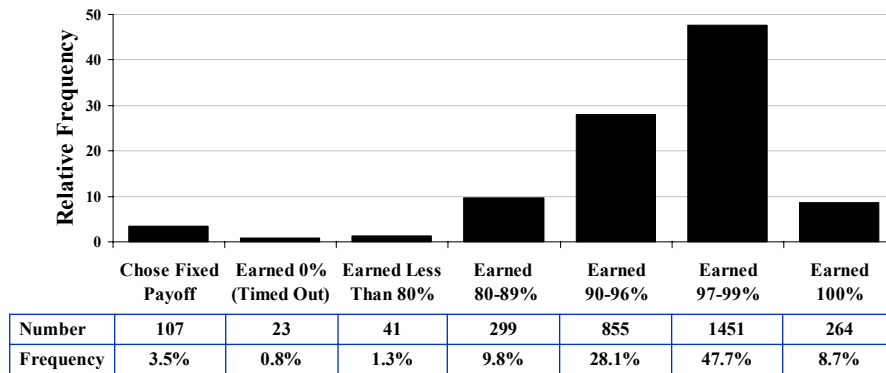
Question: How well does the subject perform relative to the optimal solution?

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Model Variables

NPRST

Variable	Definition
Dependent Y	
Earnings Ratio	Subject's per-round earnings, as a percent of the maximum possible in the round
Cell Ratio	Number of cells in subject's final per-round choice, as a percent of the number of cells in the round's optimal solution
Search Ratio	Total number of cells subject selects per round (including those not part of subject's final choice), as a ratio of the number of cells in subject's final choice for the round
Fixed	= 1 if subject chooses the fixed payoff option in the round = 0 otherwise
Timeout	= 1 if time expires before subject is finished in the round = 0 otherwise
Session $_i$ $i = 2, \ldots, 4$	= 1 if Y observation from session Si = 0 otherwise
Round $_j$ $j = 2, \ldots, 11$	= 1 if Y observation from round Rj = 0 otherwise
Subject $_k$ $k = 2, \ldots, 80$	= 1 if Y observation from subject Sub$k$ = 0 otherwise

Note: There are n = 3040 observations of each dependent variable. There are 107 instances where Fixed = 1 and 23 instances where Timeout = 1.

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Hypotheses Tests

NPRST

Hypotheses Tests from Fixed Effects Regressions			
	Dependent Variable		
Test	**Earnings Ratio**	**Cell Ratio**	**Search Ratio**
	$R^2_{Adj} = 0.85$	$R^2_{Adj} = 0.77$	$R^2_{Adj} = 0.49$
Overall Model H_0: ?$_{S2}$ = … = ?$_{Sub80}$ = 0	F = 196.9 p < .001	F = 111.2 p < .001	F = 29.7 p < .001
Session Effect H_0: ?$_{S2}$ = ?$_{S3}$ = ?$_{S4}$ = 0	F = 174.0 p < .001	F = 5.07 p = .002	F = 2.19 p = .087
Round Effect H_0: ?$_{R2}$ = … = ?$_{R11}$ = 0	F = 1.24 p = .260	F = 4.37 p < .001	F = 2.13 p = .020
Subject Effect H_0: ?$_{Sub2}$ = … = ?$_{Sub80}$ = 0	F = 28.1 p < .001	F = 70.9 p < .001	F = 13.6 p < .001

Note: n = 3040 for each regression. See Appendix 3 for further detail.

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NPRST

Conclusions

- **Two main results**
  - **Relative tradeoff between the attributes is a significant treatment variable**
    - › **Subject payoffs higher if variable attribute given relatively more weight**
    - › **Majority of subjects adopt heuristics to approximate optimal solution**
  - **Subjects rarely choose fixed payoff, even when fixed payoff is 80% of potential variable payoff**
    - › **Suggests individuals place a high value on flexibility and choice**
    - › **Suggests individuals confident in their ability to reach an optimal choice**
    - › **Given complex choice environment individuals have the capacity to approximate nearly an optimal solution**

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NPRST

Conclusions (con't)

- **Support for "choice" in compensation packages**

  - **Suggests Policymakers should focus on introducing "choice" into Military institution…possible positive implications for job satisfaction and tenure (retention/recruiting)**

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Appendix A9: PERSTEMPO/OPSTEMPO

North Atlantic Treaty Organization

ORGANIZATION

NATO Human Factors & Medicine Task Group on "Recruiting & Retention of Military Personnel" (HFM 107 / RTG 034)

Recruiting And Retention Of Military Personnel: Influences of Quality of Life and Personnel Tempo

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North Atlantic Treaty Organization

ORGANIZATION

Topic Introduction

· OPS/PERS Tempo
  – OPSTEMPO – deployment of military personnel on an operation
  – PERSTEMPO – all activities (including OPSTEMPO) that take military members away from their unit and home

· Quality of Life
  – Non-monetary benefits that impact "+" or "–" on the wellbeing and morale of military members and their families

OPS/PERS Tempo

- Summary
  - Non–hostile deployments positively influence retention at the NCO level
  - As the number, length and severity increase, retention is affected negatively
  - Deployments positively influence officer retention

Limitations

  - Career progression policies may confound this relationship

  - Nature of the deployment may also explain results – ROTO 0 vs. ROTO 5

Quality of Life (QOL)

- Definition – difficult to determine standard
- Many single issues that would fall under QOL have been associated with retention
  - Role conflict (family/work)
  - Work scheduling
  - Expected vs. achieved salary
  - Expectations of services provided for families of deployed soldiers
  - Spouses' wishes that the military member stay or leave

Kerce QOL Model

CF Conceptual QOL Model

QOL Model of Married Marines with Children
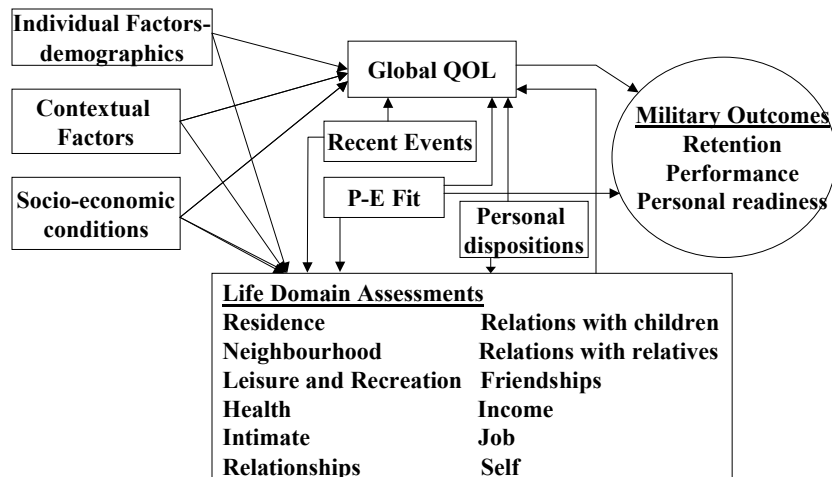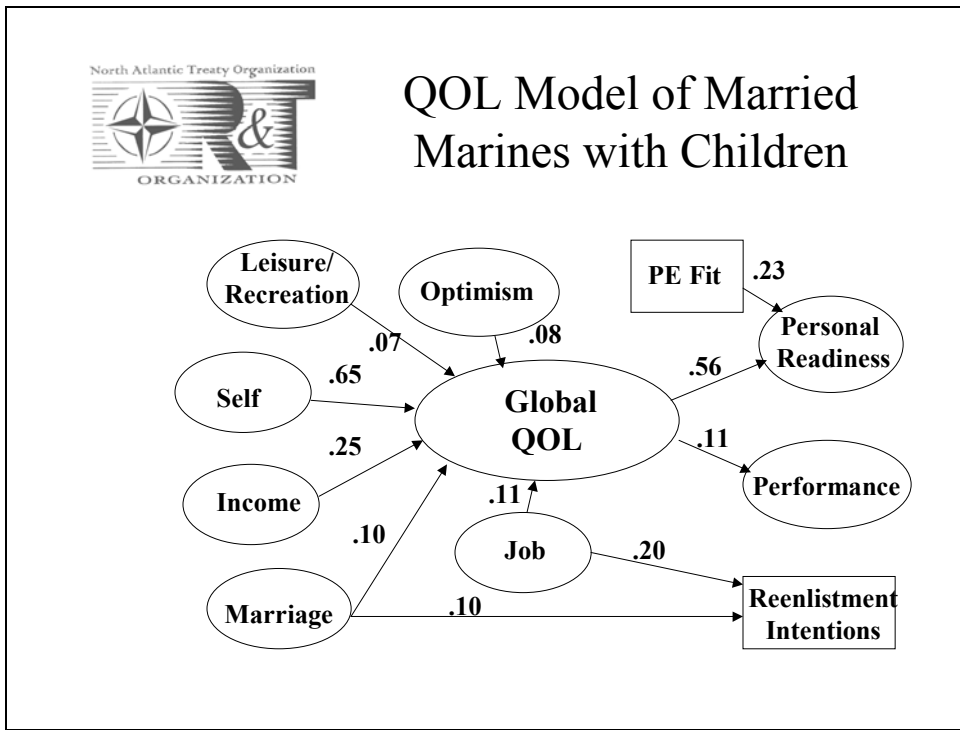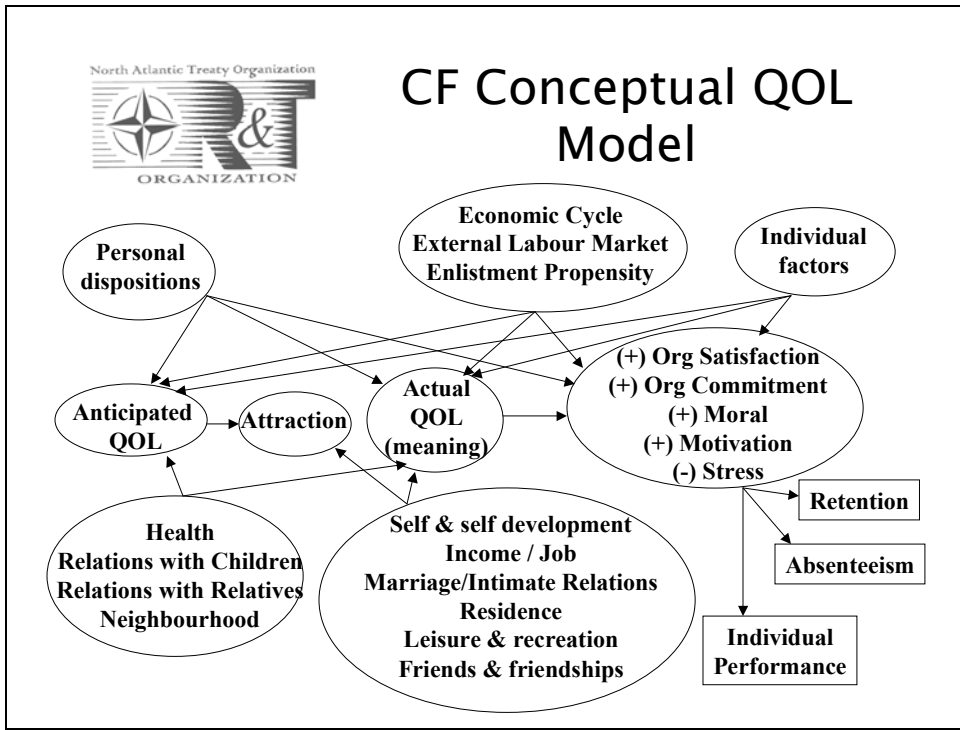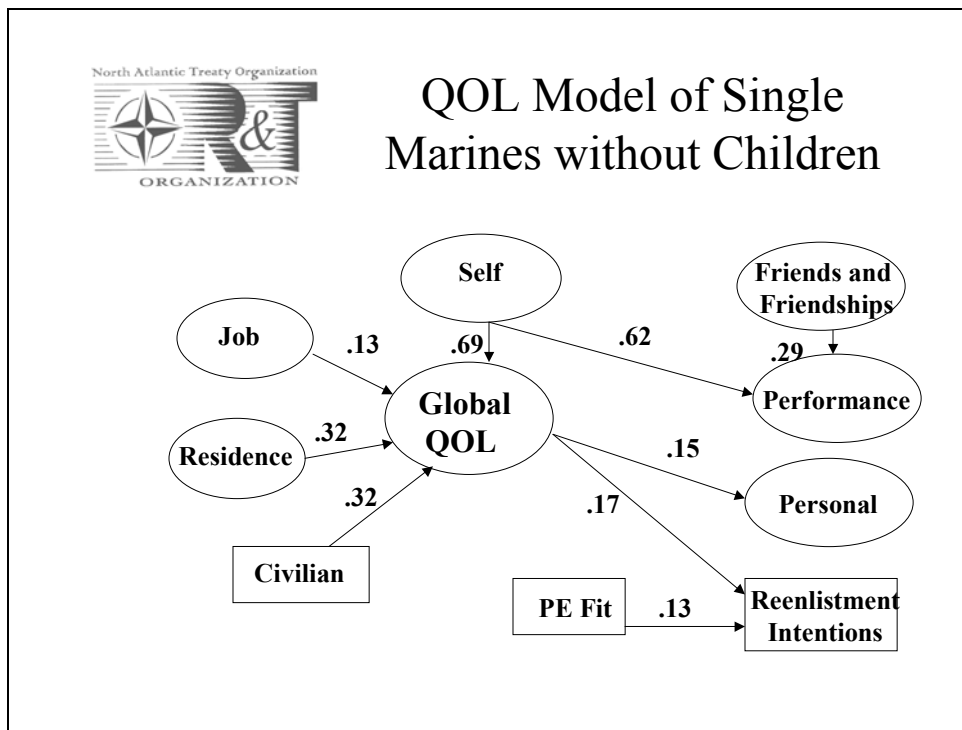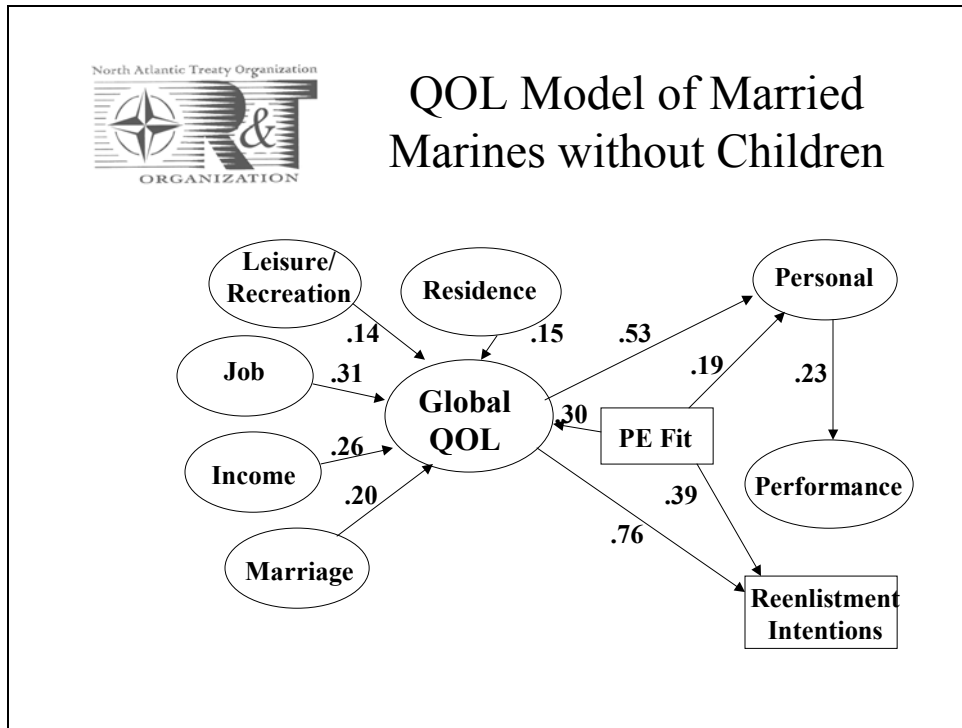
Recruiting

- PERSTEMPO

  Person–Environment (PE) fit (Wicker, 1996)

  – how well do personal qualities match the demands and
    opportunities in situations people find themselves in

  – suggested self–report of sufficient fit

- QOL

  Anticipatory QOL (Rice et al., 1985)

  – what effect does the anticipated QOL in the military
    have on new recruits joining the organization

  – Has implications for recruiting advertising

    – "employer of choice "

Summary

	Retention	Recruiting
OPS/PERS Tempo	Workload, Role Stress, Job Satisfaction, commitment	P–E Fit
Quality of Life	Job Satisfaction, Commitment, Workload	Anticipatory

Appendix A10: INDIVIDUAL DIFFERENCES

INDIVIDUAL NEEDS AND MILITARY TURNOVER

H. Canan Sümer, Ph.D.
Middle East Technical University
Ankara, Turkey

Background

■ Identifying organizational, job- and individual-related factors contributing to voluntary, dysfunctional turnover is imperative in order to take appropriate actions.

■ Available turnover models focus on attitudes (satisfaction and commitment) as the major individual differences variables.

■ The purpose of this study was to review needs-related factors that are likely to play a role in the process of withdrawal from the military.

Individual Differences Factors

Relevant in Military Turnover:

- Unmet expectations
- Work-family concerns
- Job related attitudes
- Individual Characteristics

Unmet Expectations

- Initial expectations not fulfilled at work - Critical especially in early attrition in the military (e.g., Griffeth & Hom, 2001).

- Met expectations modestly predict (corrected validity coefficient = -.15) actual turnover behavior (Griffeth, Hom, & Gaertner, 2000).

- Unmet expectations about job characteristics seem to determine the satisfaction level and the following drop out rate from initial training programs (van de Ven, 2003).

Unmet Expectations

■ Young people employed on fixed-term contracts are likely to have a relatively instrumental attitude toward the military work.

■ Unmet expectations and disappointments concerning readily observable aspects of work/job (e.g., salary, working conditions, and workplace atmosphere) have a great deal of influence in the decision to drop out (van de Ven, 2003).

Unmet Expectations and Realistic Job Previews

■ Realistic job previews contribute significantly to the development of initial expectations concerning job and conditions of employment (Hom, Griffeth, Palich, & Bracker, 1999)

RJP→Initial Expect.→Perceptions of Post-Entry Exper.→Job Sat.

Work-Family Concerns/Balance

■ Work-family conflict - One of the critical determinants of turnover.

■ Interrole conflict influences turnover through the mediated effects of job satisfaction and withdrawal cognitions (Hom & Kinicki, 2001).

Work-Family Concerns/Balance

■ Family considerations - Underresearched in the prediction of retention/reenlistment decisions in the military (Kelley, Hock, Bonney, Jarvis, Smith, & Gaffney, 2001).

■ Most military jobs makes work-family balance quite challenging:
  □ frequent and long deployments,
  □ overnight duty,
  □ long work hours,
  □ high tempo,
  □ work overload,
(Dunn & Morrow, 2002).

Work-Family Concerns/Balance

- Navy fathers and mothers anticipating deployment report substantial levels of separation anxiety characterized by guilt, shame, and concerns about the interruption of family relationships (see Kelley et al., 2001).

- Deployed fathers report disrupted communication patterns, feelings of out synchrony with the family and problems in establishing and maintaining strong parent-child attachment (see Kelley et al., 2001).

- Enlisted men and their spouses report incompatibility of child rearing with army life (Price & Kim, 1993).

Work-Family Concerns/Balance

Other findings:
- Active duty air-force women who gave birth were twice as likely to leave the military compared to women who did not give birth during the same time period (Price, 1998).

- The majority of the respondents (81.6%), who applied for premature voluntary release in the British Army, reported that their decision was related very much to the impact of the Army on personal and/or domestic life (Richardson, 2003).

- PERSTEMPO factors (e.g., frequent and long predeployment trainings and deployments themselves), quality of life concerns, and work overload were among the reported reasons for leaving the CF (Dunn & Morrow, 2002).

Work-Family Concerns/Balance

- Work-family concerns, as part of broader QOL factors, seem to contribute to the development of turnover intentions through their influence on overall job satisfaction and commitment.

Job-Related Attitudes
Job Satisfaction:

- Treated as a major variable in the decision making process concerning whether or not to leave the organization

- Shown to influence turnover not directly but through turnover thoughts and intentions (e.g., Dallessio, Silverman, & Schuck, 1986; Hom, Griffeth, & Sellaro, 1984; Mobley, 1977).

- Personal and work characteristics are assumed to influence turnover intentions (and hence turnover) through their effects on job satisfaction (e.g., Griffeth & Hom, 2001).

Job-Related Attitudes
Job Satisfaction:

- Because of contractual obligations, satisfaction is likely to have a weaker influence on withdrawal cognitions and actual turnover for military samples than for civilian samples. (e.g., Carsten et al., 1992).

- The decision making process in military seems more planned and programmed; individuals are expected to choose between reenlistment and separation much before the end of their current tour of duty (Steel & Ovalle, 1984).

- Dissatisfaction was less related with thoughts of quitting in the military samples (-.57 vs. -.65), and there was a closer agreement between quit intentions and withdrawal behavior for the military samples (.40) than for the civilian (.34) samples (Hom et al., 1992).

Job-Related Attitudes
Organizational Commitment

- Organizational commitment predicts turnover (average corrected correlation coefficient = -.23) better than does overall satisfaction (-.19). The predictive power of commitment was even larger for military samples (-.28) (Griffeth et al., 2000).

Job-Related Attitudes
Organizational Commitment:

Meyer and Allen's (1997) conceptualization of commitment as a three-component process:
- ☐ Affective Commitment (AC) – "Want to"
- ☐ Continuance Commitment (CC) – "Need to"
- ☐ Normative Commitment (NC) – "Ought to"

Job-Related Attitudes
Organizational Commitment:

- ■ All three commitment dimensions are correlated negatively with turnover intentions (e.g., Meyer et al., 2002).

- ■ AC is a better predictor of variables associated with military withdrawal than the other two dimensions (Tremble et al., 2003).

Individual Characteristics

- Person-Job Fit
- Dispositions
- Psychological Well-Being

Individual Characteristics

Person-Job Fit and Turnover:

☐ Schneider's Attraction-Selection-Attrition (ASA) Model.

☐ Evidence concerning the effects of **personality type-environment type** fit on the organizational outcomes including turnover (Gustafson & Mumford, 1995).

☐ For example, anxious-defensives, overall uninvolveds, and anxious-unmotivated impulsives were more dissatisfied, withdrew more, and performed poorly within the structured-complex environments.

Individual Characteristics

Dispositions (Specific Personality Attributes) & Turnover
- Agreeableness and neuroticism (Boudreau, Boswell, Judge, & Bretz, 2001)
- Negative affectivity (Griffeth & Hom, 2001)
- Proactive personality (McIntyre et al., 2002)

Individual Characteristics

Psychological Well-Being and Turnover:
- Mental-health-related problems play a critical role in a significant portion of the turnover/discharge within the first six months of enlistment in the U.S. Armed Forces (Cigrang et al., 2000).
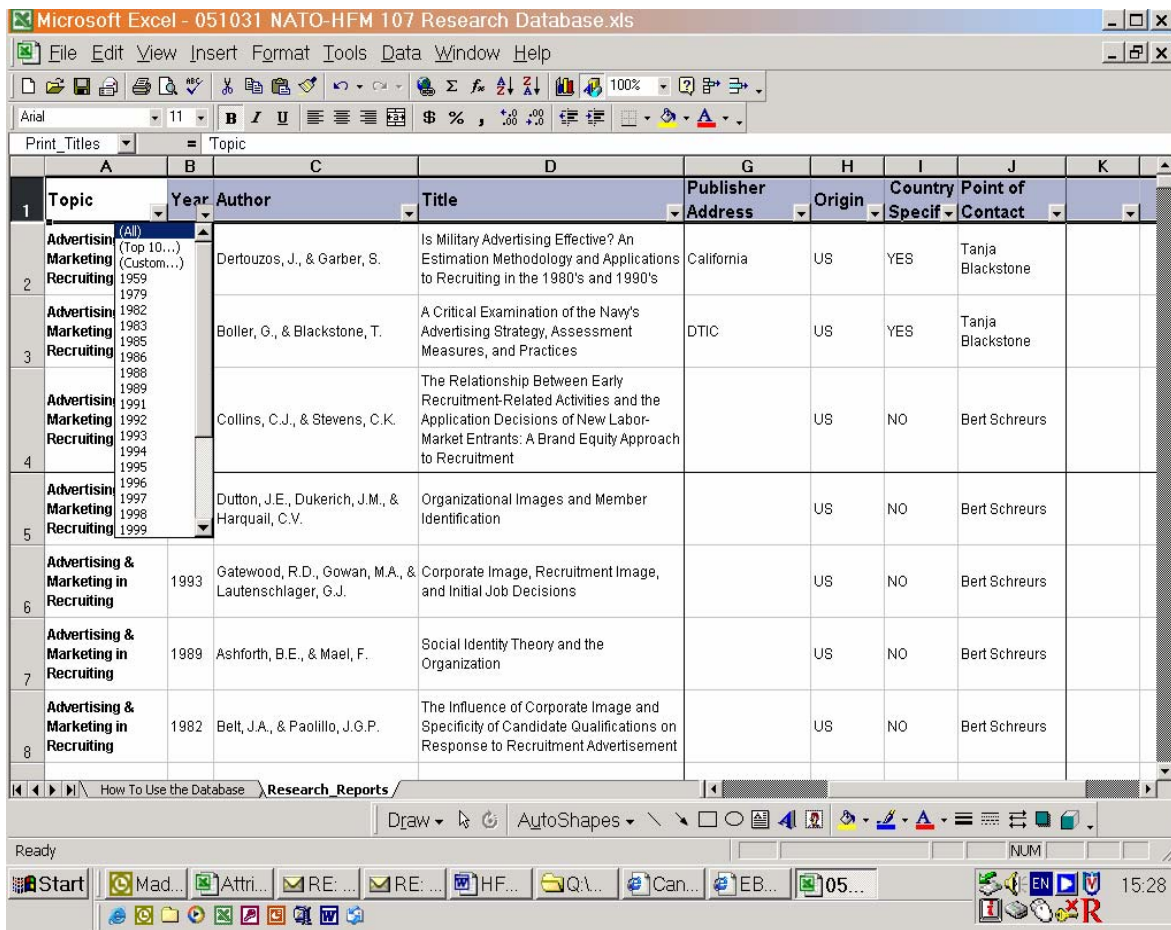
- Mental-health-related factors are one of the common predictors of discharge in United States Air Force basic military training (Lando & Fiedler, 1999).

- Depression scores predict attrition from the military training for both male and female trainees (Holden & Scholtz, 2002).

Annex B – RECRUITMENT AND RETENTION RESEARCH LITERATURE DATABASE

B.1 HOW TO USE THE DATABASE

This database is very easy to use. Simply click on the tab at the bottom of this page called "Research_Reports." The database will appear. The bolded text represents the topic areas. Each of the column headings can be seen as the top row of the database.
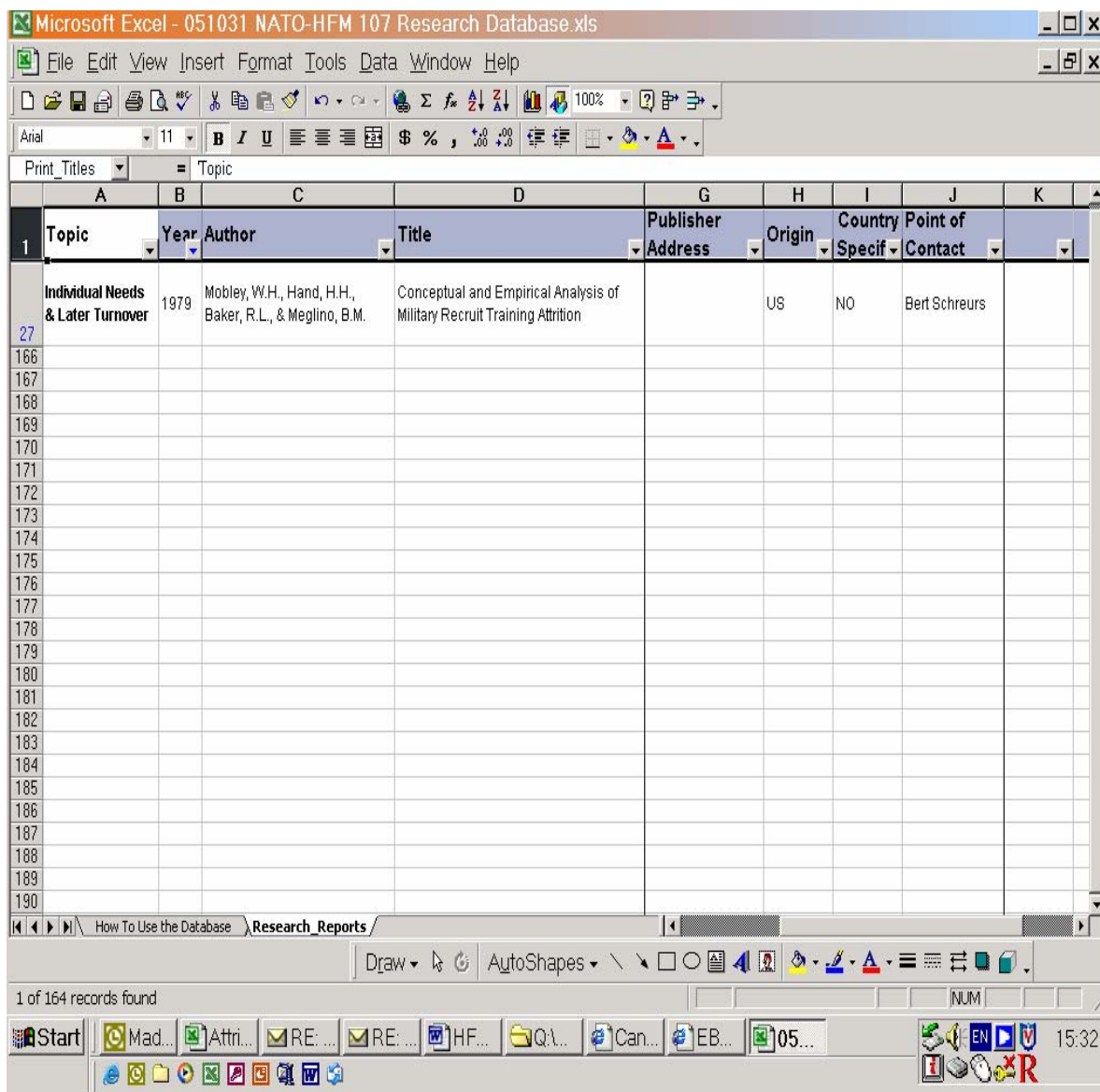
You will also notice that there is a small gray box with an arrow pointing down in the right-lower corner of each of the boxes on the top row. If you click on that arrow, you will see a list of all the items are in that column. For instance, if you click on the arrow inside the "Year" box, you will see a list of dates, highlighted in Figure B-1.

Figure B-1: Research Reports Page.

If you click on 1979, you will see that there is one article by Mobley et al in the database, as highlighted in Figure B-2.

Figure B-2: Search by Author.

This is a faster way to look up specific information. If you know the author of an article and want to find what paper(s) he/she may have produced, you can use this feature to find it faster than by scrolling through the whole database.

By clicking on the arrow in that column again, and selecting (All), you will return the database to its original condition. Using this shortcut, you can look for articles of particular interest by whatever column headings you wish. You may also search the database by simply scrolling down the list. The articles are listed in alphabetical order by topic. Within the topic, they are also listed in chronological order from newest to oldest.

Click here for link to database – Research database.

Annex C – PROGRAM OF WORK (PoW) – HFM-107/TG-034 RECRUITING AND RETENTION OF MILITARY PERSONNEL JUNE 4TH 2006

C.1 1ST MEETING: MAY 20 – 23, 2003, ANTALYA (TUR)

- Establishing PoW.

Between 1 & 2 TG Meeting:

- Each nation gives a broad outline of its recruitment processes and describes its R&R strategies:
  - Address the topics in the TOR.
  - Format: EXCEL table (for comparison purposes) **and** Word document for example with a table (for the report).
  - Identify if strategy addresses Recruiting, Retention or both.
  - Identify major issues driving current/future strategies.
  - To do points:
    - Dutch delegation will present an example template of recruitment process/ R&R strategies by 20th June in the forum. Feedback is expected by 4th July. Final report ASAP.
    - US delegation will produce an outline of a letter that gives information of what we do for potential new members by 4th June. Comments are expected by 17th June. Chair will get the redraft by 21st June and will distribute the final checked letter by 30th June. Addressees to be provided by US delegation.
    - Collect and/or reference Recruitment information for next meeting.
    - Chair will produce a report of the 1st meeting, distribute the PoW by 6th June and will take care of the agenda for next meeting. Finally, the Chair will check whether a visit to a selection center is possible.
    - Belgian delegation will contact Webmaster to discuss folder options for the newsgroup to make it easier to find the research articles that will be sent there and will check the workshop options (HFM, IMTA, IAMPS, etc.) to link our workshop with one of them.
    - Canadian delegation will produce a draft template of the database/chapter.

C.2 2ND MEETING: SEPTEMBER 23 – 26, 2003, BONN (DEU)

- Present national R&R strategies in combination with the topics.
- Refine the topics.
- Agree upon the standardized format and the burden sharing for writing the topic chapters.
- Continue the work on R&R strategy text.
- Brainstorm development of the generic model.
- Plan/prepare workshop (incl. information about IMTA/IAMPS, selecting workshop options under deliverables).

- Agree upon database format (forum).

- Probable visit to a military facility (e.g., selection center).

Between 2 & 3 TG Meeting:

- Write draft of topic chapters:

  - Include 'models' pertaining to the topic.

  - Include information concerning topic-issues from member nations serving as examples.

  - Post drafts on forum two weeks prior to meeting.

- Continue work on R&R strategies (try to finalize them).

C.3 3RD MEETING: MAY 11 – 14, 2004, BATH (GBR)

- Present and discuss the draft topic chapters.

- Integrate the topic chapters into final format (format will be specified before).

- Finalize work on R&R strategy text including the topics.

- Develop the generic model based on sub-group work.

- Prepare workshop.

- Review development of the database.

Between 3 & 4 TG Meeting:

- Revise draft of topic chapters.

- Prepare/finalize workshop (possibly be ready for conducting it in Fall 2004 if conference scheduling dictates this is the best option).

- To be determined (TBD).

C.4 4TH MEETING: AUGUST 31 – SEPTEMBER 3, 2004, OTTAWA (CAN)

- Refine model.

- Discuss new drafts of topic chapters.

- Prepare/conduct workshop (depending upon finalizing the scheduled time. Possibly change the date/location due to IMTA).

- Review development of the database.

- Other (e.g., R&R strategy, etc.).

Between 4 & 5 TG Meeting:

- Possibly prepare workshop.

- TBD.

C.5 5TH MEETING: MAY 10 – 13, 2005, AMSTERDAM (NLD) (TENTATIVE)

- Continue work on generic model.

- Continue work on final report.

- Review development of the database.

- Possible change of date/location due to IAMPS.

Between 5 & 6 TG Meeting:

- TBD.

C.6 6TH MEETING: SEPTEMBER 2005 (USA) (TENTATIVE)

- Finalize all relevant texts.

C.7 DELIVERABLES

1) Final Report

   a) Executive Summary.

   b) Current information on R&R strategies of the member countries.

   c) Topics (from the TOR).

      i) The psychological contract.

      ii) The influence of information on turnover.

      iii) Management of selection and classification (S&C).

      iv) Values research.

      v) Individual needs.

      vi) Transition.

      vii) PERSTEMPO/OPSTEMPO & Quality of life.

      viii) Pay and benefits.

      ix) Gender & minority issues.

   d) Generic Model.

2) Database of Recruitment / Retention Research and Country Data

   a) Put all material on NATO website.

   b) Organize database (contact webmaster, reference system? …).

3) Workshop

a) Possible options (depending on a number of external decisions):

    i) Together with IMTA 2004 in Belgium:

- Depends on:
    - Agreement BEL authorities (likely).
    - Agreement of NATO (HFM/RTB) (needs a review of 2004 program, should be achievable).
    - Agreement of IMTA (likely).
- Pros and cons:
    - **Pro** – IMTA takes care of logistics (parallel tracks).
    - **Pro** – very big audience, well focused for topic of our workshop.
    - **Con** – registration fee (300 EUR?).
    - **Con** – relatively early in lifetime of TG.
    - **Con** – effect on travel funding for attending Ottawa meeting?

    ii) Together with IAMPS 2005:

- Depends on:
    - Whether it happens in NATO country.
    - Agreement of organizing country.
    - Agreement of IAMPS sponsors (ONR, …).
- Pros and cons:
    - **Pro** – IAMPS takes care of logistics (no parallel tracks).
    - **Pro** – big audience, less focused for topic of our workshop.
    - **Pro** – no or less registration fee.
    - **Pro** – good timing for TG.

    iii) Together with IAMPS 2006:

- Similar scenario but later.

    iv) On our own:

- Pros and cons:
    - **Pro** – more freedom as to where/when.
    - **Con** – big job for logistics.
    - **Con** – smaller audience.
    - **Con** – funding? or registration fee.

D.1 ORIGIN

D.1.1 Background

In many countries, achieving recruitment goals becomes increasingly challenging. At the same time, the Military is facing an important loss of often highly qualified personnel who choose to leave. This has become a major concern to military commanders as is illustrated by ADM Vern Clark, U.S. Chief of Naval Operations: "My top #1 priority is recruiting Sailors, retaining Sailors and fighting the attrition of Sailors. (sic)" (Assuming the Watch, July 2000). The recruiting and retention (R&R) problem can be related to a variety of causes including:

- The situation on the labour market (demographics, economics, …).

- The correlation between prevailing values in society and in the Military organizational culture.

- The content of the jobs (job content, wages, organizational climate, operations, geographical mobility, promotion system, …).

- The management of the major processes of recruitment, selection and classification, turnover and retention.

The difficulty in recruiting sufficient numbers is aggravated by the fact that many military personnel leave voluntarily. Nowadays it is not unusual that 30% or more of the enlisted recruits do not complete their first term. In addition, many military personnel choose to return to civilian life later in their careers, attracted by more appealing opportunities. This happens frequently in specific trades (pilots, ICT personnel, …) that are hard and expensive to recruit and train.

D.1.2 Justification (Relevance for NATO)

Forces lacking the appropriate personnel because of R&R problems are no longer fully operational. In addition, many nations throughout Europe are in transition from a conscript to an all volunteer military force. These issues have consequences for R&R policies. This not only has an obvious quantitative dimension but also an important qualitative one. In order to meet recruitment goals, the pressure to lower entry standards will increase because retention problems do not affect different trades (Military Occupational Specialties) in the same way. Another reason to counter early turnover and retention problems is that they are extremely expensive for the Military. Furthermore, serving personnel frequently have to work harder to cover gaps potentially leading to discontent and disruption, thus increasing the turnover rate. R&R is a very complex issue. This complexity has to be recognised for there are no single and obvious solutions. It is important to understand the mechanisms underlying the problems in order to take appropriate actions. For that purpose, analysing the research data from different countries facing distinct as well as convergent R&R problems is paramount.

D.2 OBJECTIVES

D.2.1 Scope

This TG will focus on the questions: "Why do people join the Military? Why do they decide to stay in or leave the Military?"

These questions encompass four distinct phases in the R&R process:

D.2.1.1   Recruitment

Recruitment is the process which occurs prior to enlistment. It deals specifically with marketing, advertising and the establishment of a trusting relationship between the recruiter (organization) and the candidate. This process is critical in ensuring that the prospective candidate has realistic expectations of what the military has to offer, in effect establishing the mutual psychological contract.

D.2.1.2   Selection and Classification

The importance of selection and classification for the R&R issues lies in:

- The management of the selection process (not losing applicants during the selection process due to long waiting times, excessive selection burden, …).
- The use of adequate selection standards (setting standards too high will eliminate a significant portion of qualified candidates whereas standards which are too low will lead to unacceptable training costs).
- The use of classification tools that optimize the use of the abilities and preferences of the applicant pool.

D.2.1.3   Retention

The process of keeping adequate numbers of suitable personnel in the Military, in order to meet the needs of the organization. The primary concern will be to identify the factors contributing to the retention goals of the organization.

D.2.1.4   Turnover

Turnover refers to the people that leave the military, whether voluntarily or involuntarily. The primary concern will be to examine voluntary turnover that is avoidable and undesirable to the organization.

There are variations between nations regarding R&R contexts. However, the existence of similar problems suggests that it would be beneficial to address these issues collaboratively.

D.2.2   Goals

The main goal of the TG is to foster a true understanding of the mechanisms that influence recruitment and retention outcomes. In order to achieve this goal, a generic military model will be developed. This model will be based on the empirical evidence acquired within the framework of resources available to the TG. It is intended that the model will enable the description, analysis and prediction of military R&R outcomes. The work of the TG will conclude with recommendations to the military leadership of participating nations for improving R&R in their organizations.

Initially the TG wishes to address the following areas in more detail. However, the final model may not be limited to or include all of them[1]:

D.2.2.1   The Psychological Contract

Psychological contract comprises the implicit (and often unspoken) expectations with respect to mutual obligations held by the organization and the individual. The individual commits to making certain sacrifices

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[1] A possible contribution to counter-terrorism was discussed, but was deemed to be not directly relevant.

and in return obliges the organization to compensate fairly for the given labour. If the organization fails to meet the expected obligation by the individual s/he will either (try to) terminate the working relationship or reduce his/her effort to the level at which the employee believes the contract is more properly balanced.

D.2.2.2   The Influence of Information on Turnover

Recruits who drop out of initial training often complain that they were misinformed by recruiters or recruiting materials. As a consequence, their perception of the organization was unrealistic, and their pre-entry expectations remained unmet. This TG will examine to what extent information influences early turnover, and how the information should be shaped in order to provide a realistic job preview and reach recruitment goals at the same time.

D.2.2.3   Management of Selection and Classification (S&C)

*   Management of the selection process

    *   During the selection process, many applicants are lost although they meet selection criteria. The causes may include a negative image given by the selection centres, long waiting times, excessive selection burden (e.g., time, preparation, costs), etc.

*   Management of selection standards

    *   Modifying entry standards affects both the realization of recruitment goals and the level of turnover during training, but in a different direction. Modelling the link between entry standards and turnover, together with side effects such as training costs is needed to get a sound base to set adequate selection standards in changing recruitment contexts.

*   Management of classification issues

    *   In a multi-applicant, multi-job environment, the number and quality of enlisted personnel significantly depends on the classification strategy used. Topics include sequential vs. batch classification, integration of applicants' preferences in the decision process and used classification algorithms.

D.2.2.4   Values Research

It is not only important to understand the changing demographic profile of the various nations on R&R, psychographics is also very relevant. That is, people's attitudes, views, preferences and the framework from which they see and understand their environment. Generational theory, although an indicator of the evolution of values, does not capture the numerous "value tribes" within and across age cohorts. For example, according to a Canadian psychographic map[2] there are no less than five distinct value tribes within the generation X cohort alone. It is important to explore and better understand these value groups and their propensity to be attracted to a military life.

D.2.2.5   Individual Needs

The TG will examine the influence on R&R of how far the Armed Forces are able to meet the individual needs of potential recruits and serving personnel. The group will address the implications for personnel managers of individuals` needs (e.g., the requirements of service personnel and their families when being posted).

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[2] Generated by Michael Adams (1998), *Sex in the Snow*. Penguin Books: Toronto, Ontario.

D.2.2.6 Transition

Transition is a process encompassing the reaction (positive or negative) to significant changes in life circumstances. The concept of "transition" relates to both individuals and organizations. In the context of this TG there are three important areas for R&R:

- Movement by individuals from a civilian to a Service culture, where assumptions, attitudes, expectations and practices are different and unfamiliar. This aspect may be summarized as "cultural shock on joining".

- Changes in attitudes, expectations, aspirations and behaviour which an individual undergoes during his or her service. For example, an unmarried soldier may desire interesting operational postings but once married, the same individual may feel reluctant to leave home for long periods. Reasons for staying in the Service change as these transitions take place. This aspect may be summarized as "changes in needs and wants during Service".

- Changes in the organization, brought about by technology, or by movement in policy or operational stance. An example would be force reductions following the end of the Cold War. These reductions have the effect of changing the organizational context in which individuals serve, and hence require a rethink of organizational commitment. This can be summarized as "the effects of significant organizational change".

D.2.2.7 PERSTEMPO/OPSTEMPO and Quality of Life

Ops tempo refers to the deployment of members on an operation. PERSTEMPO refers to all activities, including OPSTEMPO that remove members from their home stations for a period of time. Quality of life refers to those non-monetary benefits, for example, base housing, that impact positively or negatively on the wellbeing and morale of members and their families. The general purpose of research in those areas is to determine their impact on the "stay or leave" decision of members.

D.2.2.8 Pay and Benefits

This refers to salary, medical (and dental), recruiting and retention bonuses and other benefits that are given in exchange for military service.

D.2.2.9 Gender and Minority Issues

Two significant demographic shifts are taking place in most western countries:

- Firstly, there has been a decline in the traditional male youth cohort and a steady growth of visible minority members.

- Secondly, there has been an increase in female employment.

These factors must be reflected in the composition of the Military to meet recruiting targets and maintain its relevance in society. Social and cultural differences impede on the Military's ability to recruit, integrate and retain women and visible minority members. These influences must be identified and understood in the context of military values and culture in order to recruit and retain sufficient numbers of women and visible minorities to sustain military operations.

D.2.2.10   Methodology

In order to develop the model, the TG will undertake the following activities: Information exchange, literature review, presentations of R&R strategies, establishment of a network of R&R specialists, and visits to pertinent facilities.

D.2.3   Deliverables

The TG will deliver a final report of its activities that will include current information about the R&R strategies of the member countries, the generic model (e.g., linear structural equations) and specific topics as described above.

It also will create a database of recruitment/retention research and country data.

The TG will propose to organize a workshop or symposium as an RTO activity to disseminate its results.

D.2.4   Duration

An immediate start of this TG after approval by the RTB is requested in order to maintain the momentum gained by the exploratory team. The duration of the TG is three years (April 2003 – December 2005). The TG will meet twice a year for three to four days per meeting.

D.3   RESOURCES

D.3.1   Membership

Countries: BEL, CAN, DEN, DEU, NLD, ESP, TUR, GBR and USA.

D.3.2   National and/or NATO Resources Needed

The appointed persons will be funded by their respective nations to attend TG meetings and to host meetings.

D.3.3   RTA Resources Needed

If the TG is to organize a symposium in 2005, the usual RTA support will be requested.

D.4   SECURITY CLASSIFICATION LEVEL

The security classification level of this activity is 'NATO UNCLASSIFIED'.

D.5   PARTICIPATION BY PARTNER NATIONS

This activity is 'OPEN.' Partners for peace nations are welcome to join the TG.

D.6   LIAISON

Nil.

Annex E – TECHNICAL ACTIVITY PROPOSAL SHEET (TAPS)

ACTIVITY	Task Group									TBA	
Activity REF. Number	HFM-107/RTG034		**Recruiting and Retention of Military Personnel**	05/2003	
PRINCIPAL MILITARY REQUIREMENTS		1	2	3	5				NATO Unclassified	12/2005	
MILITARY FUNCTIONS		1	4	10	11	12	13	14			
PANEL AND COORDINATION			Human Factors and Medicine – HFM		
LOCATION AND DATES			05/03 TU; 09/03 GE; 05/04 UK; 09/04 CA; 05/05 NL; 10/05 US	P I	
PUBLICATION DATA			TR	03/2006	200	NU	
KEYWORDS	Recruiting		Retention		Turnover		Manpower		
		Selection		Classification		Job-satisfaction			

E.1 BACKGROUND AND JUSTIFICATION (RELEVANCE FOR NATO)

In many countries, achieving recruitment goals becomes increasingly challenging. At the same time, the military is facing an important loss of often highly qualified personnel who choose to leave. This has become a major concern to military commanders as is illustrated by ADM Vern Clark, U.S. Chief of Naval Operations: "My top #1 priority is recruiting Sailors, Retaining Sailors and fighting the attrition of Sailors (sic)" (Assuming the Watch, July 2000). The recruiting and retention (R&R) problem can be related to a variety of causes including:

- The situation on the labour market (demographics, economics, …).

- The correlation between prevailing values in society and in the Military organizational culture.

- The content of the jobs (job content, wages, organizational climate, operations, geographical mobility, promotion system, …).

- The management of the major processes of recruitment, selection and classification, turnover and retention.

The difficulty in recruiting sufficient numbers is aggravated by the fact that many military personnel leave voluntarily. Nowadays it is not unusual that 30% or more of the enlisted recruits do not complete their first term. In addition, many military personnel choose to return to civilian life later in their careers, attracted by more appealing opportunities. This happens frequently in specific trades (pilots, ICT personnel, …) that are hard and expensive to recruit and train. Forces lacking the appropriate personnel because of R&R problems are no longer fully operational. In addition, many nations throughout Europe are in transition from a conscript to an all volunteer military force. These issues have consequences for R&R policies. This not only has an obvious quantitative dimension but also an important qualitative one. In order to meet recruitment goals, the pressure to lower entry standards will increase because retention problems do not affect different trades (Military Occupational Specialties) in the same way. Another reason to counter early turnover and retention

problems is that they are extremely expensive for the Military. Furthermore, serving personnel frequently have to work harder to cover gaps potentially leading to discontent and disruption, thus increasing the turnover rate. R&R is a very complex issue. This complexity has to be recognised for there are no single and obvious solutions. It is important to understand the mechanisms underlying the problems in order to take appropriate actions. For that purpose, analysing the research data from different countries facing distinct as well as convergent R&R problems is paramount.

E.2   OBJECTIVE(S)

The main goal of the TG is to foster a true understanding of the mechanisms that influence recruitment, selection and classification, retention and turnover outcomes. In order to achieve this goal, a generic military model will be developed. It will be based on the empirical evidence acquired within the framework of the resources available to the TG.

E.3   TOPICS TO BE COVERED

This TG will focus on the questions: "Why do people join the Military? Why do they decide to stay in or leave the Military?". Likely topics include: the psychological contract, the influence of information on turnover, management of selection and classification (S&C) (management of the selection process, management of selection standards, management of classification issues), values research, individual needs, transition (cultural shock on joining, changes in needs and wants during service, the effects of significant organizational change), PERSTEMPO/OPSTEMPO and Quality of life, pay and benefits, gender & minority issues.

E.4   DELIVERABLES

The TG will deliver a final report of its activities which will include current information about the R&R strategies of the member countries and the generic model. It will also create a database of recruitment/ retention research by country. Thirdly, the TG will propose to organize a workshop or symposium as an RTO activity to disseminate its results.

E.5   TECHNICAL TEAM LEADER AND LEAD NATION

Referee: LtCol Psych F. Lescreve (BEL). The Chairperson and lead nation will be elected at the first meeting of the TG.

E.6   NATIONS WILLING TO PARTICIPATE

BEL, CAN, DEN, DEU, NLD, ESP, TUR, GBR, USA.

E.7   NATIONAL AND/OR NATO RESOURCES NEEDED

The appointed persons will be funded by their respective nations to attend TG meetings and to host meetings.

E.8   RTA RESOURCES NEEDED

In order to organize a symposium in 2005, the usual RTA support will be requested by the TG.

REPORT DOCUMENTATION PAGE

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13. Keywords/Descriptors

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Attrition (personnel)	Military lifestyle	Quality of life
Classification	Military model	Recruiting
Commitment	Military occupations	Recruitment
Compensation	Military personnel	Retention
Conditions of service	Military personnel modelling	Salaries
Economic factors	Military personnel policy	Satisfaction
Force structure planning	Military sociology	Selection
Gender	Minority	Shocks
Human resources	Models	Surveys
Individual differences	OPSTEMPO	Transition
Job attitudes	Organizational attraction	Turnover
Manpower utilization	Personnel selection	Values

14. Abstract

The objective of the Task Group (TG) on Recruiting and Retention (R&R) of Military Personnel was to foster a comprehensive understanding of the mechanisms that influence military recruitment and retention outcomes. The TG produced papers with respect to information on national R&R strategies, chapters on 10 R&R topic areas and developed conceptual models on military R&R. Additionally, a database of R&R research was created and a R&R-workshop was held.

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