Psychological Assessment for Military Selection: Past, Present and Future Applications

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Abstract

Psychological assessments for selecting military personnel have played a crucial role in enhancing training effectiveness, ensuring job success and, where possible, reducing mental health casualties in war zones. This article traces the development of psychological assessment for military selection through the World Wars to modern-day procedures. Two main themes emerge from this analysis: firstly, military psychological assessment methods evolve swiftly during war due to the need for mass personnel processing. Secondly, the foundational structures and considerations from these periods of development remain relevant today. However, the theories and tools underpinning psychological assessment for military selection have evolved. Those involved in military psychological selection, therefore, require both an appreciation of its history and an understanding of current theories and tools to succeed in the field, particularly during the rapid development of new procedures. A stepped framework is proposed to guide the implementation and evaluation of psychological assessment processes for military selection. The framework is used to consider the future of psychological assessment for military selection, including in areas such as data aggregation and personality testing that may be targeted for greater effect and efficiency.

Keywords: psychological assessment, selection, military, personality testing, intelligence testing

Introduction

Organisations have long held a vested interest in selecting the right person for the right job, just as individuals have long wanted to choose the right vocation for themselves. For organisations, the right choice can result in decreased costs, increased efficiencies and, a healthier workforce and the possibility of finding those with the potential to become future senior leaders.[1,2] For individuals, it can result in greater satisfaction and, potentially, greater success with one's occupation and career.[2]

Within an organisational setting, the selection decision will often be guided by an assessment of the person-job fit (where a person's qualifications, needs, goals and values match the job) and the person-environment fit (the compatibility between a person and their environment, such as an organisation).[3] This interaction becomes significant for organisations that maintain a linear approach to career progression or offer a unique occupation due to the expected ongoing relationship between the organisation and the individual. Optimising this relationship between organisations and individual workers relies heavily on the effectiveness of initial recruitment and selection procedures.[4]

The military has played a key role in developing current approaches to organisation selection, particularly through psychological assessments. This expertise was driven by wartime demands to efficiently assess and place large numbers of recruits while attempting to minimise mental health issues on the battlefield and achieve mission success. The roles within the military profession of arms are generally unique to that organisation, as many of the roles are either exclusively conducted within its settings (such as for infantry) or have a substantial component of military training involved (such as for military health professionals). The military is, therefore, well placed to significantly influence who gets selected into certain occupations and roles. This is unlike most other professions where the role within one organisation competes with roles in other organisations, thus allowing individuals to move from one to another according to personal needs and preferences.

Understanding the origins of military psychological assessment provides valuable insights into the evolution of psychological assessment for selection within these environments, as well as its ongoing influence on selection practices at a societal level. Accordingly, this article explores the origins

and contemporary applications of psychological assessment in military selection for pre-employment and for selection into key military positions once employed. It consolidates the past, present and future of many psychological approaches to personnel selection in the military into a stepped framework, focusing on key historical events that have accelerated developments within this domain and remain relevant to its continuing evolution. It presents the framework as a starting point for consideration of psychological assessment methods—vital for those developing new assessment considerations for new roles or evaluating procedures that have existed for some time. It also utilises this framework to consider the future of psychological assessment for military selection.

The authors reviewed contemporary and historical literature, including journal articles, book chapters and 'grey' literature (documents not controlled by commercial publishing organisations such as internal reports[5]) that examined the use of psychological assessment for military selection. Literature was included if it specifically discussed psychological theories, procedures or tools used to assess candidates for military pre-employment or selection for key roles within the military. Additional references were utilised when there was a need to describe specific psychological tests or psychological selection procedures as part of the larger approach to psychological assessment for military selection. However, they did not meet the original criteria for inclusion. This additional literature has been restricted to psychology manuals or test administration procedures, or to specific psychological assessment standards and guidelines established by a definitive authority such as the Australian Psychological Society. The manuals and standards are not discussed at any length in this article; rather, they are used to better inform the use of psychological assessment for military selection.

As with much of the literature in this field, the definitions used within psychological assessment in selection have varied across time and place. This can affect the discussion or 'like' comparisons of techniques if not specifically addressed. The definitions used for the purpose of this review have, where possible, been drawn from definitive authorities and are included in Table 1.

Table 1: Definitions used with psychological assessment for selection

Psychological assessment	A behavioural and psychological evaluation, conducted in a certain sequence, of an individual in a particular situation so that the information derived from the assessment can help with making a decision or diagnosis.[46]
Psychological screening	Screening involves the broad identification of unrecognised irregularity, deficiency or disease by applying tests, examinations or other procedures that can be applied rapidly.[47]
Psychological tests	A systematic procedure for obtaining samples of behaviour, relevant to cognitive, affective or interpersonal functioning and scoring, and evaluating those samples according to standards.[8]
Assessment centres	Multiple assessment process involving several individuals undertaking a variety of activities, observed by a team of trained assessors who evaluate performance against a set of pre-determined, job-related assessment criteria.[27]
Negative selection	Negative selection removes unsuitable candidates from the selection pool and selects all others. It will typically focus on looking at the presence or absence of specific key criteria (such as educational levels, intelligence levels and professional qualifications), which are considered the minimum requirement to complete the training or role required. In psychology, it may also look for the presence or absence of current or historical psychopathology or critical events in a candidate's life history to determine the risk of developing psychological problems in the future.[48,49] Negative selection would generally be indicated when an organisation needs to employ many people and can tolerate a certain amount of failure in training or during probation, or if the candidates do not have any previous training or qualifications in the job and will be trained once employed.[50]
Positive selection	Selects those best suited for the role, rejecting all others, including those who may also meet criteria but are not considered to be the best candidate. It will look for the best candidates for the nature of the training or work required based on desired criteria that, in an employment context, is often drawn from job analyses, expert opinion and previous empirical findings.[48] Positive selection, and accordingly, the use of psychological assessment, would be indicated when there is more risk and higher returns associated with the job itself.

History of psychological assessment for the military—World War I

Prior to World War I (WWI), there was little evidence of any methodical approach to selecting recruits for the armies and navies of different countries. However, rulers tended to take an active interest in who was selected for the officer roles, often along the lines of fealty.[6] As standardisation of military selection procedures emerged, they tended to be focused on medical and educational standards for officers, with psychology (a new profession at the time) having limited impact.[6] This shifted with WWI when militaries started considering alternative methods for selecting large numbers of recruits. This shift occurred because the unprecedented scale of WWI demanded the timely mobilisation and deployment of large numbers of personnel. As part of this, medical staff were employed, initially to detect those who were of 'intellectual deficiency, psychopathic tendencies, nervous instability and inadequate self-control'[7(p89)] as part of their broader medical examination of recruits. In America, psychology—then in its infancy as a profession—was initially used to assist with identifying intellectual deficiency.

In 1917, the President of the American Psychological Association, Robert Yerkes, and his colleagues developed a group-administered intelligence screen to help with the war effort. This screen came to be known as Army Alpha, and the results were used by the United States Army to assign more than one million recruits to different roles to minimise training failure.[8] Army Alpha consisted of eight tests that measured verbal, numerical and reasoning abilities, practical judgment and general information (see Table 2 for more details). A second version, the Army Beta, was developed to assess those who were illiterate or did not speak English. Its usefulness in doing so was later questioned due to the heavy reliance on American cultural references unknown to many of Army Beta's target group;[9] demonstrating an early case of what would now be recognised as measurement bias.[10]

Table 2: Historical and contemporary psychological tests used by the military

Army Alpha	A group paper-and-pencil intelligence test consisting of eight subtests measuring practical judgment, general information and verbal, numerical and reasoning abilities, developed to objectively assess recruits entering the US Army in WWI.[8,12]
Army Beta	A group paper-and-pencil test intended to be equivalent to Army Alpha but for use with those who were illiterate or from non-English-speaking backgrounds.[8,12]
Army General Classification – Intelligence (AGCI)	An Australian Army devised group paper-and-pencil test designed to measure intelligence and, therefore, inform recruit allocation to military roles; first used in WWII and based on the Stanford-Binet test (itself an individual intelligence and cognitive-ability test first released in 1916).[20]
Command task	Groups of recruits would be given a practical task such as building a bridge over a stream in front of a panel of observers, and the panel would consider each individual's contribution as well as the quality of their interactions with other group members.[19,25]
Leaderless group discussion	Groups of recruits are given a topic and asked to discuss it with one another in front of a panel of people observing both the quality and quantity of individual engagement in that discussion.[19]
NEO-PI-3	A self-administered paper-and-pencil test with 240 statements on which individuals are asked to agree or disagree, with the intent of objectively measuring normal and abnormal personality traits based on the Five-Factor Model of personality.[46,51]
Progressive matrices	A non-verbal test measuring general intelligence and abstract reasoning, developed in part for use with minority and cross-cultural groups.[46]
Rorschach test	Best known as the 'inkblot test', individuals are shown inkblots in various shapes and colours and invited to talk about what they see, in the belief this would reveal their subconscious emotional state.[8]
Thematic apperception test	A test where an individual is shown a series of pictures, and they respond by writing a story about what they see, in the belief that this would reveal subconscious elements of their life related to personality.[8,52]
Word association test	Individuals are shown a word and invited to respond to it with the first word that comes into their head, in the belief that this would show subconscious conflicts within their personality.[19,52]

Note: This list is not exhaustive.

The original intent behind the use of Army Alpha and Beta was to identify those who were of very low intelligence (what we would recognise today as having an intellectual disability) or had significant mental illness and, therefore, were not suitable for selection into military service.[11] In time, Army Alpha and Beta were also used to stream recruits into different roles, including officer training,[11] due to its ability to screen out those who were unsuitable and provide information on the intellectual capability of each recruit.[7,12] The majority of these roles assumed that virtually no recruit had any previous training in warfighting, so they needed to be capable of learning how to fight as well as adapt to their specific military occupation. This approach was unique for its era and worked well for increasing training success,[13] so much so that the measurement of general mental aptitude within a selection assessment remains one of the key predictors of training success today, particularly with more complex and high-risk roles.[14] However, due to a limited understanding of mental illness at the time and a lack of accounting for combat-related stressors upon the individual's ability to complete their role, it was not successful at predicting success in the field.[15,16] It was also not used to select those for promotion due to a preference for those with seniority (or length of time served).[9] It was initially met with scepticism by some military members who preferred their own selection processes.[9,17] This, in turn, negatively affected the uptake of the tests in the military more broadly[6]

Both the United Kingdom (UK) and Australia's use of psychological assessment during WWI were minimal, as they relied primarily on individual preferences for job allocation.[17] Within the UK, some basic attempts at allocating individuals to specific roles relied primarily on their experiences and personal preferences rather than any scientific attempt to match individuals to roles.[17] For officers, there was a heavy reliance on recruits from the upper middle and aristocratic (in the UK) social classes. However, the high combat casualty rate eventually forced the militaries to consider recruiting more broadly.[17] In Australia, the profession of psychiatry did not exist far outside of the mental asylums of the time, and psychology was a little-known vocation.[13] Both Australia and the UK relied heavily on the unit commander or the unit medical officer to identify individuals already recruited but not coping with the stressors of military training prior to deployment into a war zone,[15,18] essentially making the training period prior to combat a period of 'probation'.[18]

The intervening years between WWI and World War II (WWII) saw a growing interest in the way selection of individuals for the military was conducted, due primarily to the large rates of 'shell-shock' (now known as post-traumatic stress disorder or PTSD) that had emerged from WWI and the accompanying impact this had on government costs for veteran welfare.[15,19] This did not translate to process changes at the time,[17] as the militaries had shifted to a peacekeeping size (i.e., smaller) approach to recruitment and selection.[17] However, Australia did take a close interest in what the other countries were doing for assessment and selection when WWII started, and the selection issues faced in WWI re-emerged.

History of psychological assessment for military—World War II

With the outbreak of WWII, there was a renewed need for the efficient placement of high numbers of military personnel again, and different countries began to study what other countries were doing. After trialling intelligence screening within its training units, a Directorate of Selection Personnel was established for the British Army in 1941 to organise the nation's approach to military personnel selection using psychological processes rather than relying on factors such as personal preferences.[20] With the new system, recruits would enlist into the General Service Corps (i.e. not allocated to any specific job) and then complete their basic training at a Primary Training Centre. While there, they would complete a battery of intelligence and aptitude tests and then be interviewed by a personnel selection officer, who recommended how the individual should be employed in the army. Those recruits who had low test scores or were perceived as being unstable were referred to a psychiatrist who could recommend either limited types of employment or discharge. This system aimed to ensure that service members were placed into jobs that made the most of their particular aptitudes (i.e., person-job fit), with less focus on identifying those who might be a psychiatric casualty.[21] The scheme appeared to be reasonably successful as a negative selection process, with only 1.4% of recruits rejected for intelligence or psychiatric stability concerns during the war.[21] However, despite its success in predicting military training success, the numbers of soldiers later diagnosed with combat exhaustion did not correspond with initial predictions made by psychiatrists at recruiting.[19] Much of this appeared to be due to the methods used by recruiting psychiatrists to determine the potential for developing mental health concerns during or after combat, which were not standardised and separate to the ability of screening to impact training

success. This highlights that while the British had found an acceptable means to assess for success in training, the system had failed in identifying those with mental health vulnerabilities to combat.

Australia, in particular, enjoyed success with its focus on psychological intelligence testing for recruits rather than psychiatric screening. The Permanent Air Force (later the Royal Australian Air Force or RAAF) was the first of the three services in Australia to introduce psychological testing in 1940 to tackle training failures in its potential aircrew.[22,23] A corresponding significant rise in successful completion of aircrew training was noted.[13,22,23] The Royal Australian Navy considered using psychological tests in personnel selection but decided not to pursue this as its intake and retention remained sufficient throughout the war.[22] Within the Second Australian Imperial Forces (2nd AIF, later the Australian Army), a commander of several Army specialist training schools in New South Wales seconded two psychologists to trial aptitude tests for recruitment, similar to those used by the Americans in WWI, and measure their relation to training outcomes. These tests eventually included the Australian Army's own intelligence screen (known as the AGCI; see Table 2), modelled after the Army Alpha and Beta but based more on the intelligence theories of the time.[20] Their early work successfully linked intelligence and aptitude test results with training outcomes. It was promising enough that the test battery was extended to allocating all recruits into various units and specialist arms of the service.[13] The battery of tests included intelligence, clerical (speed and accuracy), space form, and mechanical aptitude, and from this, an ability 'profile' was formed.[20] Psychiatric assessment would take place at this stage but only if the recruit's test scores were unusual (potentially from illiteracy) or from any behaviour observed by the examiners during testing that might suggest mental illness.[20]

By August 1944, this process had matured to the point that recruits that had been psychologically assessed as having a mental age below 11.5 years or having a degree of literacy no better than a grade three child were not enlisted into the Army.[20] This resulted in about 12% of those applying as recruits not enlisted, but the wastage of those deemed to be untrainable dropped from 5% to less than 2%.[20] A postwar review of these techniques suggested that the testing outcomes did not capture intelligence per se when compared to similar (not military) intelligence tests, which did not predict training success in the same manner but was a better indication of training success.[20] This suggests the continuing success of negative selection for assessment purposes regarding military training success when using intelligence and aptitude measures, noting that the assumption was that no prior military training had occurred in those being assessed. But, it was less successful in predicting job success over the longer term,[20] although much of this could again be attributed to lack of control over various job factors.

Officer selection was also redeveloped across the allied nations, mainly as a response to the number of officer cadets failing to complete their officer training and to better assess those interested in officer training but not eligible for consideration under older standards such as education or social class.[19] The British looked to Germany who, due to restrictions placed on the size of their militaries by the Treaty of Versailles after WWI, had subsequently developed a methodical approach to officer selection using psychological procedures.[6] They did this by creating assessment scenarios that tested the whole person rather than just snapshots of various traits,[17] under a positive selection process (see Table 1). As a result, in 1942, the UK approach to psychologically assessing recruits was extended to the establishment of boards to select officer trainees,[20] based in part on the success of the Alpha and Beta tests of WWI,[11] and in part on the German developments in the selection of its military officers.[17]

The British commenced using psychological tests such as the Ravens Progressive Matrices (see Table 2) for measuring intelligence and group tasks such as the Leaderless Group Discussion to test each person's character traits, temperament and abilities under pressure.[19] Known as the War Office Selection Board (WOSB), officer candidates would, over three days, undergo a series of intelligence tests, three personality tests (being the Thematic Apperception Test, the Word Association Test and the Rorschach Test, all of which rely on the psychologist's interpretation of the applicant's answer rather than a simple right or wrong answer[24]), and three 'military tests', including the Leaderless Group Task and the Command Task[19, 25] (see Table 2 for test details). They would then attend an interview with the Selection Board, which consisted of an army officer, a psychiatrist and a psychologist. After complaints about its relevance to selection, the psychologists discontinued the Rorschach Test from the battery[19] but continued with the Word Association and Thematic Apperception tests.

Despite some methodological shortcomings, such as a tendency by WOSB members to defer to the highest ranking person's opinion of candidates,[24] and a general ongoing distrust by some military leaders of psychiatrists and psychologists participating in

the selection of officers[19] (not unlike the scepticism expressed by some military leaders in WWI[17]), the WOSB proved generally popular with the military. It provided a valid stressful situation that could objectively test a candidate's potential in a way that appeared to relate to military service.[26] It was also the precursor to what is known today as assessment centres, where organisations use several methods and multiple assessors to measure an individual's response or output to multiple job-relevant assessment criteria.[27]

Facing similar training and staffing issues, particularly once Japan entered the war, the Australian Army used the WOSB as their model for selecting future leaders as officers. However, while the measure of intelligence, special aptitudes and education were important, the Australian Army also wanted an assessment of a person's qualities that could indicate potential leadership, such as ability, bearing, and personality,[20] based on the assumption that leadership was an innate individual characteristic rather than something to be taught.[6] Like the British system, Australian Army officer candidates spent three days undergoing similar aptitude and intelligence tests, medical tests and leaderless group tasks before being interviewed by a psychologist (for test results), a psychiatrist and two combat officers.[26] Personality tests used by the UK were trialled in Australia, including the Rorschach, but Australia later abandoned them due to concerns about their overall validity.[20,26]

While these procedures covered selection for enlisted and officer trainees, there was interest by numerous countries in expanding the processes further for high-risk and specialised roles such as intelligence and special forces. In WWII, the American Office of Strategic Services (OSS) was tasked with designing a structured method to assess necessary qualities for completing hazardous military jobs.[28] These qualities broadly covered motivation, effective intelligence, emotional stability, leadership and teamwork. Furthermore, the OSS explicitly acknowledged the unpredictable nature of both the roles and the environments within which the individuals would be working and tended towards a 'whole of personality' assessment rather than one targeted at specific job requirements.[28] These processes also borrowed from the WOSB, particularly around having selection staff observe candidates over several days and for leaderless group situations.[25,28] However, it was distinct from other selection methods due to its increased focus on the austere environments where they would eventually send their trainees and the unique skills they would need when they arrived (i.e., person-environment fit).[28] It also specifically considered the diversity of cultures they were recruiting (such as migrants and first-generation descendants), done primarily due to the need for deep undercover work in other countries.

The OSS process represents a significant advancement from the early Army Beta of WWI due to its closely considered approach to diversity as a positive factor, rather than treating potential diversity as a broad 'other' group that must be managed separately from English-speaking individuals. OSS also recognised that the performance of their recruits would depend in part on the personalities of their peers and the temperaments of their supervisors in addition to their traits, and thus selected (as far as possible) those who could manage a wide range of different people.[28] While this was not unlike what the WOSB was trying to achieve with its group tasks, the OSS approach recognised for the first time the impact of others on the individual during combat and selected its individuals accordingly.[28]

The OSS staff attempted to validate their methods via a range of tools including commander reports and a psychological interview with the individual when they returned from their assignments. They found (via the psychological interview) that their developmental history, political and social attitudes, and recent field experiences correlated with their adjustment in the field. However, commander reports were heavily biased towards whether or not they knew or got along with individuals and whether they were attracted to them (generally when the individual was female) and were, therefore, less useful.[28] This indicated the value of a more detailed psychological assessment in selection and demonstrated the importance of standardised assessment tools rather than relying on a single commander's report.

Analysis and contemporary approaches

Over the last decade or so, there has been an increased focus within the military and similar organisations on risk factors such as toxic leadership within the military,[29] and insider risk behaviours that can lead to counterproductive workplace behaviours, sabotage or worse.[30,31] As a result, psychology assessment procedures are increasingly being used where there is a lack of background information available (such as at recruiting) and a high level of risk of failure concerns where the outcomes could be dangerous, such as command appointments[29] and special forces.[14,32] Similarly, there is a shift away from the assumption that if a person has been found suitable for selection into a role or position once, that individual will always remain suitable.[31] Instead, more organisations are tending towards

re-assessment occurring at certain career stages or time served to be re-selected for the same role, in recognition of the impact of combat, life stressors or organisational factors potentially impacting a person's suitability for the job.[31] This approach reflects an increasing awareness of risk and how it may manifest in the military role, including how the stressors within the role itself may impact a person's ability to continue working in that role. Even in this area, reviewing the ongoing suitability for the role has elements of the work of the OSS in WWII, where they found the experience of the role can have an impact upon subsequent adjustment.[28]

A modern form of the WOSB is still used by the Australian Army today, and similar methods are used by other militaries worldwide.[33] Leadership research that was emerging at the time also appears to have influenced the development of subsequent WOSBs and assessment centres, primarily due to its emphasis on situation factors such as group composition, nature of the task, and early findings that intellectual capability, achievements, participation and sense of responsibility were associated with leadership.[6,34,35]

Much like the WOSB's impact on the modern-day assessment centres for organisations, the OSS methods also form part of the foundations for selecting high-risk personnel today.[14,32,36] Specifically, they also recognised the difficulties in developing selection methods or criteria for jobs and roles that were vague or not yet fully formed and where traditional methods such as biographical information on education or previous work experiences were unhelpful in predicting future job success.[28] Instead, they tend towards a more generic assessment with far more detail obtained to cover a wide range of known and estimated risks.[14]

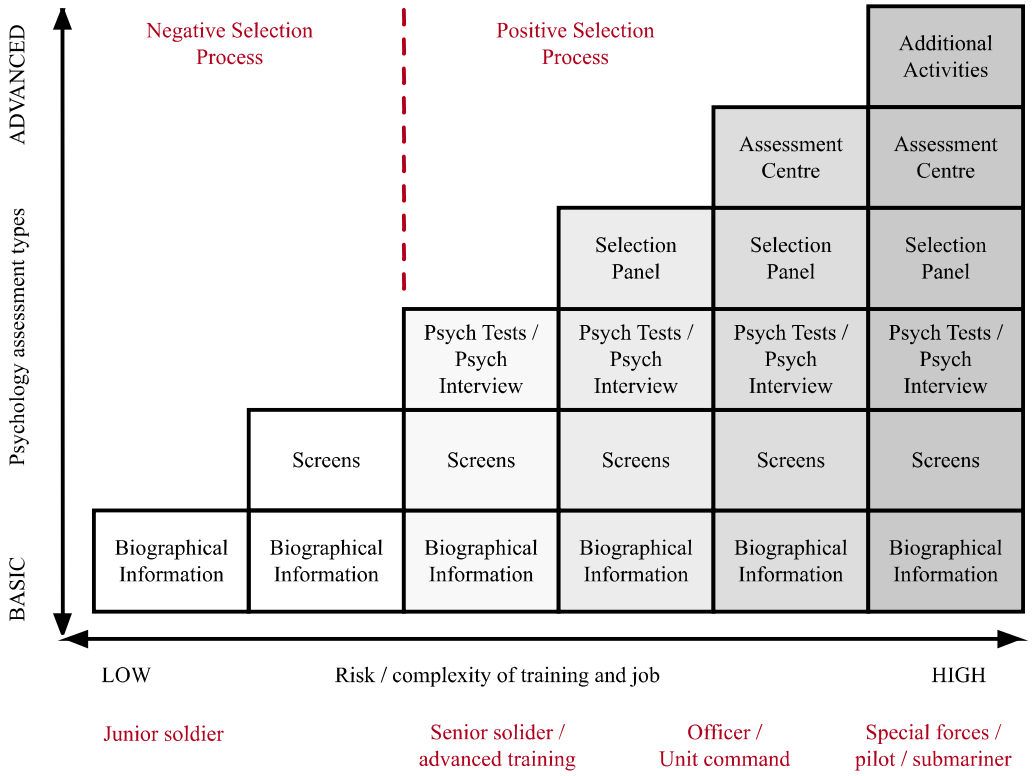
Of significance is how the work done by Yerkes and his colleagues in WWI[7,12] has impacted the subsequent approach to psychological assessment and selection. In particular, the ability of group-based intelligence screening to predict the success of training across a broad range of roles and vocations, from infantry soldier through to officer and high-risk positions, has led to a heavy focus on cognitive screening and assessment.[37] While we believe this has arguably increased in importance with the growth of information technology and similar technological advances in many military roles and vocations, it has potentially done so at the expense of non-cognitive psychological assessment approaches.

Personality testing has historically proven less reliable at predicting training success or future performance than other factors, hypothesised due to its early base in psychopathology rather than wellness.[6] This has shifted in recent times with two considerations: the first being the advent of the Five-Factor Model of personality, which has incorporated most of the previous trait models of personality into one larger theoretical structure,[38] with numerous accompanying validated tools such as the NEO-PI-3 (see Table 2) to measure it. Secondly, personality testing in high-risk roles has changed somewhat. Global personality traits are now measured to provide a broad overview of the individual to inform further assessment rather than having specific personality traits mapped against specific job requirements.[14] This has been found to enhance the validity of selection decisions for high-risk personnel[14] and selection for key roles such as unit command.[29] More recent developments in personality assessment and measures have indicated their increasing value in predicting 'soft' criteria such as interpersonal skills (vital for higher risk roles such as commanding officer and special forces where interaction with others is a key aspect of the role)[29,36] conscientiousness in completing their role,[14,37] and attrition.[37]

Several themes can be inferred from how the military has approached psychological assessment for military selection. Overall, there is genuine value for militaries to utilise psychological assessment tools and processes to select people for both the organisation and specific roles, as it has a positive impact on minimising training failure. This value can be significant in an age of budget restraints and economic costs. It has also provided some of the earliest examples of 'scaling up' and 'scaling down' of psychological assessment in a selection context, thus ensuring that the type of assessment is suitable for the various considerations of individual ability, person-job-environment fit and positive vs negative selection. This, in turn, forms the ethical basis of much of the use of psychological testing and assessment today.[10,27,39] Much like a set of building blocks, psychologists and organisations can visualise the use of psychological assessment in a military context as a stepped process, with the basic assessment types providing the foundations for the more advanced assessment types depending on the risk and complexity of the role, as shown in Figure 1.

There are also contemporary examples of the need to establish psychological assessment selection criteria for military roles where the nature of the role and tasks are emerging and thus not yet fully realised or understood. Cyberspace is a rapidly emerging domain within warfighting, and the ADF was initially required to set up psychological assessment methods for selection into cyber roles without a clear reference point or understanding

Figure 1: Stepped approach to psychological assessment in military selection



of how the jobs may evolve.[40] The essential criteria that were eventually substantiated included motivation, interpersonal ability such as teamwork, cognitive ability and maturity (including resilience and emotional stability)[40]—criteria not unlike those established by OSS during WWII,[28] and requiring a higher level of psychological assessment type due to the level of risk associated with the military role. Given the criteria's enduring use across various high-risk roles and decades, this also suggests that they may be emerging as solid factors for success in any military role that involves some level of risk or uncertainty. However, further work would be required to substantiate this.

Future focus

Our review of the evolution of psychological assessment in military selection has uncovered several pertinent themes that must be considered in the future of military psychological selection. Chief among them is that the most significant advances have occurred when the militaries have been pressured to recruit and select large numbers rapidly. This has forced psychology (and psychiatry) to look to the theories and tools of the day and make (sometimes significant) adjustments to them so they can be used to process numbers quickly and accurately.

As the roles have become more nuanced and complicated, so too have the requirements for more nuanced and complex psychological methods for selection, as shown in Figure 1. Importantly, it also points to the requirement to review these selection methods to not just validate their claims to what they purport to measure (for example, the measure of intelligence claiming to show job success but measuring training success) but also that those measures have kept pace with developments in psychology more broadly (such as the use of personality measures in high-risk roles). These lessons are learned repeatedly throughout history and are likely to be 'rediscovered' once again when the next rapid military expansion or change in roles for deployment is required.[19] The stepped framework, outlined in Figure 1, provides a structure in which to map new and emerging psychological assessment methods to ensure enough information is gathered, but not so much that the privacy of the individual is ignored or that psychological resources are deployed unnecessarily.

Many considerations of the 'future of psychology' tend to be incremental; they look at what has gone before, such as paper-and-pencil tests, and imagine it being administered via computer instead.[41] Much of the discussion in this area then focuses on the reliability

and validity of such new application methods. This is a vital aspect of psychological selection methods, and its importance in maintaining confidence in psychological assessment for selection is significant. However, there runs a risk that this is the only aspect that may be considered – essentially going back and 'cleaning up' after a large and significant body of work has already occurred. This is not unusual and, in fact, is encouraged as a process of 'lessons learned',[42] particularly during eras of peacetime in the military. But this may be a version of analysing the trees and missing the forest before them. The validation of what has occurred is important, but so is the bigger picture of the work conducted, its implications for developing both psychological theory and tools, and where this may lead.

Evolutions such as the use of computers have allowed for processes to be automated or administered differently—test responses may be entered and graded by a computer program or interviews conducted over video links. This does not essentially challenge the concepts underpinning psychological assessment for selection, simply its application. Roles within the military have changed, sometimes quite significantly, in response to technological and warfighting developments. Again, the processes used to select into these roles have not shifted, but the tools have evolved and, in many cases (such as appreciation of risk), have become more nuanced. We also continue to use the training period to inform our overall selection assessment. In most cases, we rely on realistic training to provide a real-time environment to determine the same characteristics for negative and positive selection.

We know it is challenging to accurately predict the medium- to long-term outcomes of a person's success (or otherwise) in a job or career. This is because numerous factors that can impact it are either beyond the individual's or the organisation's control, or cannot even be measured, let alone predicted.[43,44] However, with the rapid expansion of both Large Language Models (LLMs) within Artificial Intelligence (AI) and the prolific use of online data of individuals that inform the algorithms of many organisations, there exists the potential to harness this new, unprecedented level of information to inform an entirely new approach to psychological selection. There may be variables that we have not previously considered or have been unable to measure that are crucial to ensuring the best person-job-environment fit for a more extended period than we have currently. Similarly, there may be ways we can either see real-life behaviour in real time or, in the case of the military, use realistic simulated scenarios to determine the future actions of individuals and groups without requiring paper-and-pencil testing or similar. This is suggestive of a more pre-theory (a broad concept that focuses on a field of research) vs post-theory (which gives the concept a specific meaning and makes it quantifiable)[45] approach to developing psychological selection. Arguably, the military is one of the best-placed organisations to embrace both pre- and post-theory, given its history of innovation in psychology assessment for selection during conflict. Further, Figure 1 provides a structure to consider the developments that occur, particularly within pre-theory approaches to psychological assessment. However, these must be done under strict ethical guidelines and within a theoretical framework to ensure that post-theory consolidation occurs rapidly and accurately.

In conclusion, the military has been at the forefront of developing psychological assessment procedures for job selection—particularly for large recruitment drives, leadership roles and high-risk roles— still in use today both within the Australian military and across the developed world. Out of necessity, psychological assessment procedures tend to evolve rapidly during conflict, with group intelligence screening for mass recruitment emerging during World War I and broader assessment procedures developing during World War II. Many of the foundational structures and considerations from these periods of development remain relevant today. This stands testament to the robustness of the procedures and the applicability of those traits identified during times of war throughout other organisational domains. However, the theories and tools underpinning psychological assessment for military selection have evolved. Therefore, those involved in military psychological selection require both an appreciation of its history and an understanding of current theories and tools to succeed in the field, particularly during the rapid development of new procedures. A stepped framework is used to consider the future of psychological assessment for military selection, suggesting areas such as data aggregation and personality testing that may be targeted for greater effect and efficiency.

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