



SCIENTIA MILITARIA

South African Journal of Military Studies

Volume 49
Number 2
2021

ARTICLES

The legalisation of cannabis: A security-vetting dilemma

Piet Bester and Sonja Els

The role of Russian volunteers in the collapse of the International Legion in the South African War

Boris Gorelik

Loss of military equipment by the SADF at the Battle at Indungo during the Border War, 31 October 1987

Marius Scheepers and Fransjohan Pretorius

Professional military instructor identity in the South African National Defence Force

William Wagner, Sonja van Putten and Willem Rauscher

Food wastage management at the South African Military Academy officers' mess

Nomboniso Moss, Ivan Henrico and Hennie Smit

Artificial intelligence and big data in the Maritime Silk Road Initiative: The road towards Sea Power 2.0

Lungani Hlongwa

BOOK REVIEWS

In the kill zone: Surviving as a private military contractor in Iraq (Neil Reynolds)

Jean-Pierre Scherman

Eerste Daar (WS van der Waals)

Will Gordon

Kansvatter: Die rustelose lewe van Ben Viljoen (Carel van der Merwe)

Emile Coetzee

Physical control, transformation and damage in the First World War: War bodies (Simon Harold Walker)

Anri Delpont

Enemies in the Empire: Civilian internment in the British Empire during the First World War (Stefan Manz and Panikos Panayi)

Ian van der Waag

On contested shores: The evolving role of amphibious operations in the history of warfare (Timothy Heck and Brett Friedman)

Evert Kleynhans

ISSN 2224-0020 (online) | ISSN 1022-8136 (print)

scientiamilitaria.journals.ac.za

Scientia Militaria
South African Journal of Military Studies

Editor: *Dr Evert Kleynhans*

Book Review Editor: *Anri Delpont*

Assistant Editors: *Prof. Abel Esterhuyse*
Prof. Ian Liebenberg
Dr Fankie Monama
Dr Raymond Steenkamp-Fonseca

Financial Manager: *Mr Andries Fokkens*

Editorial Secretary: *Mr Evert Jordaan*

Editorial Advisory Board

<i>Prof. Francois Vreji</i> Security Institute for Governance and Leadership in Africa Stellenbosch University	<i>Prof. Bill Nasson</i> Department of History Stellenbosch University
<i>Prof. Lindy Heinecken</i> Department of Sociology Stellenbosch University	<i>Prof. Theo Neethling</i> Department of Political Science University of the Free State
<i>Dr (Brig Gen) Gerhard Kamffer</i> Director Army Reserves South African Army	<i>Prof. André Roux</i> Institute for Futures Research Stellenbosch University
<i>Prof. John Laband</i> Department of History Wilfrid Laurier University, Canada	<i>Prof. Shrikant Paranjpe</i> Department of Defence and Strategic Studies, Pune University, India
<i>Dr Nyameka Mankayi</i> Independent Researcher Cape Town	<i>Prof. Hussein Solomon</i> Department of Political Science University of the Free State
<i>Dr Sylvio Baro</i> Centre for International Political Research Havana, Cuba	<i>Prof. Vladimir Shubin</i> Institute for African Studies Russian Academy of Sciences
<i>Prof. Ian van der Waag</i> Department of Military History Stellenbosch University	<i>Prof. Isabelle Duyvesteyn</i> Utrecht University
	<i>Dr Theo Brinkel</i> Netherlands Defence Academy

ISSN 2224-0020 (online); ISSN 1022-8136 (print)

The Editor, *Scientia Militaria*, Faculty of Military Science (SA Military Academy),
Stellenbosch University, Private Bag X2, Saldanha 7395, South Africa

Contents

From the Editor	i
-----------------------	---

ARTICLES

The legalisation of cannabis: A security-vetting dilemma <i>Piet Bester and Sonja Els</i>	1
The role of Russian volunteers in the collapse of the international legion in the South African War <i>Boris Gorelik</i>	29
Loss of military equipment by the SADF at the Battle at Indungo during the Border War, 31 October 1987 <i>Marius Scheepers and Fransjohan Pretorius</i>	43
Professional military instructor identity in the South African National Defence Force <i>William Wagner, Sonja van Putten and Willem Rauscher</i>	67
Food wastage management at the South African Military Academy officers' mess <i>Nomboniso Moss, Ivan Henrico and Hennie Smit</i>	83
Artificial intelligence and big data in the Maritime Silk Road Initiative: The road towards Sea Power 2.0 <i>Lungani Hlongwa</i>	113

BOOK REVIEWS

In the kill zone: Surviving as a private military contractor in Iraq <i>Jean-Pierre Scherman</i>	133
Eerste Daar <i>Will Gordon</i>	137
Kansvatter: Die rustelose lewe van Ben Viljoen <i>Emile Coetzee</i>	143
Physical control, transformation and damage in the First World War: War bodies <i>Anri Delpont</i>	147
Enemies in the Empire: Civilian internment in the British Empire during the First World War <i>Ian van der Waag</i>	151
On contested shores: The evolving role of amphibious operations in the history of warfare <i>Evert Kleynhans</i>	157

South African Journal
of Military Science

South African Journal of Military Science

Editorial

From a defence and security point of view, the second half of 2021 has been largely dominated by the frantic final withdrawal of the United States (US) and North Atlantic Treaty Organisation (NATO) forces from Afghanistan during August. This withdrawal practically signalled the end of a twenty-year-long deployment that followed in the wake of the September 9/11 attacks. The rapidly changing security situation in Afghanistan, which ultimately boiled down to a humanitarian crisis, was underpinned by the all but complete collapse of the Afghan government, the disintegration of Afghan National Army (ANA), and the occupation of Kabul by Taliban forces on 16 August 2021. I incidentally speculated about the unfolding of these very events in the editorial to the previous issue of *Scientia Militaria*. Nevertheless, there is no doubt in my mind that military practitioners and academics will closely monitor the situation in Afghanistan as it develops over the coming months. These events will also force the United States and its NATO allies to reconsider the entire Afghanistan adventure, which was one of the main focus areas of their geo-political and defence efforts for the last twenty years. They will also need to ask several searching questions about the counterinsurgency approach adopted in Afghanistan by the coalition forces and which ultimately led to the collapse of the Afghan government and the ANA. The unravelling of the Afghanistan adventure means that issues such as defence policy, doctrine, force structure and design, coalition operations, the propping up of governments, and irregular warfare to name but a few, will be placed under the spotlight by soldiers and scholars alike over the coming years.

The Far East has also been marked by heightened tension over the past few months. Of growing concern is the brazen testing of new ballistic missile systems by the Democratic People's Republic of Korea (DPRK) in the waters off the coast of Japan. These tests occurred in direct violation of the international sanctions imposed against the DPRK, and could derail any hope of sustained and substantive dialogue with the United States, Japan and the Republic of Korea. If further provocations by the DPRK are left unaddressed, the geo-political situation in the region could worsen to the extent where military intervention might become a stark reality. The People's Republic of China (PRC) has also been in the spotlight recently for its continued heavy-handed approach in dealing with dissent in Hong Kong, and its growing military tension with Taiwan during the past few months – this includes several unflinching breaches of Taiwan's air defence zone, and the ever-present threat of a full-scale invasion of the island nation. We can only hope that constructive dialogue and the upholding of the so-called 'Taiwan Agreement' will help to bring the situation under control sooner rather than later.

In Southern Africa, the primary focus remains on the operational deployment of Southern African Development Community (SADC) and Rwandan forces to the ungoverned territory of Cabo Delgado in northern Mozambique to combat the Ahlu-Sunnah Wa-Jama (al-Shabaab)-linked insurgents. While the counterinsurgency operations by the SADC and Rwandan forces have been largely successful in terms of locating, isolating and neutralising the al-Shabaab insurgents, we now have to start considering issues such as post-conflict reconstruction and development, the re-establishment and maintenance of law and order, the provision of basic services, and – above all – dealing with the key drivers of the insurgency in the first place. If these matters are not addressed adequately by the Mozambique government in the long term, the security situation in Cabo Delgado may never stabilise – which could realistically see the prolonged deployment of SADC forces to northern Mozambique.

Closer to home in South Africa, the country was rocked by large-scale civil unrest, violent protests and rampant looting over the period 9–18 July. These incidents were mainly confined to the provinces of Gauteng and KwaZulu-Natal, and occurred against the backdrop of the imprisonment of former President Jacob Zuma for contempt of court. In order to help the South African Police Service re-establish order and control in the affected areas, the South African National Defence Force (SANDF) deployed nearly 25 000 soldiers under the auspices of Operation Prosper. While the deployment of the troops helped to quell the civil unrest in mere days, it laid bare the fact that the SANDF is severely over-stretched and critically underfunded for such an undertaking – especially against the backdrop of the current troop deployments to the Democratic Republic of the Congo and Cabo Delgado. Moreover, the civil unrest also raised questions about the local security vacuum and rapid response capabilities that were lost with the closure of the part-time commando forces of the South African Army between 2004 and 2008. We will closely monitor the ramifications of the civil unrest over the coming months, in particular the nature and scope of the subsequent police and military deployments.

In this issue of *Scientia Militaria*, Vol. 49, No. 2, 2021, the articles consider both historic and contemporary issues associated with war and conflict, as well as defence and security-related matters. As always, it is trusted that these articles will provide key insights and act as a source of influence for individuals involved in the broader ambit of military planning, operations, management and higher education.

The article by Piet Bester and Sonja Els considers the security-vetting dilemma created by the legalisation of cannabis in South Africa. The authors were particularly interested in exploring whether the legalisation of cannabis could influence vetting decisions on the security competence of employees. The fact that relevant South African security vetting literature pays no scholarly attention to the issue of the legalisation of cannabis, and the way such legalisation will influence the vetting decisions of an applicant's security competence, remains alarming. This state of affairs then leads to what can be referred to as a 'security-vetting dilemma', where a situation may arise where the efforts to ensure the security of the state or the relevant department may lead to a direct infringement of the rights of the individual. Bester and Els therefore analyse existing South African cannabis-related legislation and explore cannabis as substance and its

effect on the individual, before they investigate its impact on the workplace. The article also reflects on the security-vetting implications of cannabis use and the management thereof in the workplace, after which a summary and recommendations are proposed for vetting institutions.

In his article, Boris Gorelik reassesses the role of the Russian volunteers in the collapse of the international legion during the South African War (1899–1902). By re-examining primary sources, and in particular the first-hand accounts of legionnaires and observers, the author investigates the military career of Lt Col Yevgeny Maximov from the 1870s in order to establish his status in South Africa before and after joining the international legion led by the famous General Georges de Villebois-Mareuil. After De Villebois-Mareuil's death in April 1900, Maximov succeeded him as the commander of the international legion amidst strong opposition and criticism. Gorelik attempts to understand the legionnaires' subsequent opposition to Maximov better by scrutinising the often-quoted book by Sophia Izedinova, a Russian nurse who served with the Russo-Dutch Ambulance, and by far the most dedicated chronicler of Maximov's career in South Africa.

The article by Lungani Hlongwa reports on an investigation of the role of artificial intelligence and Big Data in the Belt and Road Initiative (BRI) – China's vision of transcontinental and transoceanic economic integration through trade. While China's BRI has attracted considerable and diverse academic interest, the focus remains largely on the land and sea dimensions. Hlongwa draws attention to the digital and maritime dimensions of the BRI, which are respectively known as the Digital Silk Road Initiative (DSRI) and the Maritime Silk Road Initiative (MSRI). He specifically considers how artificial intelligence and Big Data, as promoted under the DSRI, intersects with the MSRI to produce what he refers to as Seapower 2.0. Based on patent analysis, the article shows that artificial intelligence and Big Data will play a crucial role in future supply chains, and hence the MSRI. While the article primarily focuses on the commercial side of Seapower 2.0, the author also discusses the role that artificial intelligence and Big Data could serve for military objectives.

In their article, Nomboniso Moss, Ivan Henrico and Hennie Smit discuss food waste management at the South African Military Academy officer's mess. The motivation for the article stems from the fact that there is no research on food waste management either in the broader SANDF or in the South African Military Academy (SAMA) specifically. This is particularly alarming, considering concurrent international trends in the field of food waste management within a military context – especially against the backdrop of growing concerns over food security. The authors therefore consider the literature applicable to food waste management in general and food waste management in a military context specifically, before discussing their research design, fieldwork and subsequent findings. Moss, Henrico and Smit conclude their article by recommending a number of measures to enhance food waste management at the SAMA officer's mess in the future.

The article by Marius Scheepers and Fransjohan Pretorius reports on the loss of military equipment by the South African Defence Force (SADF) at the Battle of Indungo in Angola on 31 October 1987 – specifically against the backdrop of Operation Firewood and the broader so-called Border War (1966–1989). By focusing on Operation Firewood, and the Battle of Indungo in particular, the article illustrates some of the circumstances under which the SADF lost military equipment in Angola during the war.

In the final article, William Wagner, Sonja van Putten and Willem Rauscher consider the existence of the professional military instructor identity (PMII) construct and its effect on the military ethos and quality of instruction to and by military instructors, based on the perceptions of a sample of military instructors in the SANDF. In the article, the authors point out the need for an institutionalised PMII in the SANDF, along with the promotion of professionalism and ‘warrriorism’ where required. They argue that the institutionalisation of the PMII can be achieved among other through official doctrine, official support and perhaps even visual and monitory recognition by means of an instructor allowance. These measures, they argue, could help to improve both the military ethos and the training of and by military instructors, and in doing so, improve overall training in the SANDF.

A selection of book reviews by Jean-Pierre Scherman, Will Gordon, Emile Coetzee, Anri Delpont, Ian van der Waag and Evert Kleynhans concludes this issue of *Scientia Militaria*.

The Editor

Evert Kleynhans



The legalisation of cannabis: A security-vetting dilemma

Piet Bester¹ and Sonja Els²
Stellenbosch University

Introduction

During 1996, the South African Intelligence Community issued the Minimum Information Security Standards (MISS), which inter alia address the protection of classified information. The MISS provide the principles, standards and procedures to be followed by all South African government agencies for the protection of official resources.³ This includes the granting of different types and levels of security clearances by the South African government to provide employees and contractors access to classified information. The decision to grant a person access to classified information is based on such individual's security competence. This is an indication of the person's ability – based on his or her conduct – to prevent classified material from being disclosed to unauthorised persons, which may potentially prejudice or endanger the security or interests of the employing institution or the state. An applicant for a security clearance may be a prospective employee applying for a post from outside the organisation or an insider who is already in the organisation, often referred to as outsider and insider threats.⁴ The process of determining a person's security competence is referred to as security vetting for new employees, and re-vetting for existing employees who have gone through the vetting process in the past.⁵ In this article, the use of the term 'vetting' includes re-vetting.

Most drugs have an impairment potential, and therefore an individual's involvement with drugs or dependence-forming substances raises a security concern if the drug or substance is illegally used, is in possession – including cultivation, processing, manufacture, purchase, sale or distribution – or if the substance used causes the affected individual to be diagnosed as drug-dependent or as being an abuser by a registered health care professional.⁶ These may lead to an unfavourable determination of the affected individual's security competence. The improper or illegal involvement with drugs therefore raises questions about an individual's security competence and his or her willingness and/or ability to protect classified information and/or state assets.

It is common knowledge that cannabis has an impairment potential. The use of cannabis was illegal in South Africa until September 2018 when the Constitutional Court partially decriminalised cannabis in the matter of *Minister of Justice and Others v. Prince & Others* when an adult uses, possesses or grows cannabis in private or for personal consumption.⁷ Organisations that require their personnel to undergo security vetting, therefore raise the question whether the legalisation of cannabis use has overlooked the risk that was previously implied with cannabis use.

Facing the dilemma of the use of cannabis by an employee, the security-vetting institution must judge whether it is a risk, whether it is a manageable risk, and ultimately how security personnel and/or line managers should supervise and monitor the person. The issue is exacerbated furthermore by the estimation that the South African cannabis consumption is twice the world norm.⁸

An overview of the relevant South African security-vetting literature indicates that little to no scholarly attention has been paid to the issue of the legalisation of cannabis and how it will influence the vetting decisions of an applicant's security competence. This leads to what can be referred to as a security-vetting dilemma that denotes a situation in which one's efforts to secure the state may lead to an infringement of the rights of the individual.

This security-vetting dilemma can be formulated as follows: *How does the legalisation of cannabis influence vetting decisions on the security competence of employees?* This specifically refers to employees who, for example, consume cannabis at or before work, or those who may show up at work impaired due to the use of cannabis.

This conundrum necessitated the present research to gain more insight from an academic perspective and to provide some guidelines to practitioners who have to make vetting decisions in relation to the use of cannabis. Vetting decision-makers' knowledge on the security implications of cannabis consumption is vital for the development of vetting policy, as it is widely known that the greatest security risk to an organisation comes from the people within.⁹ Subsequently, this article briefly discusses the relevant security-vetting terms, such as 'security vetting' and 'security risk'; critically analyses existing South African cannabis-related legislation; explores cannabis as substance and its impact on the individual; and subsequently analyses its impact on the workplace. This is followed by a discussion on the security-vetting implications of cannabis use and the management thereof in the workplace. The study is concluded with a summary and recommendations for vetting institutions.

Security vetting and security risk

When one wants to gain insight into the concepts 'security vetting' and 'security risk' one has to start with the Minimum Information Security Standards (MISS).

Mdluli argues that security vetting is of the utmost importance to the security of the state, especially to the Department of Defence, as much of the security of the state depends on the integrity and reliability of its civil servants.¹⁰ She argues that security vetting is meant to establish the security competence of the applicant, which relates to integrity and reliability regarding the handling of classified information.¹¹ South Africa's MISS define security vetting as "a systematic process of investigation, followed in determining the security competency of a person".¹² This is done to counter subversion, treason, sabotage and terrorism aimed at or against personnel, strategic installations or resources of the Republic of South Africa.¹³ Security vetting is further described as a process in which individuals are scrutinised by means of background investigations that aim to determine whether past behaviour of an individual is a concern for future reliability, honesty and integrity.¹⁴ The integrity of individuals includes inter alia a sense

of duty, dedication, reliability, adherence to human rights, obedience, honesty, ability to manage finances, responsibility, moral values and averting security vulnerabilities.¹⁵ The security-vetting process is measurable, and when approved, is referred to as the security competence of an individual. Other states, such as Israel, refer to the concept ‘security suitability’ rather than security competence.¹⁶

In essence, security vetting and the subsequent determination of a person’s security competence are required to consider whether such person is a security risk. In the counter-intelligence context, Wiese states that a person can be viewed as a security risk when his or her personality traits, needs, behaviour, ideological persuasion or extreme sensitivity in terms of past deeds can be used to persuade him or her, by whatever means, to cooperate with an unauthorised individual or organisation to divulge secrets of his or her employer, or to divulge secrets to an unauthorised individual or organisation of his or her own accord.¹⁷ Although not pertinently stated, one could also include the protection of co-workers and not only the state or its institutions or assets. Molapo observes that security-screening investigations contribute to ensure that employees of government departments conduct themselves in a manner that will not endanger or compromise the image of the individual or, especially, the image of the particular department.¹⁸ Mdluli states that the security competence of an individual is normally measured against the criteria of susceptibility to extortion or blackmail, integrity, amenability to bribes, loyalty, susceptibility to being compromised or influenced due to compromising behaviour, integrity and acts endangering security.¹⁹ The above emphasise the exposing nature of security vetting. This view is supported by the United Kingdom’s former Defence Vetting Agency, which stated that the process will sometimes reveal character flaws or circumstances that result in serious security risks.²⁰ Consequently, security vetting could expose how cannabis use influences an individual’s security competence.

At the end of the process, a vetting decision is made with respect to a person’s eligibility to access classified information. This is a discretionary security decision based on whether the applicant constitutes a security risk. Since the context of security vetting and security risk is being discussed, the next part takes a closer look at cannabis.

Cannabis as substance

An overview of the relevant literature indicates that cannabis use could be both beneficial and harmful.²¹ This dualism of both benefits and harm is seen in the following quote, which clearly illustrates the competing claims amongst academics and scientists that contribute to the security-vetting dilemma referred to above.

[C]annabis use by young adults and vulnerable individuals across the lifespan can be a contributory cause of: cannabis dependence syndrome; schizophreniform psychoses; anxiety and depressive disorders; acute and perhaps chronic cognitive impairment, and structural and functional changes in brain pathways implicated in reward, learning and addiction [...] have neuroprotective properties and can be used to treat anxiety, depression, sleep disorders, pain, neurological disorders and dependence on various drugs including cannabis.²²

Like alcohol and other drugs, the use of cannabis cannot be generalised. Consequently, the use of cannabis, as evaluated by a security-vetting officer and/or decision-maker, is diverse and covers more than the assumed single mode and product of use, which is usually the smoking of the plant, and includes other forms of use, such as concentrates, edibles, blunts and vaporisers.²³ It is therefore important to discuss the effects of cannabis.

The effects of cannabis

The United Nations' World Drug report for 2020 reveals that in 2018, cannabis was the most widely used substance globally. In South Africa, an estimated 3,7 per cent of the country's population uses cannabis.²⁴ Furthermore, cannabis is the most prevalent drug for which criminals involved in property and violent crimes tested positive. Singh refers to a recent study released by the Soul City Institute in Johannesburg, which ranks South Africa among the countries with the highest levels of drug abuse globally.²⁵ The study, furthermore, reveals that close to 10 per cent of the population starts experimenting with drugs at the age of 13.²⁶ Prior to its legalisation, cannabis was the most regularly used "illicit" substance amongst the South African youth.²⁷ These statistics and frequencies support the notion to discuss the effects of cannabis.

The use of cannabis has a number of health implications, such as the development of cannabis use disorder (CUD), respiratory illness, development and exacerbation of psychiatric disorders and altered brain development, among others.²⁸ Moreover, evidence from worldwide population data indicates that approximately 6,5 per cent of cannabis users have a CUD.²⁹ The effect of cannabis is also determined by the potency of the content of delta-9-tetrahydrocannabinol (Δ 9-THC), the psychoactive key ingredient, in relation to cannabidiol (the Δ 9-THC to CBD ratio).

The use of concentrates is especially alarming as they demonstrate extreme potency of up to 80 per cent Δ 9-THC. This results in a high level of intoxication with many long-term physiological, cognitive and psychological effects with an increase in CUD with signs and symptoms, such as temporary problems with perception and cognitive functioning, disinhibition, spontaneous laughing, disturbances to vision, thought and memory, coordination loss with confusion, dry mouth and sleepiness.³⁰ Cognitive impairment, such as decreased working memory function, occurs in adolescent or early-onset cannabis users.³¹ 'Working memory' refers to the ability to manipulate small amounts of information to achieve a particular goal. It also forms part of the broader executive functioning that selects, initiates, monitors and modulates other cognitive activities during daily functioning. These activities include, but are not limited to, educational achievement, emotional regulation, behavioural inhibition, and quality of decision-making. Moreover, research indicates that earlier age of starting to consume cannabis, combined with high frequency and high potency cannabis use, and sustained uses of synthetic cannabinoids over time, correlate with a higher likelihood to develop potentially severe and persistent impairment of executive functions.³² Research by Van der Steur et al. supports these findings as they found that frequent cannabis consumption, especially on a daily basis, and the consumption of high-potency varieties with a high concentration of Δ 9-THC are both associated with a higher risk of developing

psychosis.³³ A Swedish study revealed that a relative risk for schizophrenia among high consumers of cannabis indicated a 95 per cent confidence interval in comparison with cannabis non-users pointing to a relationship between the level of cannabis consumption and schizophrenia.³⁴ It is, however, important to note that cannabis-related cognitive deficits can be overcome after long periods of abstinence.³⁵

In addition, the legalisation of recreational cannabis use is likely to increase the incidence of use amongst current users as well as the number of new users, increasing the risk of developing a dependence syndrome similar to that of alcohol and other drugs.³⁶ Cannabis is often a gateway to hard drugs.³⁷ It is, therefore, important to consider the issue of the recreational use of cannabis versus the medicinal use of the substance.

Recreational vs medicinal use

People who use cannabis for recreational purposes tend to use it mainly for its psychoactive effects. $\Delta 9$ -THC, one of the chemicals found in cannabis, creates a form of euphoria for most people. Cannabis also creates an alternative mental state in which the user can literally recreate his or her own reality.³⁸ As a result – and alluded to above – at individual level, cannabis influences the way an individual experiences his or her environment, emotional state, thinking, memory, decision-making, coordination, reaction time, and judgement, causing impairment. In South Africa with its high levels of HIV, AIDS and tuberculosis, using cannabis also indirectly compromises individuals' compliance with treatment regimes.³⁹ Moreover, spending significant amounts of money on cannabis may influence the financial state of individuals, which may lead to petty crime in the workplace.

Amongst the public, there is still a debate on the detrimental and potentially therapeutic effect of cannabis on the brain and related behaviour. Singh comments extensively on the medicinal use of cannabis, which dates back to the ancient Roman era where cannabis was used as relief for medical conditions, such as gout pains and rheumatism.⁴⁰ Singh concludes that in the modern world, where technology can identify the pharmacological composition of cannabis, it is clear that cannabis, as with all medicines, has advantages and disadvantages for medicinal use.⁴¹ Many countries, with California in the United States as the forerunner, advocate educated and knowledgeable recommendations for the medicinal uses of cannabis.⁴²

Various global studies reveal scientific evidence of advantages of the use of cannabis as medicine. Examples of such studies are the following:⁴³

- the American Institute of Medicine (1999), which proposes the development of a medical cannabinoid inhaler used under stringent medical protocols;
- a study by Chong (2006), which revealed use of cannabis for the relief of neuropathic pain and muscular spasms for patients with multiple sclerosis;
- a scientific study by Solowiji (2018), which found enhanced therapeutic effects of cannabis in a compromised brain; and
- a study by the University of the Free State in South Africa (2018), which

proposes the use of cannabis to assist with the regulation of insulin action on breast cancer cells of patients with diabetes.

In terms of the medicinal use of cannabis, the jury is still out on the effectiveness of the drug for the treatment of certain illnesses. For example, in South Africa, only one cannabis drug has been approved for clinical use, although, when prescribed as a medication, it should be treated differently compared to any other intoxicating medication.⁴⁴

Cannabis not only influences the users themselves, but it also has social implications such as harm to others, including injuries due to violence.⁴⁵ From the above, it is clear that cannabis has a physiological, cognitive and psychological effect on the individual. As one is dealing with the individual during the security-vetting process, it is important to take note of the factors influencing the effect that cannabis use has on an individual.

Factors determining the effect of cannabis

There are several factors that determine the effect cannabis has on its users. The first is the **frequency** of use. More intensive use of cannabis increases the odds for adverse consequences among users.⁴⁶ To illustrate this point, a growing number of studies indicate that restlessness, irritability and anxiety, which may be associated with aggression, follow within 24 to 48 hours after the abrupt cessation of frequent cannabis use.⁴⁷ Moreover, studies in high-risk populations indicate that more frequent users of cannabis show signs of an increased propensity for violence.⁴⁸ Although frequency of use is important, it is essential that additional factors be considered, such as the quantity and type of product used and the effect that its use has on the individual.

In addition to frequency, the **duration** of the use of the substance is important. The chronic use of cannabis could lead to respiratory and cardiovascular toxicity and the development of cannabinoid hyperemesis syndrome. This is mainly a health issue and not related to security vetting, but it could lead to certain psychiatric conditions, which may have an adverse effect on an individual's security competence.⁴⁹ Psychiatry-related conditions relate to experiencing anxiety, paranoia, psychotic disorders and loss of cognitive ability. Based on findings from recent studies, 13 per cent of schizophrenia cases could be linked to cannabis use.⁵⁰ Studies also show that the continuous use of cannabis-based narcotics impairs long-term memory.⁵¹

In terms of the **quantity** used, studies indicate that both acute and chronic cannabis intoxication may impair a person's executive functioning (cognitive domain) and in that way, create perceptual distortions, such as interpreting neutral actions as aggressive; impairing the user's ability to suppress aggression; heightening physiological arousal, leading to feelings of anxiety, paranoia and panic,⁵² postulating a positive dose-response relationship.

Furthermore, the concept **cannabis load** refers to a combination of both frequency and quantity of use, and is used as a single component to measure cannabis use.⁵³ This term was constructed by multiplying the values of frequency (number of days per week) and quantity (the number of joints smoked per day).

In addition to the above, the **mode of use and products** consumed is another factor to consider, especially in terms of how a person's body absorbs the substance. In this regard, an international study on cannabis use amongst university students, found that 76 per cent of users engaged in the use of products besides the plant itself. This highlights the importance of considering this factor in security competence determinations.⁵⁴ To illustrate this, Hazekamp indicates that cannabidiol (CBD) oil, which is popular in the medicinal administration of cannabis, contains differing concentrations of $\Delta 9$ -THC.⁵⁵ Furthermore, using products with high potency (such as concentrates) has the potential to lead to significant increases in impairment, intoxication and the lasting effects of the substance.⁵⁶ For example, due to the high $\Delta 9$ -THC potency of the product concentrate, users are more likely to develop tolerance or experience withdrawal.⁵⁷ This is whether or not the cannabis product is organic or synthetic cannabinoids, as synthetic cannabinoids may have more health risks than organic products.⁵⁸

The **consequences** of how the individual reacts to the product consumed, emphasise that one cannot use a blanket approach when considering the effects of cannabis consumption on individuals. Research has indicated that individuals differ in unobserved ways in terms of their vulnerability to starting and stopping cannabis use and their unobserved mental and physical health frailties.⁵⁹ Research in the Netherlands indicates the physical and mental health effects of cannabis consumption are likely to be small.⁶⁰ Nevertheless, an overview of cannabis-related literature indicates that cannabis use has been associated with various adverse consequences, such as motor vehicle accidents, and an increased risk of psychotic disorders among susceptible individuals.⁶¹ It is also noteworthy that certain practices during the cultivation of the plants – such as the lighting, use of chemicals, such as insecticides, nutrients and fertiliser – could have different effects on different individuals.⁶² It would thus be safe to state that cannabis use is likely to impair cognition and brain functioning, causing impaired judgement. During the vetting process, it is therefore necessary to obtain information on the kind of cannabis and the effect thereof on the behaviour of the individual. One must determine how each individual reacts in the context of the above-mentioned factors.

A combination of the above factors also contributes to and is supplemented by various categories of users, which are described below.

Categories of users

A classification system, usable for vetting purposes, is identified in the literature and is referred to as 'classes of users'. These are light plant users, moderate frequency plant-based users, heavy plant users, heavy plant and concentrate users, light plant and edible users, and a high frequency all-product users (plant, concentrate and edible).⁶³ Based on an overview of the literature, two additional groups can be added, namely those who use cannabis for medicinal purposes only (prescribed cannabis-related medication) and those who experimented with cannabis, but never became frequent users. Table 1 below summarises these categories of users.

Table 1: Category of users

Experimental users	Only experimented once or twice with the drug
Frequent recreational users	Light plant users
	Moderate frequency plant-based group
	Heavy plant users
	Light plant and edible users
	High frequency all-product users (plant, concentrate and edible)
Medicinal users	Those using prescribed or over-the-counter cannabis medication for medicinal purposes only

Source: Authors' own compilation

It is therefore clear that the consumption of cannabis products has various immediate and long-term positive and negative effects, depending on the frequency, quantity, mode of use and product combined with the category of user and, ultimately, how the individual reacts to the stimulant. It was beyond the scope of the study reported here to determine the harm and benefits of the substance. The aim was rather to discuss the implications of the substance for conduct in the workplace in general and, more specifically, the risk associated with giving a user access to classified information.

The risk

The combination of factors mentioned above suggests a certain security risk level for a cannabis user. In this regard, the literature indicates that the risk profile of an individual with five episodes of substance use per day differs from someone who uses a small amount once a day.⁶⁴ A study concluded that high frequency all-product users reported the highest number of consequences of the use of the substance;⁶⁵ thus, posing a higher risk in terms of manifesting problems related to the use of these products.

Considering the possible impact of cannabis use in the workplace it is important to conduct all risk assessments during the vetting process within the legal framework of South African law.

The legal environment

Contrary to the private sector, security vetting in the public sector is governed by legislation. Mdluli correctly summarises that three vetting agencies in South Africa have the legal mandate to conduct security vetting in accordance with the National Strategic Intelligence Amendment Bill, 2008.⁶⁶ These agencies are:

- the State Security Agency created in terms of a Presidential proclamation in 2009;
- the intelligence division of the South African Police Service (SAPS) mandated by the Police Act;⁶⁷ and

- the intelligence division of the South African National Defence Force (SANDF) mandated by the Defence Act, 2002.⁶⁸

Section 37(2) of the Defence Act emphasises the importance of security vetting in that a member or employee may not be enrolled, appointed, promoted, receive a commission or be retained unless he or she has been issued with the appropriate or provisional grade of security clearance by Defence Intelligence. Furthermore, section 38 of the Defence Act authorises the Minister of Defence even to discharge any member or employee not issued with the necessary security clearance. The importance of security vetting, especially in the public domain, can therefore not be over-emphasised.

In making a vetting decision where cannabis use by the applicant is considered, the vetting officer needs to be mindful of the legal stance concerning cannabis use. Two landmark court decisions in 2017 set the scene for the lawful production, distribution and use of cannabis in South Africa.⁶⁹ This was followed by a controversial Constitutional Court decision in September 2018 on the constitutionality of certain clauses of the Drugs Act of 1992 and the Medicines Act of 1965.⁷⁰

It is essential first to consider the history of South African legislation on cannabis use before analysing these developments.

It is well known that wild cannabis has been used for centuries by South African indigenous people for recreational, traditional, medicinal and religious purposes. However, the escalation of drug trafficking and substance abuse in later years resulted in an absolute ban on the dealing, cultivation and possession of cannabis in South Africa.⁷¹ These prohibitions originated from the international Treaty of Versailles, which required signatory states to establish processes to repress the illicit drug trade of, inter alia, cannabis. Following the signing of this treaty in 1919, South Africa promulgated the Customs and Excise Duties Amendment Act in 1922. This Act prohibited the cultivation, sale, possession and use of cannabis, cocaine and a number of other substances.⁷² In 1924, cannabis was officially added to the international list of habit-forming drugs by the Advisory Committee for the Council of the League of Nations, as part of international law.⁷³ Similarly, the use of cannabis was completely criminalised in South Africa in 1928 under the Medical, Dental and Pharmacy Act.⁷⁴ Cannabis prohibition was also included in the Weeds Act in 1937.⁷⁵

Other legislation that prohibits the production, distribution or use of cannabis followed at a steady pace namely the following:

- Medicines and Related Substances Act, 1965;⁷⁶
- Pharmacies Act, 1974;⁷⁷
- Criminal Procedure Act, 1974 (allowing for searches and seizures);⁷⁸ and
- Drugs and Trafficking Act, 1992.⁷⁹

Furthermore, cannabis was classified as a Schedule 7 substance that is subject to special restrictions and controls.⁸⁰ Among other things, the Drugs and Trafficking Act allowed

for people found in possession of more than 115 g of cannabis to be presumed guilty of dealing in the narcotic. In 1995, following the adoption of the Interim Constitution, the Constitutional Court declared this presumption unconstitutional, as it unjustifiably infringed the constitutionally enshrined presumption of innocence.⁸¹

In order to contextualise the medicinal use of cannabis in South Africa, the Medical Innovation Bill was proposed in 2014.⁸² The aim of the Bill was the legalisation of the use of cannabinoids for medicinal purposes. Although the Bill was rejected by Parliament, the Medical Control Council published license application procedures in 2017 to plant, produce or trade in cannabis for medicinal and educational purposes.⁸³

Constitutional challenges and the current law on the use of cannabis

Prior to 1994, the effective judicial protection of human rights was virtually impossible in South Africa.⁸⁴ The 1996 South African Constitution introduced a number of fundamental rights in the Bill of Rights. These fundamental rights referred to basic human rights such as the right to privacy, the right to freedom of religion, the right to human dignity, and the right to freedom and security of the person. However, these rights are not absolute, and a general limitation clause was built into the 1996 Constitution to specify the criteria for the justification of restrictions of the fundamental rights.⁸⁵ Rights may therefore be justifiably infringed if the limitation is reasonable and justifiable in an open and democratic society, taking into account the nature of the right, the importance of the purpose of the limitation, and less restrictive means to achieve the purpose of limitation.⁸⁶

During 2001, allegations of ‘unjustifiable limitation’ of the right to religious freedom, as guaranteed by section 15 of the Constitution, initiated the battle for the legalisation of cannabis in South Africa in a court case.⁸⁷ The appellant, Prince, was refused admission by the Law Society of South Africa due to his two previous convictions for possession of cannabis and his expressed intention to continue using cannabis as a result of his religious beliefs. Prince challenged the decision of the Law Society submitting that the constitutional validity of the prohibition on the use or possession of cannabis was unjustified when motivated by his Rastafarian religion. The use of cannabis is central to the Rastafarian religion. Prince unsuccessfully approached the High Court, the Supreme Court of Appeal, and the Constitutional Court over the next number of years, but was granted no relief.⁸⁸

Prince maintained that his fundamental rights were infringed, and in March 2017, he, together with several other applicants, approached the Western Cape High Court in the ‘second Prince case’, this time basing the submission on the right of privacy.⁸⁹ The applicants also challenged the constitutional validity of sections 4(a) and (b) as well as section 5(b) of the Drugs and Drug Trafficking Act 140 of 1992 and section 22(10) of the Medicines and Related Substances Act 101 of 1965. The argument was that it was not the state’s right to dictate what people may eat, drink and smoke in the privacy of their own homes.⁹⁰ Furthermore, the applicants relied on a judgement made by the Constitutional Court in the case of *Bernstein v Bester* where it was stated:

A very high level of protection is given to the individual's intimate personal sphere of life and the maintenance of its preconditions and there is a final untouchable sphere of human freedom that is beyond interference from any public authority. So much so that, in regard to this most intimate core of privacy, no justifiable limitation thereof can take place. But this most intimate core is narrowly construed. This inviolable core is left behind once an individual enters into relationships with persons outside this closest intimate sphere; the individual's activities then acquire a social dimension and the right of privacy in this context becomes subject to limitation.⁹¹

Singh reports that the applicants also submitted to the court that the distinction between cannabis, tobacco and alcohol is unreasonable and therefore unjustifiably restrict the right of privacy.⁹²

The Western Cape High Court ruled that the blanket prohibition on the use of cannabis is unconstitutional, as it impedes on the basic human right of privacy.⁹³ Therefore, the criminalisation of home use and cultivation of cannabis by adults, as specified in the Drugs Act of 1992 and the Medicines Act of 1965 is *mutatis mutandis* unconstitutional. The invalidity of the said legislation was suspended for a period of 24 months to allow Parliament to amend the legislation. The Constitutional Court confirmed the order by the High Court on 18 September 2018, interpreted the right to privacy as being the "right to be left alone", and ruled that the use or possession of cannabis by an adult person "in private for personal consumption" is legal.⁹⁴ The use of cannabis was only "partly decriminalised" as the finding does not affect the laws governing the trading, use and possession of cannabis in public. South Africa was the first country in Africa to decriminalise the use of cannabis partly.⁹⁵ The Constitutional Court has not specified the amount of cannabis that will be deemed lawful for personal consumption in private, and considers it a matter for attention in future legislation.⁹⁶ In this landmark decision, the Constitutional Court also declared section 40(1)(h) of the Criminal Procedure Act (1997) constitutionally invalid. Thus, it is no longer a criminal offence for an adult to use or be in possession of cannabis for personal consumption in private. It is clear that the Constitutional Court does not restrict the use or possession of cannabis to a home or private dwelling. If not properly addressed in future legislation, challenges of implementation may arise in differentiating between private and public for purposes of enforcement.⁹⁷

Following the directive of the Constitutional Court, the draft Cannabis for Private Purposes Bill, 2020 (hereafter the draft 2020 Cannabis Bill) was introduced in the National Assembly.⁹⁸ The opportunity for public comments closed on 30 November 2020, and it is now up to Parliament to consider the content. However, this proposed bill is widely claimed to be inadequate as it ignores any commercial opportunities for cannabis; it fails to accommodate its medicinal uses; and it provides for unreasonable punishments for offenders who exceed the permitted quantities of cannabis.⁹⁹

In essence, the draft 2020 Cannabis Bill permits adults to do the following for personal use only:

- possess an unlimited quantity of cannabis seedlings;
- cultivate – in a private place – four flowering cannabis plants per adult;
- possess, in private, 600 g of cannabis per adult; and
- possess, in private, 100 g of cannabis in a public place.¹⁰⁰

The definitions in the draft 2020 Cannabis Bill include the following meanings:¹⁰¹

- “Possess in private” means to keep, store, transport, or be in control of cannabis or a cannabis plant, in a manner that conceals it from public view;
- “Private place” means any place, including a building, house, room, shed, hut, mobile home, caravan, boat, or land, to which the public does not have access as of right; and
- “Public place” means any place to which the public has access as of right.

The proposed bill is yet to be finalised and promulgated.

During the adjudicative process of security vetting, the vetting officer needs to be acutely mindful of the constitutional aspects of fundamental rights, as some of these rights will inevitably be affected, directly or indirectly, during the process of security vetting. Any infringements of fundamental rights need to be constitutionally justifiable in the circumstances.

Workplace legislation

Although not directly related to security vetting per se, Mokwena reports that cannabis use has often been associated with workplace injuries and/or challenges of workplace productivity.¹⁰² Laurens and Carstens emphasise that the constitutional judgement (second Prince case) does not affect any of the existing statutes that regulate health and safety in workplaces and other risk-sensitive environments.¹⁰³ It is submitted that, even after implementation of the draft 2020 Cannabis Bill, workplace legislation will remain applicable. In this regard, the Occupational Health and Safety Act (OHS Act) (No. 85 of 1993) demands of employers to provide and maintain, as far as possible, a working environment that is safe and without risk to the health of their employees.¹⁰⁴ The OHS Act and the General Safety Regulations thereof, prohibit the use of any heavy equipment or machines when a person is under the influence of any drug (including cannabis) and employers can, even with prescription medicine use, not allow employees to perform duties where side-effects constitute a threat to the health and safety of employees.¹⁰⁵

Other applicable legislation is the Mine Health and Safety Act (No. 29 of 1996)¹⁰⁶ and the Employment Equity Act (No. 55 of 1998).¹⁰⁷ These Acts set out the requirements for substance testing, which confirm that some substances could have a negative impact on a workplace, and which validate substance testing as its consideration for security vetting.

The employer's premises are not a 'private' but a 'public place'. It is submitted that employers may therefore implement rules that regulate the possession and use of cannabis in the workplace. This may, in the opinion of the authors, include a total prohibition on the use and possession of cannabis in the workplace. The draft 2020 Cannabis Bill makes provision for an individual to possess legally (in his or her private capacity) up to a 100 g of cannabis in a public place. Yeates however observes that, if a company has a workplace policy that prohibits any quantity of cannabis, it becomes a workplace rule. If an employee is in possession of any quantity in the workplace, it will then be viewed as a contravention of a workplace policy.¹⁰⁸ This may lead to disciplinary action against the employee, not for being in possession of cannabis per se, but because of the breach of a workplace policy. Should the employee be in possession of more than 100 g of cannabis, it will constitute a crime in terms of the proposed legislation, and criminal prosecution will be instituted.

Terblanche, a legal specialist advocate in environmental health and safety, provided the following advice at a 2019 Occupational Health and Safety EXPO:

Until the state of being 'under the influence of cannabis' is medically defined, best practice advice for employers would be to make sure that the company rules set out a detailed written policy and procedure on alcohol and drug testing, with trade union input where applicable. The policy should state the reason for the information being outlined, namely safety and productivity, and should also indicate job categories and descriptions for which intoxication is not allowed.¹⁰⁹

The authors posit that, as with alcohol abuse, the employer may take disciplinary action against an employee, without any testing, if the effects of cannabis are clearly observable. This can then be included in the employee's personnel file in terms of disciplinary action taken against the employee, which could be considered during the security-vetting process. Similarly, in the view of the authors, the employer may introduce a condition of employment that renders it obligatory to undergo regular medical testing if employment conditions justify such testing. This can also be applicable for security vetting to determine whether the applicant is suitable for the job from a security point of view. The authors submit that 'justifiable employment conditions' may be applicable in respect of certain occupations that involve operating heavy machinery, pilots, medical staff, or security services where employees are required to carry weapons or to be alert. Such circumstances may also include incidents where cannabis consumption poses a risk to the property of the employer or the safety of other employees and the public.

It is undisputed that an employee who is contractually bound to the employer during certain hours, has to adhere to all the employer's rules, regulations and policies during such hours. Sobriety requirements for cannabis must thus be treated in the same way as any other narcotic or alcohol-related tests or transgressions. In the end, it is the responsibility of the employer to ensure that policies and procedures are in place, which include and embrace cannabis-specific rules.

Making security-vetting decisions

From the above, it is clear that cannabis, although legalised, may still have an adverse effect on the security competence of an individual. This then leads to the question as to what vetting decision-makers should decide regarding the security competence of the individual using cannabis. In answering this question, it is important to understand –

- firstly, what a vetting decision is;
- secondly, what vetting officers should consider when making vetting decisions on cannabis users;
- thirdly, what the challenges are in making these decisions; and
- lastly, which disqualifying and mitigating conditions vetting officers should consider.

Vetting decisions

In a study on financial misconduct, Kühn and Nieman posit that security-vetting decisions must be risk-based, and subsequently, the same can be said about the use of cannabis.¹¹⁰ The final vetting decision is made after an adjudication or evaluation process during which a risk analysis was done considering vulnerabilities and security threats. Ultimately, it is about determining the risk that an individual poses and making recommendations regarding certain important factors, such as integrity, loyalty, acts or omissions endangering security, and susceptibility to accepting bribes or to extortion or blackmail or to be influenced or compromised.¹¹¹

During this process, a representative period of the person's life is evaluated to make a well-informed recommendation whether the person is eligible for access to classified information.¹¹² Mdluli emphasises that the “whole person” phenomenon should be used during the assessment of a person's security competence.¹¹³ This implies that all information regarding a person is taken into consideration when making the final vetting decision. The decision further implies weighing up an applicant's strengths and weaknesses or favourable or unfavourable information about the person within the context of the type of occupation involved, such as carrying weapons or operating heavy machines. Mahlatsi also advocates the “whole person” approach.¹¹⁴

There are however several noteworthy challenges when dealing with cannabis in the workplace. The first relates to the detection of cannabis and the threshold for impairment. A drug test can detect the presence of $\Delta 9$ -THC, but unlike alcohol, there is no consensus on the threshold for impairment.¹¹⁵ Furthermore, the presence of $\Delta 9$ -THC does not imply that an individual is impaired and it does not indicate how long ago the substance was consumed.¹¹⁶ Van Niekerk et al. observe that there are also other factors that could lead to a positive test for the substance, such as second-hand inhalation, the potency of the different strains of cannabis, and the individual's metabolism. However, despite these challenges and based on the above-mentioned discussion, some recommendations can be made for vetting personnel on what to consider when making vetting decisions in instances of cannabis use.

Considerations during cannabis-related vetting decisions

Once there is an indication that an individual is using cannabis or had used cannabis, the first aspect is to determine the **specific workplace requirements**, such as a safe work environment where personnel work with heavy machinery, transport people and/or, for example, carry weapons. The reason for this is that an overview of the relevant literature on cannabis consumption and its effect in the workplace identified a number of issues of which the most are human resource-related.¹¹⁷ These are a drop in attendance or productivity; disruptive or disorderly behaviour; an increase in accidents and safety violations; increased medical and insurance costs; and an increase in having to deal with substance abuse issues in the workplace.¹¹⁸ Van Niekerk emphasises the systemic nature of the influence of cannabis as it does not only affect the person's behaviour in the workplace, but also has a ripple effect throughout the organisation and even beyond that.

Closely linked to the workplace requirements is whether the employer has a **cannabis-specific workplace policy** in place. At organisational level, it should be determined whether a company has a policy that addresses the possession of cannabis in the workplace. It is also important to consider whether the policy is communicated effectively to all employees. In cases where organisations have a zero-tolerance policy and where there should be no presence of cannabis in the blood or urine of an individual, employees should be properly informed in this regard.¹¹⁹ It is therefore, recommended that organisations should at least have a policy or programmes that propagate abstinence from cannabis.

This is followed by determining the **context of the use** of cannabis. This indicates whether it was used in a recreational, medicinal, private or public context. In the case of medicinal use, it is important that the medication should be prescribed by a registered health care professional and that the final product consumed has undergone rigorous testing through clinical trials and is registered with the South African Health Products Regulatory Authority (SAHPRA). It is also worth noting that, at the time of writing, there was only one product approved for medicinal use in South Africa, while many of the claims of the benefits of cannabis use for medicinal purposes are without solid clinical evidence. Moreover, conduct that deviates from the approved medical direction for the use of the substance, such as grinding tablets and mixing it with tobacco in order to smoke it, will be a concern.

Likewise, the United States' National Oceanic and Atmospheric Administration (NOAA) identifies several factors the evaluator should follow when making vetting decisions of which the context is one. Decisions may include considering the age and maturity of the individual during the time of the conduct and whether the applicant participated voluntarily.¹²⁰ For vetting decision-makers, it is the nature, extent and seriousness of the conduct of concern followed by the circumstances surrounding the conduct, including knowledgeable participation that need to be evaluated.

Next, the vetting officer needs to consider the **frequency** of use (occasional versus regular exposure) and determine the category of user as alluded to in Table 1. Although it is recommended not to look at frequency in isolation, research has revealed that frequent

users of cannabis show a greater likelihood for violence than infrequent users.¹²¹ Once the frequency is known, the vetting officer must determine the **duration** of use followed by determining the **quantity** the individual consumes. The amounts used affect the impact cannabis has on an individual. Acute and chronic cannabis intoxication may impair a person's executive function as alluded to earlier. Closely linked to the quantity would be the **cannabis load** (frequency and quantity) the individual consumes. Information on cannabis load might be difficult to obtain, but if available, it could assist in reaching a more informed decision. The maker of a vetting decision must also consider the **mode and products**, as the way in which a person's body absorbs the substance as products with high potency (such as concentrates), which has the potential to lead to a significant increase in impairment, intoxication and the lasting effects of the substance, as observed by Gunn et al.¹²²

The next step would be to determine the **effect** the consumption has on the individual, for example whether the person presents signs and symptoms of cannabis-dependence syndrome, and whether there are indications of adverse health consequences, such as impaired psychosocial and brain development, mental health and respiratory problems, cardiovascular disease, and an increase in, for example, motor vehicle accidents. The effect would specifically refer to the social (including financial and workplace behaviour), emotional and cognitive effect the substance has on the individual. The individual's reaction to intoxication is especially important in posts where executive functioning is required, such as flying a plane, but also in terms of everyday decisions, such as deciding whether you want to wear a blue or white shirt to work. This relates to his or her conduct or behaviour when intoxicated and the subsequent or coinciding non-adherence to workplace policies. Another area in which cannabis has an effect, is the productivity of an individual.¹²³ As suggested above, concentration, emotional reaction, speed of reaction, and influence on memory are crucial factors here. It is therefore more important to determine what manifests in the intoxicated person's behaviour rather than only the presence of the substance in the person.

It is also important to determine the **recency** of the use, especially in the case where the individual displays behaviour that would have a negative impact on the vetting decision.¹²⁴ This assumes that the more recent a behaviour has occurred, the more likely it is to occur again, especially if it coincided with a pleasurable experience.

There are other **collateral factors** that the vetting officer must consider, such as how the person had obtained the substance, whether there was illegal involvement, such as selling, cultivating, manufacturing, processing, distributing or using it outside the private domain or using it in public or attending work intoxicated.

After considering these factors, the vetting officer must determine the **security risk** that the individual poses. Security risk determination is a weighing process where the adjudicator will typically consider various factors. In the South African context, Mdluli suggests the following nine factors:

- the nature, extent and seriousness of the conduct;
- the circumstances surrounding the conduct, or any knowledgeable participation;
- the frequency and recentness of the conduct;
- the individual's age and maturity at the time of the conduct;
- willingness to participate;
- the presence or absence of rehabilitation and other pertinent behavioural changes;
- the motivation for the conduct;
- the potential for pressure, coercion, exploitation or duress; and
- the likelihood of continuation or recurrence.¹²⁵

The above factors relate closely to the considerations mentioned previously.

It is important to note that employees using cannabis at work may place the employer and other employees at risk if there is an incident where other employees get injured or even die due to an employee's use of cannabis (for example through the use of weapons or heavy machinery). Questions will then be asked regarding measures the employer had put in place to avert the occurrence of the incident; thus, placing the employer at risk for litigation or causing public embarrassment for the employer or organisation. This emphasises the necessity for an employer to have a well-written policy to provide regulatory certainty for both the employee and the organisation, and to consider these aspects in determining the risk.

From the above, it would be safe to postulate that the major concern with uncontrolled cannabis consumption and its unforeseen consequences is that using cannabis might contribute to the development of emotional, mental and personality disorders, which are likely to affect an individual's psychological, social and occupational functioning adversely. These are likely to lead to the exercise of questionable judgement, unreliability, failure to control impulses, and an increase in the risk of unauthorised disclosure of classified or sensitive information due to carelessness. If cannabis consumption coincides with known illegal activities and an unwillingness to comply with rules and regulations, it raises questions regarding an individual's willingness or ability to protect classified or sensitive information.

There are, however, still considerable uncertainties regarding the risks and benefits of cannabis use. It is worth noting that Laurens and Carstens suggest that the legal use of cannabis should be viewed from the same perspective as legal alcohol use and its effects on the workplace.¹²⁶ Van Niekerk et al. postulate that organisations, which have strict health and safety measures in place, are likely to deal with the impact of personal cannabis use in the same way they are dealing with alcohol intoxication.¹²⁷ See the reference above on workplace policies. The same can therefore be suggested for organisations that have strict measures in place with respect to security.

All the above considerations should take place within the **legal context**, which implies that the individual's constitutional rights should not be limited while remaining within justifiable limits. There might also be instances where there is a risk that is manageable but with the necessary interventions. When a risk is identified, the organisation could therefore decide to manage the risk. Mdluli makes a number of suggestions for risk management.¹²⁸ In the case of job applicants, a decision can be made to avoid or prevent the risk by refusing a security clearance and not appointing the individual. This would, however, depend on the nature of the job the incumbent will do, or it will depend on whether the organisation has a zero-tolerance policy for certain aspects. In the case of existing employees, the vetting authority may prevent the risk by withdrawing, downgrading or refusing a security clearance. It is important that due process should always be followed. The following Acts make provision for dealing with members viewed as unfit for employment in the particular organisation:

- section 14(7) of the Intelligence Services Act, 65 of 2002;
- sections 38, 39(2)(a) and (4)(a) of the Defence Act, 42 of 2002; and
- the South African Police Service Act, 68 of 1995.

Due to issues related to security clearance, a person may be redeployed in a less sensitive post or to another state department, or be discharged if he or she cannot be deployed elsewhere. This implies that the evaluator must consider both disqualifying and mitigating conditions when making the vetting decision. It is important to take note of some of these disqualifying or mitigating conditions.

Disqualifying conditions would, for example, be the illegal cultivation, manufacture, processing, sale or distribution of the substance. Furthermore, a formal diagnosis of substance dependency or abuse (e.g. CUD) made by a healthcare professional can be a disqualifying condition, especially if the affected individual is, for example, sent for rehabilitation or treatment and he or she does not successfully complete the programme or fails to follow the treatment advice. An indication by the individual that he or she intends to continue abusing the substance despite advice from management to desist from doing so, may also be a disqualifying condition. The conduct of the individual when under the influence of the substance in public, such as driving under the influence, aggressive behaviour, jeopardising the welfare and safety of others or other criminal incidents related to the misuse of the substance need to be considered. The findings of a study on acute cannabis consumption and motor vehicle collision risk conducted by Asbridge confirmed a marked increased risk of motor vehicle collisions.¹²⁹

Another important disqualifying condition is the use of the substance at work or to report to work or duty when in an impaired or intoxicated condition. If the individual's conduct is of such a nature that exposing the conduct creates a vulnerability for the individual in terms of duress, manipulation or exploitation by any entity, such as a foreign intelligence service, crime syndicate or individuals, a disqualifying situation may result. All these instances may lead to an unfavourable determination. It is furthermore important to determine the motivation for the conduct and the likelihood of the continuation or reoccurrence of the conduct.

There are several **mitigating conditions** that could lessen the security concerns. Illegal conduct committed a long time ago; an isolated event; an anomaly with no recurring pattern; a firm intention to refrain from such behaviour in future; or successful completion of a rehabilitation programme may demonstrate positive changes in behaviour and need to be considered in mitigation. In the latter case, a favourable prognosis by a registered healthcare professional could also contribute to mitigating the initial risk. Should the individual acknowledge a situation where he or she is informed of the adverse impact of his or her substance abuse, be able to provide evidence of actions taken to overcome the problem, and establishes a pattern of abstinence from the substance, this would constitute a mitigating situation. This would be reinforced further by providing an affidavit in which the individual undertakes to abstain from the substance and acknowledges that any future involvement with the substance may lead to denial or revoking of the security clearance. Further mitigation is applied in the event of information obtained from an unsubstantiated or unreliable source or where the organisation has an employee assistance programme, but no support was provided to the employee.

Weighing up the aggravating and mitigating conditions in the context of the 'whole person' determines the individual's risk profile. This risk can be either significant or insignificant, leading to the issuing of a security clearance. As stated elsewhere, as a rule of thumb, the same principles can be applied as to the use of alcohol as both are legal substances that can be misused. A combination of the adjudicative guidelines for substance abuse and drug involvement could therefore be used when making a vetting decision.

Responsibility on employers

Ultimately, the above-mentioned factors and/or considerations can be used to determine whether a security clearance would be issued, denied or revoked. However, the discussion above also highlights that organisations and employers have some form of social responsibility where an employee is likely to be affected negatively by cannabis use, whether these negative consequences are already present or foreseen to manifest in the near future. In the case of already employed personnel, employers need to support their employees who use, abuse or are addicted to cannabis, as employers are responsible for the well-being of their employees. It is recommended that there must be open communication where the use of cannabis can be discussed openly.¹³⁰ It is of paramount importance that organisations rather follow a supportive approach where an intervention (assistance, such as counselling or progressive discipline) is initially implemented to protect the individual and his or her co-workers as opposed to following a punitive approach.

It is, furthermore, essential that employers ensure that their employees and prospective employees clearly understand their stance on the use of cannabis. This can be done through a workplace policy on cannabis. For example, employees must understand the meaning and implications of a 'zero tolerance' policy. There also needs to be a link to the occupational health and safety practitioners who must be able to do testing in the context of understanding the organisation's policies in this regard, which bio-matrix should be

employed to test for cannabis, and the establishment of screening and confirmation cut-off concentrations for $\Delta 9$ -THC.¹³¹ Likewise, it is also important to inform employees that the organisation is intolerant to employees not adhering to cannabis-related workplace policies due to its effect on the individual and the organisation. It is therefore advisable to rehabilitate before one terminates. Mdluli emphasises that all vetting processes, including remedial steps, be included in an employment contract or comprehensive vetting policy that is understandable and accessible to all employees.¹³²

From the preceding discussion, it is also clear that, despite the recent legalisation of cannabis in South Africa, a vetting decision in the event of cannabis use by an applicant for a security clearance is not clear cut and involves a number of considerations. The considerations deduced from the literature should be included in an organisation's vetting policy to guide vetting decision-makers (adjudicators) in making a recommendation with respect to an individual's eligibility for access to classified information. It is thus important that the necessary governance be in place to ensure that applicants are aware that present and past conduct may influence their eligibility for access to classified information.

Conclusion

Mdluli emphasises that the ultimate determination of whether a person would be allowed access to classified information should be consistent with national security, but it must be "an overall common-sense determination, based on careful consideration [...] in the context of the whole person".¹³³ Therefore, the aim of the study reported here was to address the security-vetting dilemma caused by the reformed social attitudes regarding cannabis as well as the partial legalisation thereof in South Africa, which may have a potential negative outcome in the workplace. It is clear that each security-vetting dilemma presents a different set of risks and threats that need to be assessed within the framework of national legislation allowing the use of cannabis by an adult in private. Evidently, although the private use of cannabis at home has been legalised, it does not necessarily mean that employees are entitled to attend the workplace under the influence of the substance. In the case of an applicant using cannabis, the vetting process may disclose circumstances that may lead to security breaches, but may also provide an opportunity to evaluate an individual's conduct in context. Vetting decision-makers can thus not apply a blanket approach in making decisions on an applicant's suitability for access to classified information. Everyone should be evaluated individually, applying the 'whole person' concept, weighing up the aggravating and mitigating conditions in relation to the concern that may arise from the use of cannabis. The consumption of alcohol and the frequency thereof have been considered for decades in vetting decisions, and the authors advocate similar considerations for cannabis use.

It is important not to be blindsided by the applicant's constitutional rights, but also to consider the constitutional limitation clause that clearly mandates the limitation of a right where it is reasonable and justifiable considering the importance of the limitation, namely the protection of state security during security vetting. Furthermore, a job application is a voluntary process, and advertisements of government and other posts

normally warn potential applicants that obtaining the necessary security clearance is a requirement for employment.¹³⁴ The procedure usually includes written consent by the applicant.¹³⁵

On a practical level, the above-mentioned analysis clearly calls for employers to have cannabis-related workplace policies in place and to ensure that security-vetting institutions also have policies in place providing guidance to vetting practitioners in withdrawing or refusing a security clearance in relation to cannabis use. Employers should ensure that they have a cannabis-use policy available, which is accessible to employees; thus, emphasising awareness of the policy and its implications. Security vetting is intrusive and intended to uncover and analyse a combination of factors that can either enhance or mitigate an identified risk.

This article highlighted the necessity to train security-vetting investigators in exploring issues related to the use of cannabis to determine the effect of its use on the work environment in general and more specifically to establish an individual's eligibility for access to classified information and to view it within the context of current workplace policies.

Finally, making vetting decisions in the context of the now legalised cannabis is still filled with uncertainty. Therefore, this article aimed to stimulate further research into understanding both recreational and medicinal use of cannabis and its effect on the workplace and in situations where a determination must be made with respect to a person's eligibility for access to classified information.

ENDNOTES

- ¹ Colonel (Dr) Petrus Bester is a senior lecturer in Industrial Psychology at the Faculty of Military Science, Stellenbosch University. Piet Bester grew up on a farm and during national service (conscription) he joined the South African Defence Force and obtained the degrees B Mil, Hons B Mil (Industrial Psychology) and a master's degree in Human Resources Management. He also completed the Doctoral Programme: Leadership in Performance and Change. During his military career, he completed the South African National Defence Force's Joint Senior Command and Staff Programme at the South African National War College, the South African National Defence College's Security and Defence Studies Programme and a Postgraduate Diploma in the Management of Security at the University of the Witwatersrand. Piet served as an army intelligence officer, intelligence officer at the Defence Intelligence Division, and in 2001 was re-employed as an industrial psychologist to the South African Military Health Service. Piet is currently a senior lecturer at the Stellenbosch University Faculty of Military Science. His research interests are leadership, integrity, performance enhancement, test construction, and national security.
- ² Lieutenant Colonel (Dr) Sonja Els is a senior lecturer in Mercantile and Public Law at the Faculty of Military Science, Stellenbosch University. About the authors: Sonja Els completed the B Juris degree at North-West University (then PU vir CHO) after which she worked as public prosecutor at the Department of Justice for a period of five years. After obtaining the LLB degree, she worked at SASOL Secunda as commercial officer and later practised as an advocate of the High Court in Pretoria. In her military career at Defence Legal Services Division, she served as prosecution counsel and military law instructor at the School of Military Justice where she taught military law, trial advocacy, and law of armed conflict. She obtained the LLM and LLD degrees through the University of South Africa. Sonja is currently a senior lecturer at the Faculty of Military Science at Stellenbosch University. Her research interests are military law, law of peace operations, and law of criminal procedure.
- ³ Republic of South Africa. *Minimum Information Security Standards (MISS)*. Pretoria: Government Printing Works, 1996.
- ⁴ R Walton. "Balancing the insider and outsider threat". *Computer Fraud & Security* November. 2006. 8.
- ⁵ S Kühn & A Nieman. "Can security vetting be extended to include the detection of financial misconduct?" *African Security Review* 26/4. 2017. 413–433. doi: 10.1080/10246029.2017.1294096; BD Mdluli. *Fundamentals of security vetting in a democratic South Africa*. Cape Town: BM Consultants, 2011, 3.
- ⁶ JB Laurens & PA Carstens. "Medicine and the law: Cannabis legalisation and testing for cannabis use in safety- and risk-sensitive environments". *South African Medical Journal* 110/10. 2020. 995–998.
- ⁷ Staff Writer. "Everything you need to know about South Africa's weed laws – and what's coming next". *BusinessTech*. 7 June 2019. <<https://businesstech.co.za/news/business/322063/everything-you-need-to-know-about-south-africas-weed-laws-and-whats-coming-next/>> Accessed on 11 December 2020; R van Niekerk, M Yeates & P van Staden. "Legalization of cannabis: The real impact in the workplace". Online panel discussion at the 22nd Annual SIOPSA Conference Leading through Innovation: Navigating the New World of Work, 1–3 December 2020. <<https://youtu.be/NVwFIgSaJUK/>> Accessed on 04 December 2020; Minister of Justice and Constitutional Development and Others v Prince (Clarke and Others Intervening); National Director of Public Prosecutions and Others v Rubin; National Director of Public Prosecutions and Others v Acton (CCT 108/17) 2018 ZACC 30.

- ⁸ Van Niekerk *et al. op. cit.*
- ⁹ J Carnie. “Preserving security in a multi-tenanted hosting environment”. *Network Security* 2010/4. 2010. 13.
- ¹⁰ Mdluli *op. cit.*, p. 78.
- ¹¹ *Ibid.*, p. 79.
- ¹² Republic of South Africa *op. cit.*, p. 13.
- ¹³ South African Government. *National Strategic Intelligence Act 39 of 1994*. Pretoria: Government Printing Works, 1994, Section 1.
- ¹⁴ MB Afolabi. “An insight into security vetting”. In LN Asiegbu, MB Afolabi & DO Bodunde (eds), *Unending frontiers in intelligence and security studies*. Ado-Ekiti: Department of Intelligence and Security Studies, Afe Babalola University, 2017, 61–69.
- ¹⁵ K Molapo. “Security vetting in the Department of Home Affairs”. MA thesis. University of the Witwatersrand, 2017. <<http://hdl.handle.net/10539/23041://uir.unisa.ac.za/handle/10500/25690://youtu.be/NVwFgSaJuk/>> Accessed on 12 June 2016; Mdluli *op. cit.*, p. 105.
- ¹⁶ A Barnea. “Counterintelligence: Stepson of the intelligence discipline”. *Israel Affairs* 23/4. 2017. 715–726. doi: 10.1080/13537121.2017.1333725
- ¹⁷ W Wiese. Presentation on espionage case studies. Pretoria: Defence Intelligence Media Centre, 2020.
- ¹⁸ Molapo *op. cit.*, p. 1.
- ¹⁹ Mdluli *op. cit.*, p. 3.
- ²⁰ Defence Vetting Agency. “Welcome to the DVA”. 2003. <<https://www.gov.uk/government/organisations/defence-vetting-agency>> Accessed on 4 January 2021.
- ²¹ A Hazekamp. “The trouble with CBD oil”. *Medical Cannabis and Cannabinoids* 1. 2018. 65–72. doi: 10.1159/000489287; B Dhakal. “Is it worth legalizing cannabis uses for public? Harms and benefits of cannabis use”. Research Gate, 2020. <<http://www.nzfsc.co.nz/>> [https://www.researchgate.net/publication/344947474_Is_it_worth_of_legalizing_cannabis_uses_for_public_Harms_and_Benefits_of_Cannabis_Uses] Accessed on 3 January 2021; D Piomelli. “Editorial: Demystifying cannabis”. *Cannabis and Cannabinoid Research* 4/1. 2019. 1–2.
- ²² W Hall, E Hoch & V Lorenzetti. “Cannabis use and mental health: Risks and benefits”. *European Archives of Psychiatry and Clinical Neuroscience* 269. 2019. 1–3. doi: 10/1007/s00406-019-00986-2
- ²³ RL Gunn, ER Aston, AW Sokolovsky, HR White & KM Jackson. “Complex cannabis use patterns: Associations with cannabis consequences and cannabis use disorder symptomatology”. *Addictive Behaviors* 105. 2020. 1–8. doi: 10.1016/j.addbeh.2020.106329
- ²⁴ Staff Writer. “The most widely used drugs in South Africa”. *BusinessTech*. ²⁴ September 2020. <<https://businesstech.co.za/news/lifestyle/435579/the-most-widely-used-drugs-in-south-africa/amp/>> Accessed on 28 December 2020.
- ²⁵ V Singh. “The need for decriminalization of the use of cannabis – a comparative legal study”. MA thesis. University of South Africa, 2019.
- ²⁶ G Ndong. “Drug abuse: Youth in South Africa”. Soul City Institute, n.d. <<https://www.soulcity.org.za/resources/research/literature-reviews/soul-city-institute-drug-abuse-youth-south-africa.pdf/view/>> Accessed on 23 January 2021.
- ²⁷ K Peltzer, S Ramlagan, BD Johnson & N Phaswana-Mafuya. “Illicit drug use and treatment in South Africa”. *PubMed Central* 45/113. 2010. 2221–2243.

- ²⁸ M Amlung & J MacKillop. “Availability of legalized cannabis reduces demand for illegal cannabis among Canadian cannabis users: Evidence from a behavioural economic substitution paradigm”. *Canadian Journal of Public Health* 110. 2019. 216–221. doi: 10.17269/s41997-018-0160-4; D Shah, P Chand, M Bandawar, V Benegal & P Murthy. “Cannabis induced psychosis and subsequent psychiatric disorders”. *Asian Journal of Psychiatry* 30. 2017. 180–184. doi: 10.1016/j.ajp.2017.10.003; Hall *et al. op. cit.*, p. 2; L Karila, P Roux, B Rolland, A Benyamina, M Reynaud, H-J Aubin & C Lançon. “Acute and long-term effects of cannabis use: A review”. *Current Pharmaceutical Design* 20/25. 2014. 4112–4118. doi: 10.2174/13816128113199990620
- ²⁹ L Dellazizzo, S Potvin, M Athanassiou & A Dumais. “Violence and cannabis use: A focused review of a forgotten aspect in the era of liberalizing cannabis”. *Frontiers in Psychiatry* 11. 2020. 1–11. doi: 10.3389/fpsy.2020.567887
- ³⁰ Dellazizzo *et al. op. cit.*, p. 2; Dhankal *op. cit.*; MM Sweeney, O Rass, C DiClemente, RL Schacht, HT Vo, MJ Fishman, JS Leoutsakos, MZ Mintzer & MW Johnson. “Working memory training for adolescents with cannabis use disorder: A randomized controlled trial”. *Journal of Child & Adolescent Substance Abuse* 27/4. 2018. 211–226. doi: 10.1080/1067828X.2018.1451793
- ³¹ Sweeney *et al. op. cit.*
- ³² M Colizzi & S Bhattacharyya. “Editorial: Cannabis: Neuropsychiatry and its effects on brain and behavior”. *Brain Sciences* 10/11/. 2020. 1–5. doi: 10.3390/brainsci10110834
- ³³ Colizzi & Bhattacharyya *op. cit.*, p. 3.
- ³⁴ S Andréasson, P Allebeck, A Egnström & U Rydberg. “Cannabis and schizophrenia: A longitudinal study of Swedish conscripts”. *Lancet* 330. 1987. 1483–1486; Singh *op. cit.*, p. 27.
- ³⁵ Fried *et al.*, Hanson *et al.* & Hooper *et al.*, as cited in Sweeney *et al. op. cit.*
- ³⁶ K Mokwena. “Social and public health implications of the legislation of recreational cannabis: A literature review”. *African Journal of Primary Health Care & Family Medicine* 11/1. 2019. 1–6.
- ³⁷ *Ibid.*, p. 2.
- ³⁸ Van Niekerk *et al. op. cit.*
- ³⁹ Mokwena *op. cit.*, p. 1.
- ⁴⁰ Singh *op. cit.*, p. 23.
- ⁴¹ *Ibid.*
- ⁴² *Ibid.*
- ⁴³ The authors made a summary of various studies as reported by Singh *op. cit.*, pp. 24–28.
- ⁴⁴ Van Niekerk *et al. op. cit.*
- ⁴⁵ Dellazizzo *et al. op. cit.*, p. 1.
- ⁴⁶ D Feingold, O Livne, J Rehm & S Lev-Ran. “‘Cannabis load’: Measuring intensity of cannabis use and its association to cannabis use disorder”. *American Journal on Addictions* (under review).
- ⁴⁷ Dellazizzo *et al. op. cit.*, p. 6.
- ⁴⁸ *Ibid.*, p. 1.
- ⁴⁹ LJ Schep, RJ Slaughter, P Glue & P Gee. “The clinical toxicology of cannabis”. *New Zealand Medical Journal* 133/1523. 2020. 96–103.
- ⁵⁰ *Ibid.*, p. 98.
- ⁵¹ F Mouro, JA Ribeiro, AM Sebastiao & N Dawson. “Chronic, intermittent treatment with a cannabinoid receptor agonist impairs recognition memory and brain network functional connectivity”. *Journal for Neurochemistry* 147/1. 2018. 71–83.
- ⁵² Dellazizzo *et al. op. cit.*, p. 6.
- ⁵³ Feingold *op. cit.*
- ⁵⁴ Gunn *et al. op. cit.*, p. 6.

- ⁵⁵ Hazekamp *op. cit.*, p. 66.
- ⁵⁶ Gunn *et al. op. cit.*, p. 6.
- ⁵⁷ *Ibid.*
- ⁵⁸ Colizzi *op. cit.*, p. 2; Centre for Disease Control and Prevention. “How harmful is K2/Spice (synthetic marijuana or synthetic cannabinoids)?” 2021. <<https://www.cdc.gov/marijuana/faqs/how-harmful-is-k2-spice.html>> Accessed on 28 May 2021.
- ⁵⁹ JC van Ours & J Williams. “The effects of cannabis use on physical and mental health”. *Journal of Health Economics* 31/4. 2012. 564–577. doi: 10.1016/j.jhealeco.2012.04.003
- ⁶⁰ *Ibid.*, p. 576.
- ⁶¹ Feingold *op. cit.*
- ⁶² S Lenton, VA Frank, MJ Barratt, GR Potter & T Decorte. “Growing practices and the use of potentially harmful chemical additives among a sample of small-scale cannabis growers in three countries”. *Drug and Alcohol Dependence* 192. 2018. 250-256. doi: 10.1016/j.drugalcdep.2018.07.040
- ⁶³ Gunn *et al. op. cit.*, p. 6.
- ⁶⁴ Dellazizzo *et al. op. cit.*, p. 2.
- ⁶⁵ Gunn *et al. op. cit.*, p. 6.
- ⁶⁶ Mdluli *op. cit.*, preface.
- ⁶⁷ South African Police Service Act 68 of 1995, Section 70.
- ⁶⁸ Defence Act 42 of 2002, Chapter 10, sections 37–41.
- ⁶⁹ S Riley, N Vellios & C van Walbeek. “An economic analysis of the demand for cannabis: Some results from South Africa”. *Drugs: Education, Prevention and Policy* 27/2/ 2019. 123–130. doi: 10.1080/09687637.2019.1581139
- ⁷⁰ Minister of Justice and Constitutional Development and Others v Prince (Clarke and Others Intervening); National Director of Public Prosecutions and Others v Rubin; National Director of Public Prosecutions and Others v Acton (CCT 108/17) 2018 ZACC 30; Drugs and Trafficking Act 140 of 1992; Medicines and Related Substances Act 101 of 1965.
- ⁷¹ J Burchell. *Principles of criminal law*. Pretoria: Juta, 2013; Singh *op. cit.*, p. 8.
- ⁷² Customs and Excise Duties Amendment Act, 1922.
- ⁷³ Singh *op. cit.*, p. 34.
- ⁷⁴ Medical, Dental and Pharmacy Act 13 of 1928.
- ⁷⁵ Weeds Act 42 of 1937.
- ⁷⁶ Medicines and Related Substances Act 101 of 1965.
- ⁷⁷ Pharmacies Act 53 of 1974.
- ⁷⁸ Criminal Procedure Act 51 of 1977.
- ⁷⁹ Drugs and Trafficking Act 140 of 1992.
- ⁸⁰ GN R509 of 2003, Schedule 7.
- ⁸¹ S v Bhulwana, S v Gwadiso (CCT 12/95, CCT 11/95) 1995 ZACC 11; 1996 (1) SA 388; 1995 (12) BCLR 1579 [1].
- ⁸² Medical Innovation Bill 2014 (rejected).
- ⁸³ Singh *op. cit.*, p. 30.
- ⁸⁴ I Currie & C de Waal. *The Bill of Rights handbook* (6th ed.). Cape Town: Juta, 2015.
- ⁸⁵ Constitution of South Africa, 1996, section 36.
- ⁸⁶ *Ibid.*, Section 36(1).
- ⁸⁷ Prince v President, Cape Law Society, 2001 BCLR 133, as cited in Singh *op. cit.*, p. 36 (hereinafter referred to as “the first Prince case”).
- ⁸⁸ *Ibid.*, p. 37.

- ⁸⁹ Prince v Minister of Justice and Constitutional Development and Others: Answering Affidavit of the Minister of Health, 2017 ZAWCHC; Rubin v National Director of Public Prosecutions and Others; Acton and Others v National Director of Public Prosecutions and Others (4153/2012) 2017 ZAWCHC 30, 2017 2 All SA 864 (WCC); 2017 (4) SA 299 (WCC); E Lubaale & S Mavundla. “Decriminalisation of cannabis for personal use in South Africa”. *African Human Rights Journal* 19/2. 2019. 819–842.
- ⁹⁰ As discussed by Singh *op. cit.*, p. 44.
- ⁹¹ Bernstein and others v Bester and others, NNO 1996 ZACC 2; 1996 (2) SA 751 (CC), as cited in Singh *op. cit.*, p. 47.
- ⁹² Singh *op. cit.*, p. 48.
- ⁹³ Prince v Minister of Justice and Constitutional Development and Others; Rubin v National Director of Public Prosecutions and Others; Acton and Others v National Director of Public Prosecutions and Others.
- ⁹⁴ *Ibid.*
- ⁹⁵ C Parry, B Myers & J Caulkins. “Correspondence: Decriminalisation of recreational cannabis in South Africa”. *The Lancet* 393/10183. 2019. 1804–1805. doi: 10.1016/S0140-6736(19)30011-X; Lubaale & Mavundla *op. cit.*, p. 821.
- ⁹⁶ Prince v Minister of Justice and Constitutional Development and Others; Rubin v National Director of Public Prosecutions and Others; Acton and Others v National Director of Public Prosecutions and Others (4153/2012) 2017 ZAWCHC 30, 2017 2 All SA 864 (WCC); 2017 (4) SA 299 (WCC) [130].
- ⁹⁷ Lubaale & Mavundla *op. cit.*, p. 826.
- ⁹⁸ Draft Cannabis for Private Purposes Bill, 2020.
- ⁹⁹ M Steynvaart, M Wegerif & P Vale. “Proposed cannabis law has serious shortcomings and must go back to the drawing board”. *Daily Maverick*. 10 December 2020. <<https://www.dailymaverick.co.za/article/2020-12-10-proposed-cannabis-law-has-serious-shortcomings-and-must-go-back-to-the-drawing-board/>> Accessed on 2 January 2021; A Richards & A Wood. “Is the 2020 Cannabis Bill a flower among weeds or a weed among flowers?” International Law Office, 17 September 2020. <<https://www.internationallawoffice.com/Newsletters/Product-Regulation-Liability/South-Africa/ENSafrica/Is-the-2020-Cannabis-Bill-a-flower-among-weeds-or-a-weed-among-flowers>> Accessed on 12 February 2021.
- ¹⁰⁰ Draft Cannabis for Private Purposes Bill, 2020.
- ¹⁰¹ *Ibid.*
- ¹⁰² Mokwena *op. cit.*, p. 2.
- ¹⁰³ Laurens & Carstens *op. cit.*, p. 995.
- ¹⁰⁴ Occupational Health and Safety Act 85 of 1993.
- ¹⁰⁵ *Ibid.*, Section 8(1).
- ¹⁰⁶ Mine Health and Safety Act 29 of 1996.
- ¹⁰⁷ Employment Equity Act 55 of 1998.
- ¹⁰⁸ Van Niekerk *et al. op. cit.*
- ¹⁰⁹ H Terblanche. “Cannabis policies in the workplace – some re-thinking required?” *Engineering News*. n.d. <<https://www.engineeringnews.co.za/article/annabis-policies-in-the-workplace-some-re-thinking-required-2020-03-16/rep>> Accessed on 18 December 2020.
- ¹¹⁰ Kühn & Nieman *op. cit.*, p. 429.
- ¹¹¹ Mdluli *op. cit.*, p 105.
- ¹¹² National Oceanic and Atmospheric Administration. “Adjudicative guidelines for determining eligibility for access to classified information”. 24 March 1997. <https://www.wrc.noaa.gov/wrso/security_guide/adjudica.htm#Drug%20Involvement> Accessed on 8 January 2021.

- ¹¹³ Mdluli *op. cit.*, pp. 105–106, 118.
- ¹¹⁴ LW Mahlatsi. “An exploration of the chasm in the protection of classified information in South African government departments”. MA thesis. University of South Africa, 2017.
<<http://uir.unisa.ac.za/handle/10500/25690>> Accessed on 18 January 2021.
- ¹¹⁵ *Ibid.*
- ¹¹⁶ Van Niekerk *et al. op. cit.*
- ¹¹⁷ *Ibid.*
- ¹¹⁸ *Ibid.*
- ¹¹⁹ *Ibid.*
- ¹²⁰ National Oceanic and Atmospheric Administration *op. cit.*
- ¹²¹ Feingold *op. cit.*, p. 6.
- ¹²² Gunn *et al. op. cit.*, p. 6.
- ¹²³ *Ibid.*
- ¹²⁴ National Oceanic and Atmospheric Administration *op. cit.*
- ¹²⁵ Mdluli *op. cit.*, p. 118.
- ¹²⁶ Laurens & Carstens *op. cit.*, p. 995.
- ¹²⁷ Van Niekerk *et al. op. cit.*
- ¹²⁸ Mdluli *op. cit.*, pp. 32–33.
- ¹²⁹ Singh *op. cit.*, p. 27.
- ¹³⁰ Van Niekerk *et al. op. cit.*
- ¹³¹ Laurens & Carstens *op. cit.*, p. 995.
- ¹³² Mdluli *op. cit.*, p. 197.
- ¹³³ *Ibid.*, p. 119.
- ¹³⁴ *Ibid.*, pp. 29, 119.
- ¹³⁵ *Ibid.*, p. 41.
-

SCIENTIA MILITARIA

South African Journal of Military Studies



The role of Russian volunteers in the collapse of the international legion in the South African War

Boris Gorelik

Institute for African Studies, Russian Academy of Sciences, Moscow¹³⁶

Abstract

The establishment of an international legion by General Georges de Villebois-Mareuil in March 1900 was the most ambitious attempt to coordinate the activities of foreign volunteer units within a single formation during the South African War. On the general's death (5 April 1900), De Villebois's Russian deputy and successor, Lieutenant Colonel Yevgeny Maximov, lost control of the legion. As a hierarchical formation, it survived De Villebois by only two weeks. Given Maximov's ample experience in conventional and unconventional warfare, and the accolades that he later won from the republican political and military leadership, including the rank of general, the legionnaires' opposition to him appears to be unjustified. Accounting for the discrepancy between historians' perceptions of Maximov and his lack of success in controlling the legion is based on a premise that legionnaires had compelling reasons to reject his authority. Maximov had come to Africa ostensibly as a journalist. He was yet to earn the respect of his subordinates because he had not seen action in the South African War. In subsequent weeks, having resigned from his post in the legion, he distinguished himself in the engagement at Tobaberg as the leader of the Dutch corps. By then, Maximov had the 'moral authority' to command an international unit, but his poor health prevented him from carrying on fighting. Unlike De Villebois, who was supported by like-minded French lieutenants, Maximov could not rely on his compatriots. Instead of endorsing his claim to leadership, the Russian corps refused to join the legion while he was in charge, and intentionally discredited him. In the power vacuum after De Villebois's death, the legion collapsed, and a chance to transform the emerging alliance of foreign volunteer units into a formidable force was missed.

The ill-starred successor

In March 1900, with the burgher troops retreating on several fronts, the republican military leadership decided to assemble volunteers of various nationalities fighting on the Boer side. The establishment of an international legion by General Georges de Villebois-Mareuil, the most senior European officer on the side of the Boers, was the most ambitious attempt to coordinate the activities of foreign volunteer units within a single formation during the South African War.¹³⁷

On 5 April, the general fell in battle when his detachment was overwhelmed by Lieutenant General PS Methuen's troops near Boshof. The legion as a hierarchical formation survived De Villebois by only two weeks. Afterwards, it functioned as a loose association of autonomous units.

The demise of the legion has been viewed by historians as a consequence of the general's death. A biographer of Camillo Ricchiardi, an Italian volunteer on the Boer side, opines that only De Villebois had "the capacity and charisma required to have kept such a complex and divergent unit going".¹³⁸ Nobody else could hold together this alliance of fiercely independent and ill-disciplined combatants.¹³⁹

Why not De Villebois's deputy, Lieutenant Colonel Yevgeny Maximov (1849–1904)? One of the most senior foreign officers on the Boer side, Maximov had ample experience in conventional and unconventional warfare. He became the second foreigner after De Villebois to receive the rank of general in the burgher armies. Reportedly, General Louis Botha referred to the Russian officer as "the bravest man in the Transvaal and a gifted leader".¹⁴⁰ President Paul Kruger believed that Maximov's services to the ZAR "were of extraordinary importance and deserving of great respect".¹⁴¹ State Secretary Francis William Reitz recounted that Boer commandos praised Maximov's "bravery, his ability to keep discipline among his men and the value of his advice".¹⁴²

However, despite the trust placed in him by De Villebois and the support from the republican political leadership, this valiant soldier and gifted commander failed as the French general's replacement. In less than a week after his appointment, Maximov gave up the command of the legion. He could not overcome what Michael Davitt, an Irish politician and war correspondent on the Boer side, characterised as "jealousies breaking out among the numerous would-be successors of the gallant French officer".¹⁴³

Given Maximov's abilities and experience, the volunteers' opposition to him appears to be unjustified. His short temper and disciplinarianism put his subordinates off. However, agreeableness is not a prerequisite for leading a military unit, and the commander's idiosyncrasies were eclipsed by his glory. It would also be an exaggeration to assert that leaders of volunteer units preferred to keep their independence at all costs, because soon after the collapse of the legion, they petitioned the authorities for its revival. Davidson and Filatova, in their seminal study of Russian involvement in the South African War, suggest that legionnaires found it hard to emulate Maximov's self-sacrifice in battle.¹⁴⁴ Yet, while few combatants risked their lives as readily as he did, Maximov got a chance to show his bravery on South African soil only after he had lost control over the legion.

What accounts for the discrepancy between historians' perceptions of Maximov as an outstanding military leader and his lack of success in controlling the legion?

Legionnaires did not have the benefit of hindsight, which influences our current perceptions of Maximov. Perhaps their view was affected by important considerations that may have been overlooked or underplayed in historiography. I agree with Davidson and Filatova who believe that legionnaires mistrusted Maximov.¹⁴⁵ I hypothesise that his position in the legion was precarious from the beginning, and that his subordinates had compelling reasons to reject his authority. The power vacuum led to the collapse of the international legion.

The study on which this article reports involved re-examination of primary sources used by my predecessors, particularly accounts by legionnaires and observers. The

narratives were analysed in the context of Maximov's military career from the 1870s to establish his status in South Africa before and after joining the legion. Understanding the legionnaires' opposition to Maximov also required a scrutiny of the often-quoted book by Sophia Izedinova, a Russian nurse with the Russo-Dutch Ambulance and the most dedicated chronicler of Maximov's career in South Africa.¹⁴⁶ Her memoir is regarded as a key primary source of information on the international legion although her partiality for Maximov and the inordinateness of her criticism of other foreign volunteers have been recognised by historians.

A critique of Izedinova's account as a primary source

"As far as her admiration for Maximov is concerned, her memoirs leave little doubt that the nurse was in love with him", note Davidson and Filatova.¹⁴⁷ Izedinova's bias in favour of the Russian officer does not invalidate her account. Nevertheless, it brings into question her assessment of those who displeased Maximov, including Boer generals and leaders of foreign volunteer units that stayed clear of the ill-fated legion.

Izedinova tended to range Maximov against other commandants by emphasising his valour and integrity and their supposed egoism and ineptitude. For example, a biographer of De Villebois notes that her opinion of the French general as tactless and maladroit disagreed with statements by those who, unlike the nurse, knew the founder of the legion personally.¹⁴⁸ Izedinova alleged that the Italian scouts were plunderers although their unit did not operate at Fourteen Streams, the only area where Izedinova worked on the frontline.¹⁴⁹ She stated that Alexey Ganetsky, the commandant of the Russian corps, brought his country into disrepute, although other accounts indicate that Izedinova was prejudiced because he prevented Maximov from leading that unit.¹⁵⁰

Tracing the nurse's career in March and April 1900 reveals that she did not witness either the formation and disintegration of the legion or the engagements in which Maximov took part and which she vividly described in her book.

The nurse arrived in Kroonstad with the Russo-Dutch Ambulance in late March 1900. She spent most of her time at the hospital, where her only source of information on the legion was "rumours and stories from both patients [...] and our frequent visitors, Dutch military agents".¹⁵¹ Soon, while the legion was still being formed, Izedinova left the town for Fourteen Streams, and never returned to the Orange Free State.¹⁵² Working nearly 300 km from Kroonstad in the following four weeks, she had no first-hand knowledge of the tensions within the international legion.

Like other Russians, Izedinova distrusted Maximov and spoke to him politely but coldly until she learnt about his gallantry.¹⁵³ In mid-May, she made friends with the convalescent compatriot and, apparently, travelled back to Russia in his company.

When writing about the war, other Russian doctors and nurses focused on their medical work. They were mostly interested in wounds and their treatment, the recovery of their patients, and the attitudes of their colleagues and the authorities. Even Izedinova's superiors in the Russo-Dutch Ambulance rarely discussed political and military matters

in their reports, articles and interviews. “We have had little accurate information regarding the course of hostilities, because most rumours that reach us turn out to be false,” admitted a Russian doctor in April 1900.¹⁵⁴

By contrast, Izedinova dedicated dozens of pages to her descriptions of battles; characterisation of burgher leaders and foreign volunteers; evaluation of Boer foreign relations and military organisation; assessment of Boer strategic plans and their implementation; and explanation of causes for Boer defeats. If her book is viewed as a memoir, the dogmatism of her views of people that she hardly knew and the amount of detail in her stories of events that she did not witness, can be puzzling.

The book came out in 1903, when first-hand accounts of the war had already been published, including the De Villebois journal. The nurse cited those works, but she also claimed to have collected “accurate, reliable” data in her conversations with the Reitz family, General Louis Botha’s wife and other Boers.¹⁵⁵ Yet, with regard to the international legion, it seems that her main source of information was Yevgeny Maximov. Some passages in her account of the legion carry strong emotion, although the nurse, unlike Maximov, did not have a vested interest in its success. For example, she fully shared Maximov’s opinion of De Villebois, which the Russian officer expressed in his writings. Apparently, the nurse’s interpretation of the events was heavily influenced by the Russian officer’s stance, which made her account unobjective. Moreover, she probably conveyed some of his views and judgements that he was unable or reluctant to publish under his name.

Izedinova did not state clearly that her views of the legion were based on indirect knowledge of the situation. In this respect, her book is not a memoir but a secondary source, grounded on unidentified accounts. Therefore, I have used her statements with caution and tended to rely on other sources.

The commandant’s deputy

During the conventional and transitional phases of the war, foreigners who fought for the republican cause either joined burgher commandos or organised independent, relatively small units which hardly collaborated with one another and reported directly to the commander-in-chief.¹⁵⁶

“Some of the leaders of those units asked commandants of the nearest commandos for instructions, but they could rarely get the necessary information and instructions even from them”, recounted the Russian military attaché with the Boer troops. “Consequently, those who considered themselves scouts carried out reconnaissance on their own initiative, completely disregarding the requirements of the situation; therefore, the information that they delivered was rarely useful, and the Transvaal generals did not always trust it.”¹⁵⁷

The decision to form an international legion under De Villebois was made at the historic council of war in Kroonstad on 17 March 1900, when the younger military leaders insisting on bolder action, better mobility and stricter discipline gained the upper

hand. De Villebois called it the “European legion” (*la légion européenne*), although membership was open to men from North America too.¹⁵⁸ Boer political and military leaders exerted their influence to swell the ranks of the new formation. Encouraged by President Martinus Theunis Steyn, a strong proponent of the legion, the government of the Orange Free State offered economic incentives to the legionnaires.¹⁵⁹ Foreign volunteers started gathering in Kroonstad, the temporary capital of the republic.

Newly appointed as Boer general and inspired by his service in the French Foreign Legion, De Villebois believed that control over volunteer units had to be exerted by professional soldiers who were familiar with best practice in Western-style warfare; therefore, his staff was composed of European and American officers.¹⁶⁰ Maximov, a European-trained soldier, shared his exasperation at the tactical errors of the Boers and their reluctance to assault the enemy when fortune would favour it. When Maximov first met De Villebois in Kroonstad on 23 March 1900, the general invited him to be his second-in-command.

Three decades before, as a cavalry officer in the peacetime Russia seeking a baptism of fire, Maximov had resigned and fought against Turkey in the Herzegovina uprising of 1875. He commanded volunteer units in the Serbian–Turkish War (1876–1877). Russia intervened in the hostilities, and Maximov re-joined the army. However, he was appointed military superintendent of railway stations, and spent the Russo–Turkish War (1877–1878) in the rear. Aspiring to see action again, Maximov went to Central Asia with a Red Cross ambulance and attained distinction in the Russian conquest of Turkestan in charge of a flying column in 1880–1881. The lieutenant colonel travelled in Ethiopia and Asia as a journalist and nearly went to Crete to fight as a volunteer for the Greeks against the Ottoman forces in 1896, but a conflict was avoided.¹⁶¹

De Villebois wanted his legion to conduct cavalry raids, similar to the ones carried out in the American Civil War, and it was expected that Maximov’s experience in guerrilla warfare and commanding a flying column would prove useful. Being well-connected, Maximov could also help De Villebois to deal with the Boer authorities. Besides, as the French volunteer, Henri-Marie-Albert Lecoy de la Marche pointed out, the lieutenant colonel was chosen as De Villebois’s chief of staff “perhaps because of his nationality”.¹⁶² De Villebois had written a monograph on the Imperial Russian Army.¹⁶³

Maximov accepted the proposal; the new position matched his ambition and experience. Soon, he procured from the authorities the ammunition that they had promised to De Villebois. Meanwhile, the founder of the legion, eager to take the field again, had no time for organisational problems. On 24 March 1900, De Villebois left Kroonstad with a flying column comprising dozens of foreign volunteers to make raids in the direction of Kimberley. As his deputy, Maximov was to complete the formation of the legion and wait for an order to follow De Villebois with the rest of the men.¹⁶⁴

The defiant Russian corps

Among the volunteer units that came to Kroonstad to join the legion was the 25–30-strong Russian corps. Formed in Natal in mid-March, the unit consisted of Russian-speaking members as well as Italians, Germans, Greeks and Portuguese.

The commandant of the Russian corps, Second Captain (*stabs-rotmistr*) Alexey Ganetsky, had charisma but none of Maximov's combat experience. A son of an illustrious general, Ganetsky left active duty as a dragoon officer with a Guards regiment to become an assistant to the minister of war. This 'well-known personage' in Russian society married a rich divorcee, and rebuilt the luxurious Sandunovsky Baths in Moscow.¹⁶⁵

On the ship to Mozambique in February 1900, Ganetsky discussed the idea of a Russian unit with Maximov and seemed willing to be his lieutenant. On their arrival, while the senior officer was establishing contact with political leaders of the ZAR in Pretoria, Ganetsky travelled to Glencoe. In early March, at the camp near the headquarters of the republican forces, he recruited Russian volunteers for the new corps. As the originator of the idea to form the unit, the charming and enthusiastic Ganetsky was elected to be commandant. Even those who had fought on Spioenkop and Thukela Heights supported the nomination of this newcomer.

When Ganetsky returned to Pretoria as the leader of the Russian corps, Maximov felt cheated. The lieutenant colonel believed that he deserved to be their commandant far more than the "trickster" (*mazourik*), as he called Ganetsky in his diary.¹⁶⁶ During their confrontation, Ganetsky, supported by other members of the corps, refused to renounce his claim to leadership.

It may seem extraordinary that the Russian officers disregarded military rank preferring to obey a second captain rather than a lieutenant colonel whose military career spanned 30 years. They did not respect the man who had brought honour to himself in charge of similar units in major wars. According to a member of the corps, Second Lieutenant Yevgeny Avgustus, they did not believe that Maximov was qualified "to set an example of proper organisation for the Boers"¹⁶⁷ even though they detested the lack of discipline and other flaws of burgher commandos.

Neither Ganetsky nor Maximov had proved their abilities in that war; they had not yet participated in engagements with the British, and their military credentials could not be verified in the Boer republics. However, members of the Russian corps took Ganetsky at his word. Their distrust of Maximov should be attributed to other factors.

In South Africa, Maximov was known only as a journalist and marksman who once shot a running springbok from the window of a moving train. For weeks after his arrival, Maximov introduced himself as a war correspondent for Russian newspapers, although his travel expenses were met by the Ministry of War in Saint Petersburg. Before his departure, the Russian General Staff had asked the Ministry of Foreign Affairs to introduce Maximov to the ZAR¹⁶⁸ government. Davidson and Filatova suggest that the Russian government wanted Maximov to advise the Boer authorities on the Russian foreign policy.¹⁶⁹ In early March, almost simultaneously with the secret discussions in Europe on a Russo–French–German mediation between the warring parties, Maximov convinced President Steyn to approach the Russian tsar with a request for conciliation. Perhaps his conversations in Pretoria had an effect, because, on 10 March 1900, Steyn and Kruger asked the great powers for their good offices to resolve the military conflict in South Africa.¹⁷⁰

Although the Boer presidents and other important politicians readily discussed politics and foreign relations with Maximov, his offer of assistance in military matters was declined. When he tried to organise a unit under his command, the republican authorities did not support his efforts. In frustration, Maximov was about to join a burgher commando as rank and file when he received the offer from De Villebois.¹⁷¹

Moreover, his compatriots in the Russian corps considered him an impostor: a policeman pretending to be a soldier. They knew that Maximov had served in the Special Corps of Gendarmes, the uniformed security police of the Imperial Russian Army; it was during those three years that he was made lieutenant colonel.¹⁷² Members of the Russian unit alleged that Maximov spied on his compatriots for their government. As reported by a Russian military agent who interviewed Russian volunteers on the Boer side, the lieutenant colonel appeared to be excessively involved in political affairs for a soldier.¹⁷³ His personal relations with top-ranking officials of the Boer republics strengthened the volunteers' conviction that he had a secret mission.¹⁷⁴ The Russian corps resented the prospect of being commanded by an "undercover agent".¹⁷⁵

Their suspicion was groundless: Maximov had resigned from the security police sixteen years before the South African War, and nothing suggests that he was their agent afterwards.¹⁷⁶ However, the Russian corps did not conceal their low opinion of the lieutenant colonel. A French volunteer recounted that the Russians could not pardon Maximov's "position as a police officer and even professed a certain contempt for him".¹⁷⁷

By the time the Russian corps reached Kroonstad in late March 1900, De Villebois had departed, and Maximov assumed command of the remaining part of the legion. Ganetsky and his subordinates had not changed their minds about Maximov, especially now that his position was far more powerful than the one that he had sought from them. Unwilling to follow the lieutenant colonel's orders, the Russian corps refused to join the international legion.

Their disrespect was imparted to other foreign volunteers bolstering opposition to De Villebois's deputy. The Russians spread rumours about Maximov, which he was unable to dispel, having no one to vouch for him. When the Russians revealed that Maximov had been a police officer, it reinforced the prejudice against him in the legion.

The fact that Maximov had once served in law enforcement in Russia could not, by itself, compromise him in the eyes of legionnaires. Professional soldiers were in the minority among foreign volunteers. Their overseas ranks and service records mattered little on commando, and they had to earn their reputations anew on South African battlefields. Besides, it was known that a foreign-born policeman, Major Gerard Marie Johan van Dam (1855–1940), was in charge of the prominent Johannesburg Police Commando. However, those who viewed Maximov as an unnecessary intermediary between themselves and De Villebois, particularly commandants of volunteer units within the legion, had no interest in rebutting the allegations against him.¹⁷⁸

In anticipation of news from De Villebois, the Russian corps put itself at the disposal of General Philip Botha, south of Brandfort. Lieutenant Ernest Galopaud and the French volunteers under his command also defied Maximov, leaving for Hoopstad in search of De Villebois and his flying column. About eighty Dutch volunteers as well as the German corps under Captain Charles Lorenz, the French unit under Lieutenant Olivier d'Etchegoyen and the Austro–Hungarian corps under Captain Julius Illés remained in Maximov's charge. However, the lieutenant colonel struggled to keep order among his subordinates or even to have them live in the camp and report for duty.¹⁷⁹ The inaction and anxiousness in De Villebois's absence exacerbated ethnic conflicts among the Dutch, the French and the German volunteers; therefore, Maximov redeployed his legionnaires from Kroonstad to Brandfort.¹⁸⁰

The collapse and attempts at revival

The death of De Villebois and the surrender of his men, which represented at least a third of the legion, in the Battle of Boshof shocked foreign volunteers at Brandfort.¹⁸¹ The British interred De Villebois with military honours, and he was mourned as a hero on the republican side. The most prominent foreign volunteer, on whom both legionnaires and Boer leaders pinned their hopes, seemed irreplaceable.

The news of the general's death reached his men at Brandfort on 7 or 8 April 1900.¹⁸² Maximov succeeded De Villebois as commandant of the legion, having been appointed by the president of the Orange Free State. Nevertheless, most legionnaires did not recognise his leadership. Neither was he able to resolve the disputes among his subordinates.¹⁸³

Besides, Maximov had a quarrel with Captain Lorenz, commandant of the German corps, whom he had characterised as “dutiful” and “soldier-like” (*obyazatelen, pokhozha na soldata*) in his diary not long before.¹⁸⁴ The German captain had been confident that the legion would grow to be a stable and efficient formation, but apparently, Maximov saw him as a contender. The Russian officer accused Lorenz of unscrupulousness in commissariat arrangements and tried to replace him. The Germans stood up for their elected leader, causing the Russian commandant to expel them from the legion.¹⁸⁵ Several compatriots of Lorenz crossed over to the German unit under Richard Runck. The indignant Maximov complained to President Steyn, but there was no bringing them back.¹⁸⁶

The Russian officer remained commandant of the international legion for only a few days. Since no other foreigner had the backing of most volunteers, Maximov was superseded by a Boer officer, General De la Rey's brother, Adriaan. However, by 13 April, when the new leader was appointed, the legion had practically broken up. The volunteer units regarded De la Rey as “honorary commandant”, and his authority was nominal.¹⁸⁷

Maximov retained control only of the Dutch corps, which was, judging by a contemporary photograph, comparable to the Russian unit in size (just over thirty men).¹⁸⁸ The corps operated in coordination with General WJ Kolbe's commandos. However, Maximov did not inspire unswerving loyalty among his men. Most of them were dissatisfied with

his strict ways, as he was trying to organise basic field training and ensure hygiene in the camp. They were especially annoyed by Maximov's reluctance to allow them to mix with other volunteers who could, in his opinion, undermine their *esprit de corps*. However, the Dutch bore with Maximov for fear of a split within their unit.¹⁸⁹

To the reader of Izedinova's account, it may seem as if Maximov established firm discipline in the Dutch corps. Yet, the memoir of his subordinate indicates that the nurse, or her informants, indulged in wishful thinking. "There was not much order in the camp," recounted Cornelis Plokhooy, a former member of the Dutch corps, "it was a gang of real daredevils – a fighting unit".¹⁹⁰ When they did not fight the enemy, they fought among themselves. The commandant's efforts to keep discipline were largely foiled. The men often quarrelled with Maximov over his attempts to treat them as "Cossacks", whom he admired. Allegedly, the Dutch corps engaged in looting on both sides of the frontline while Maximov shut his eyes to it if they shared their 'booty' (*buit*) with him.¹⁹¹ His corps was typical of volunteer units in that war, with their insubordination and flexible hierarchies.

At the end of April, Maximov had a chance to display his leadership and courage in a serious engagement. He sustained severe wounds when the Dutch corps under his command held the Tobaberg Hill, defending the road to the burgher position at Houtnek. Vastly outnumbered, the commandant and his men repulsed British charges for a day until they were ordered to retreat.¹⁹² This was the highlight of the Russian officer's two-month career with the Boer forces. Several commandos elected him as general. Yet, it was his last battle on the republican side: his shoulder blade was splintered and his skull was damaged by a bullet. Being no longer fit for active service because of his injuries at Tobaberg, Maximov relinquished command of his unit and returned to Russia for recuperation.

New attempts to centralise control over volunteer units began in May 1900. Former lieutenants of De Villebois, such as D'Etchegoyen, Illés, Lorenz and Wrangel, initiated this movement. Commandant Johan Samuel Frederik Blignaut (1867–1901) agreed to take charge of the relaunched legion. At first, Boer political leaders, including the State Secretary of the ZAR, supported this enterprise, even threatening dissidents with punishment under martial law. The foreigners who had served in the field were ordered to register with the office of the 'Uitlanders corps' in Pretoria. However, after Louis Botha had turned the plan down, the official support was withdrawn, and the legion disbanded.¹⁹³ Blignaut assumed the command of the Dutch corps, which was reconstituted as an independent unit once it became clear that the 'Uitlanders corps' would not materialise.¹⁹⁴

The idea of an international formation was explored again during the guerrilla phase of the war. In June 1900, the leader of the Italian Scouts as one of General Louis Botha's troops, Captain Camillo Ricchiardi, commanded a "foreign legion" comprising volunteer units in 1901.¹⁹⁵ It was far smaller than De Villebois's legion, because most foreign volunteers had already left South Africa.

Conclusion

The most plausible explanation of Maximov's fiasco is that legionnaires did not see him as an inspirational leader. This version was put forward by French subordinates of De Villebois, who regarded him as "the soul of the legion".¹⁹⁶ They argued that Maximov did not have the "moral authority" (*autorité morale*), which members of the international legion had accorded to the general.¹⁹⁷

De Villebois, a retired French colonel and veteran of European and colonial wars, had come to the Transvaal as a soldier to fight against the British. He was introduced in this capacity to prominent Boer generals and advised them before important battles. De Villebois became the first foreigner to be given the rank of general in the republican armies. Although the burgher military leaders often ignored his recommendations, partly because he harshly criticised their tactics, they valued his experience. When he familiarised himself with the local methods of warfare, the Boer governments allowed him to form the international legion in the worsening military situation.¹⁹⁸

Viewed by some as a quixotic figure, the French founder was nevertheless trusted by foreign volunteers and their commandants. After his heroic death, he was esteemed. A contemporary Dutch historian of the South African War pointed out that the death of De Villebois was perceived by those who had placed themselves under his orders as an irreparable loss, because no one else seemed to have "the ability to lead such a legion, uniting the different nationalities under one banner".¹⁹⁹

Maximov was among De Villebois's critics. In his diary, he characterised the general as "inept" (*neoumelyi*) and promised to "put things to rights" in the legion.²⁰⁰ The Russian lieutenant colonel, whose credibility rested on the general's confidence, did not realise the precariousness of his own position. Maximov had come to Africa ostensibly as a journalist, not as a professional soldier. Boer politicians valued his opinion, regarding him as an emissary of the Russian government; civilians, not military leaders, appointed him as De Villebois's successor. Without combat experience in the South African War, Maximov was yet to earn the respect of Boer soldiers and his own subordinates. Only in subsequent weeks, having resigned from his post in the legion, did he make daring raids behind the enemy lines with his Dutch corps and distinguished himself in the engagement at Tobaberg. Afterwards, Maximov already had the 'moral authority' to command an international unit, but his poor health prevented him from fighting on.

Unlike De Villebois, who was supported by like-minded French lieutenants, Maximov could not rely on his compatriots. Instead of endorsing his claim to leadership, the Russian corps refused to join the legion while De Villebois was in charge and intentionally discredited him. The slanderous rumours that they circulated set other volunteers against De Villebois's deputy. Their unwillingness to serve under the lieutenant colonel caused legionnaires to misjudge him and challenge his mandate. No other officer among them had their overwhelming support either. Meanwhile, the Boers did not undertake on the strenuous task of rallying and organising foreign volunteers either. A chance to transform the emerging alliance of foreign volunteer units into a formidable force was missed.

ENDNOTES

- ¹³⁶ Gorelik specialises in the history of Russian-South African encounters and Russian perceptions of South Africa. His works include 'An Entirely Different World': Russian Visitors to the Cape 1797–1870 (Van Riebeeck Society, 2015) and the South African Military History Society publication of Yevgeny Avgustus's memoir, *A Russian Fighting for the Boer Cause* (2016). Contact the author at boris.gorelik@inafr.ru
- ¹³⁷ F Pretorius. "Welcome but not that welcome: The relations between foreign volunteers and the Boers in the Anglo-Boer War of 1899–1902". In CG Krüger & S Levsen (eds), *War volunteering in modern times*. London: Palgrave Macmillan, 2010, 127.
- ¹³⁸ M Lupini. *Camillo Ricchiardi: Italian Boer War hero*. Melville: Scripta Africana, 1988, 75.
- ¹³⁹ B Pottinger. *The foreign volunteers: They fought for the Boers (1899–1902)*. Melville: Scripta Africana, 1986, 231.
- ¹⁴⁰ Quoted in A Davidson & I Filatova. *The Russians and the Anglo-Boer War, 1899–1902*. Cape Town: Human & Rousseau, 1998, 17.
- ¹⁴¹ *Ibid.*, p. 80.
- ¹⁴² SV Izedinova. *Neskolsko mesyatshev u burov: vospominaniya sestry miloserdīya [A few months with the Boers: A nurse's memoir]*. Saint Petersburg: Tipografiya AS Souvorina, 1903, 283. (Translated from Russian). Also available in English: SA Izedinova. *A few months with the Boers: The war reminiscences of a Russian nursing sister* (C Moody, trans, ed). Johannesburg: Perskor, 1977.
- ¹⁴³ M Davitt. *The Boer fight for freedom*. New York: Funk & Wagnalls, 1902, 334–335.
- ¹⁴⁴ Davidson & Filatova *op. cit.*, pp. 75, 82–83.
- ¹⁴⁵ *Ibid.*, p. 83.
- ¹⁴⁶ Izedinova *op. cit.*
- ¹⁴⁷ Davidson & Filatova *op. cit.*, p. 82.
- ¹⁴⁸ RM Macnab. *The French colonel: Villebois-Mareuil and the Boers, 1899–1900*. Cape Town: Oxford University Press, 1975, 180.
- ¹⁴⁹ Lupini *op. cit.*, p. 76.
- ¹⁵⁰ For a comprehensive account of the unit's history and their conflict with Maximov, see B Gorelik. "The Russian Corps in the Anglo-Boer War: Two months of misfortune". *Military History Journal* 2020. 19/1. 10–17.
- ¹⁵¹ Izedinova *op. cit.*, p. 176. (Translated from Russian)
- ¹⁵² *Ibid.*, pp. 205, 207.
- ¹⁵³ *Ibid.*, p. 124.
- ¹⁵⁴ V G Shubin, N G Voropayeva, R Vyatkina, V Khritinin, I Liebenberg (eds). *Anglo-burskaya voina 1899–1902 godov glazami rossiyskikh poddannyyh* [The Anglo-Boer War of 1899–1902 as seen by Russian subjects]. Vol 9. Moscow: Izdatel I B Belyi, 2012. 143.
- ¹⁵⁵ Izedinova *op. cit.*, p. 111.
- ¹⁵⁶ F Pretorius. "The Second Anglo-Boer War: An overview". *Scientia Militaria* 30/2. 2000. 111.
- ¹⁵⁷ V Romeyko-Gurko. *Voina Anglii s Yuzhno-Afrikanskimi respublikami 1899–1901 gg. [The War of England against the South African republics, 1899–1901]*. Saint Petersburg: Voyenno-Uchetnyy Komitet Generalnogo Shtaba, 1901, 67. (Translated from Russian)
- ¹⁵⁸ G Villebois-Mareuil. "Instruction pour la formation de la légion européenne" [Instructions for the formation of the European legion]. 23 March 1900. Reproduced in A Vinogradsky. *Anglo-burskaya voina v Yuzhnoy Afrike [The Anglo-Boer War in South Africa]*. Vol 2. Saint Petersburg: Ekonomicheskaya Tipografīya, 1902, unnumbered pages.
- ¹⁵⁹ Izedinova *op. cit.*, p. 209.

- ¹⁶⁰ Davitt *op. cit.*, pp. 306–307; O D’Etchegoyen. *Ten months in the field with the Boers: By an ex-lieutenant of General De Villebois-Mareuil*. London: William Heinemann, London, 1901, 113; W van Everdingen. *De oorlog in Zuid-Afrika: Tweede tijdvak [The War in South Africa: Second period]*. Vol 1. Delft: J Waltman Jr, 1905, 146–147.
- ¹⁶¹ V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 6, pp. 64–72, 80; Y Avgustus. “Vospominaniya uchastnika anglo-burskoy voyny 1899–1900 gg.” [A combat memoir of the Anglo-Boer War 1899–1900]. *Varshavsky Voeny Zhurnal* 1. 1902. 25.
- ¹⁶² H-M-A Lecoy de la Marche. *Souvenirs de la guerre du Transvaal: journal d’un volontaire (mars-septembre 1900) [Memoirs of the Transvaal War: A volunteer’s diary (March-September 1900)]*. Paris: A Colin, 1901, 25–26. (Translated from French)
- ¹⁶³ G de Villebois-Mareuil. *L’armée russe et ses chefs en 1888 [The Russian Army and Its Leaders in 1888]*. Paris: Librairie moderne, 1888.
- ¹⁶⁴ Davitt *op. cit.*, pp. 306–307; D’Etchegoyen *op. cit.*, p. 115; Macnab *op. cit.*, p. 180.
- ¹⁶⁵ “Russian Boer officers”. *Daily Mail*. 23 November 1899. 4. V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 8, pp. 16, 281; “Otyezd v Transvaal” [Departure for the Transvaal]. *Peterburgskaya Gazeta*. 19 December 1899; “Paris day by day”. *The Daily Telegraph*, 9 November 1899. 11.
- ¹⁶⁶ V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 6, p. 11.
- ¹⁶⁷ Y Avgustus. “Vospominaniya uchastnika anglo-burskoy voyny 1899–1900 gg.” *Varshavsky Voeny Zhurnal* 9. 1901. 889. (Translated from Russian)
- ¹⁶⁸ Zuid-Afrikaansche Republiek (South African Republic)
- ¹⁶⁹ Davidson & Filatova *op. cit.*, pp. 85–86.
- ¹⁷⁰ D Spring. “Russian foreign policy and the Boer War”. In K Wilson (ed), *The international impact of the Boer War*. Abingdon: Routledge, 2014, 56–57; V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 6, pp. 7–10.
- ¹⁷¹ V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 6, p. 3.
- ¹⁷² NG Voropayeva, RR Vyatkina & GV Shubin (comp). *Anglo-burskaya voyna, 1899–1902 gg.: Po arkhivnim materialam i vospominaniyam ochevidtsev [Anglo-Boer War, 1899–1902: Memoirs and archival materials]*. Moscow: Vostochnaya Literatura, 2001, 514; Y Avgustus. “Vospominaniya uchastnika anglo-burskoy voyny 1899–1900 gg.” *Varshavsky Voeny Zhurnal* 1. 1902. 22.
- ¹⁷³ V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 8, p. 281.
- ¹⁷⁴ Y Avgustus. “Vospominaniya uchastnika anglo-burskoy voyny 1899–1900 gg.” *Varshavsky Voeny Zhurnal* 6. 1902. 554.
- ¹⁷⁵ *Ibid.*
- ¹⁷⁶ Y Avgustus. “Vospominaniya uchastnika anglo-burskoy voyny 1899–1900 gg.” *Varshavsky Voeny Zhurnal* 1. 1902. 22; Voropayeva et al. *op. cit.*, p. 514.
- ¹⁷⁷ Lecoy de la Marche *op. cit.*, pp. 25–26. (Translated from French)
- ¹⁷⁸ Davitt *op. cit.*, pp. 334–335; Lecoy de la Marche *op. cit.*, pp. 25–26.
- ¹⁷⁹ Izedinova *op. cit.*, p. 207.
- ¹⁸⁰ “Une entrevue avec le Colonel Maximof” [An interview with Colonel Maximof]. *Le Temps*. 31 July 1902. 2.
- ¹⁸¹ D’Etchegoyen *op. cit.*, p. 120.
- ¹⁸² *Ibid.*; R Raoul-Duval. *Au Transvaal et dans le Sud-Africain avec les attachés militaires [In the Transvaal and South Africa with military attaches]*. Paris: C Delagrave, 1902, 213.
- ¹⁸³ “Une entrevue avec le Colonel Maximof”.
- ¹⁸⁴ *Anglo-burskaya voyna 1899–1902 ...* Vol 6, p. 12.
- ¹⁸⁵ Izedinova *op. cit.*, p. 209.
- ¹⁸⁶ R Runck. *Aus dem Freiheitskampfe der Buren. Die Deutschen Korps [The Boers’ struggle for freedom. The German corps]*. Zweibrücken: Reiselt, 1902, 209.
- ¹⁸⁷ D’Etchegoyen *op. cit.*, p. 123; Pretorius, “Welcome but not that welcome ...” *op. cit.*, p. 127.

- ¹⁸⁸ Judging by a photo of the Dutch corps taken in April 1900, its members numbered 33. National Archives of South Africa, TAB, Photo 1493.
- ¹⁸⁹ Izedinova *op. cit.*, p. 210; C Plokhooy. *Met den mauser. Persoonlijke ervaringen in den Zuid-Afrikaanschen oorlog* [*With the Mauser. Personal experiences in the South African War*]. Gorinchem: F Duym, 1901, 110.
- ¹⁹⁰ Plokhooy *op. cit.*, p. 105. (Translated from Dutch)
- ¹⁹¹ *Ibid.*, pp. 108–109. (Translated from Dutch)
- ¹⁹² PG Cloete. *The Anglo-Boer War: A chronology*. Pretoria: JP van der Walt, 2000, 136–137.
- ¹⁹³ D’Etchegoyen *op. cit.*, pp. 188–193; Izedinova *op. cit.*, p. 210; C Reichmann. “Extracts from the report of Capt. Carl Reichmann, Seventeenth Infantry, on operations of the Boer Army”. War Department. Adjutant General’s Office. *Reports on military operations. South Africa and China. July, 1901*. Washington, DC: Government Printing Office, 1901, 124; J van Dalsen. “Die Hollander korps tydens die Tweede Vryheidsoorlog” [The Dutch corps in the Second War for Freedom]. MA thesis. University of Pretoria, 1942, 40–42.
- ¹⁹⁴ *Standard Encyclopaedia of Southern Africa*. Vol. 5. Cape Town: Nasou, 1972, 569; MH van Meurs. “Cor van Gogh en de Boerenoorlog” [Cor van Gogh and the Boer War]. *Southern Journal of Contemporary History* 25/2. 2000. 193, 195.
- ¹⁹⁵ Lupini *op. cit.*, pp. 159–160.
- ¹⁹⁶ Raoul-Duval *op. cit.*, p. 213.
- ¹⁹⁷ D’Etchegoyen *op. cit.*, pp. 129, 136; Lecoy de la Marche *op. cit.*, p. 25.
- ¹⁹⁸ Macnab *op. cit.*, p. 180; ‘Une entrevue avec le Colonel Maximof’.
- ¹⁹⁹ Van Everdingen *op. cit.*, p. 156. (Translated from Dutch)
- ²⁰⁰ V G Shubin et al. *Anglo-burskaya voyna 1899–1902 ...* Vol 6, p. 12.
-

SCIENTIA MILITARIA

South African Journal of Military Studies



Loss of military equipment by the SADF at the Battle at Indungo during the Border War, 31 October 1987

Marius Scheepers and Fransjohan Pretorius

Department of Historical and Heritage Studies, University of Pretoria

Abstract

This article takes the form of an investigation regarding the loss of military equipment by the South African Defence Force (SADF) at the Battle at Indungo, in an operation that was assigned the codename Operation Firewood, on 31 October 1987 during the Angolan Border War. The war was waged from 1966 to 1989 in Southern Africa. The case study of Operation Firewood illustrates some of the circumstances under which the SADF lost military equipment in Angola during the war.

Operation Firewood was one of more than 300 SADF general operations²⁰¹ that occurred in Angola. In the final stages of the war, the area north of Cuvelai provided the setting for the launching of Operation Firewood, some 285 kilometres north of the border with South West Africa/Namibia. The aim of this military operation was to eliminate an enemy base that housed elements of the People's Liberation Army of Namibia (PLAN), the military wing of the South West Africa People's Organisation (SWAPO).

Introduction

Travelling through southern Angola, one is reminded of a period in the history of this country when it was entrapped in a bitter civil war between its liberation movements. There was also a 'second war' on the Angolan border with South West Africa/Namibia for the liberation of Namibia. The SADF carried out operations on both fronts.

More than 30 years after these wars had ended, the Angolan landscape is still littered with discarded military vehicles of all sorts, from both sides of the divide. During the Angolan Border War, the abandoning of military equipment by the SADF was a rare occurrence. Today, a few SADF military vehicles are on display at a military site in Luanda.

The former Union of Soviet Socialist Republics (the Soviet Union), along with some of the countries that formed the Communist Bloc in Eastern Europe during the Cold War, were the main suppliers of weapons, equipment and armaments to FAPLA or People's Armed Forces for Liberation of Angola and SWAPO.

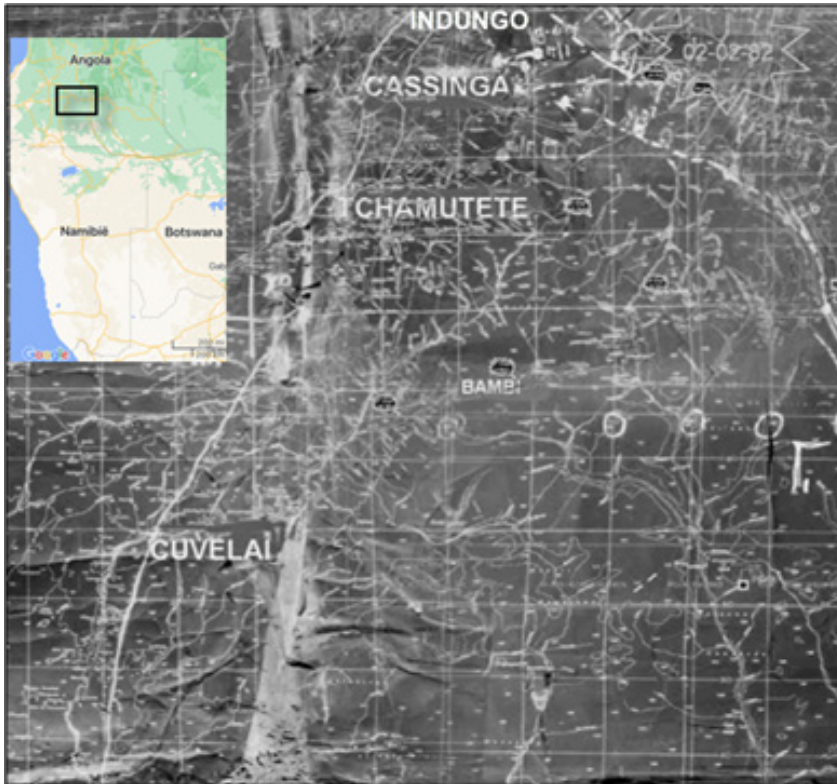


Figure 1: Map of the Angolan Border War during the carrying out of Operation Firewood in the deep central area of southern Angola in 1987. The background map is the original operational map that was displayed at 32 Battalion headquarters during operations.²⁰²

During the civil war in Angola, the MPLA or People's Movement for the Liberation of Angola was in control of the capital city, Luanda, and large areas in the north, east and centre of the country. FAPLA served as the military wing of MPLA, which was supported by the Cuban Revolutionary Armed Forces and the Defence Force of the Soviet Union.

The main objective of the SADF during the war, which was also the motivation for carrying out Operation Firewood, was to prevent SWAPO forces from entering South West Africa/Namibia in large numbers.²⁰³

Since 1976, the SADF had conducted cross-border operations inside Angola regularly. Each year, the primary objective of the larger operations of the SADF was to search for, attack, and destroy SWAPO targets and bases before infiltrations by SWAPO were due to commence at the end of the year.

SWAPO needed to establish its operational headquarters and other bases close to the border between South West Africa/Namibia and Angola in order to provide supplies and support to infiltrating SWAPO soldiers. For SWAPO to have an effective guerrilla force, its soldiers needed to operate in areas in close proximity to South West Africa/Namibia, to enable them to be within easy reach of their targets, to cause damage to infrastructure, and to influence local populations. During the last stages of the war, SWAPO's missions required of them to leave their bases, which were situated deep in Angola, and to travel on foot over distances of more than 300 kilometres, before they reached South West Africa/Namibia.²⁰⁴

SWAPO guerrilla bases were located close to FAPLA and Cuban bases, where SWAPO sought protection from frequent attacks by the SADF. The FAPLA forces put up much more resistance when they were attacked than their SWAPO counterparts, because they were divisions of a regular army, which defended its bases with heavy weapons, such as the Soviet-built T-34/85 and T-54/55 tanks, which were often used defensively. The SWAPO forward bases probably served as assembly points for SWAPO guerrillas, from which they were deployed to infiltrate into South West Africa/Namibia.

SWAPO usually chose to forfeit their bases when they were attacked. An attack by the SADF during Operation Colosseum on 13 November 1986 was a case in point, as SWAPO dispersed yet again.²⁰⁵ An attack by an SADF task force on the SWAPO base at Indungo was to have a significantly different outcome, as the SWAPO force stood its ground and retaliated. When the SADF task force withdrew after the attack on Indungo, it abandoned three Casspir armoured troop carriers and a Buffel mine protected vehicle (MPV), which subsequently fell into the hands of SWAPO.

There are a number of similarities between Operation Firewood of October 1987 and Operation Colosseum (1986). Both operations took place at approximately the same time of year. Both task forces were formed from companies of 2 and 5 Reconnaissance Regiments. Their respective SWAPO targets were almost identical, and were situated in the same general area. At least one unit from 5 Reconnaissance Regiment used Casspir armoured personnel carriers during both operations, and Colonel JR (James) Hills, who was to command the carrying out of Operation Firewood, would inevitably have made some observations concerning the carrying out of operations under these circumstances from his previous experience.

Operational instructions and phases of Operation Firewood

For Operation Firewood, the SADF was to field arguably its best-trained military formations, which were to be merged into a formidable task force. Whether the units succeeded in performing as a united force during the operation needs to be evaluated in due course. It consisted of the South African Special Forces units from its Reconnaissance Regiments (Recces), 1 Parachute Battalion (Parabats) and companies from 101 Battalion, which was generally referred to as the 'Ovambo' battalion, because its soldiers were recruited from the Ovambo region of South West Africa/Namibia, from the same people as SWAPO soldiers.²⁰⁶ Other units, such as 32 Battalion (the Buffalo

Battalion) and 61 Mechanised Battalion (61 Mech), also gained excellent track records during the war. But 32 Battalion and 61 Mech were already being deployed as a segment of the task force for another operation, Operation Modulêr, in the Mavinga area, some 100 kilometres to the east of Indungo.

An order from the SADF Army Headquarters in Pretoria, which bore the title “Op Instruksie 36/87”, declared that the General Officer in Command of the SA Army Forces: South West Africa “should inflict maximum losses upon the PLAN forces in the central and eastern areas, south of the Cubango River, during the period 1 November 1987 to 30 November 1987”.²⁰⁷

The target at Indungo was the Central Area Headquarters of SWAPO. The Eastern Area Headquarters of SWAPO was found to be situated five kilometres to the north of the enemy base near Indungo, although only a small group of from 40 to 60 SWAPO soldiers were expected to be at their base during the attack.²⁰⁸ The Eastern Area Headquarters were obviously not as well defended as the Central Area Headquarters. According to sources, both headquarters were at the target area at the Indungo base.²⁰⁹ While the Eastern Area Headquarters housed only a small component of SWAPO soldiers, the Central Area Headquarters housed a much larger SWAPO force. Although the size of this force remains uncertain, the fierce resistance that it put up during the long, drawn-out battle at Indungo, suggests that the size of the force was substantial. At the conclusion of the engagement, the encounter yielded a correspondingly substantial body count of between 100 and 150 SWAPO soldiers, which was recorded by the various units of the task force.

It was planned that Operation Firewood was to be carried out by adhering to the procedures that had been prescribed for the following phases:²¹⁰

Phase 1 was to be the preparatory phase, which was to be carried out from 30 September until 26 October 1987. During this period, the force was to assemble at Oshivelo in South West Africa/Namibia, where it would prepare and receive training for the operation.

At the commencement of **Phase 2**, the SADF task force was to infiltrate Angola from 26 October to 1 November 1987, through Rundu headquarters, which were situated in Sector 20, in South West Africa/Namibia. The force had to cross the Angolan border and follow the northern route, which runs parallel to the Cubango River. On their arrival at the headquarters of the Tactical Operations frontline base of the SADF at Ionde, the members of the task force were to be provided with logistical support, fuel and other provisions.

During **Phase 3**, which was also known as Operation Firewood A, the task force had to locate the Central Area Headquarters of PLAN and attack the target, thereby carrying out Operation Firewood B, before commencing area operations from 8 November to 30 November 1987.

During **Phase 4**, the force had to withdraw from Angolan territory from 30 November to 4 December 1987, before demobilising.

The SADF task force was instructed to carry out the operation –

And ensure the safety of the members of the SADF who participated in the operation, while their equipment was to receive high priority and to serve as a criterion against which the successful conclusion of the operation was to be measured. Significant risks were to be limited.²¹¹

The task force comprised a battalion-strength force of 1 071 soldiers,²¹² which is generally considered a formidable force.

The 159 vehicles of the main SADF force for the attack at Indungo consisted of 81 from 5 Reconnaissance Regiment and 78 from 101 Battalion. Included in this number were the vehicles of the members of the Citizen Force from 2 Reconnaissance Regiment, who travelled in three Buffels, while the two platoons from D Company of 1 Parachute Battalion had eight Buffels. Their C Company, which was deployed as a reserve force, was also issued with Buffels. There were a further four Ratel 81 mortar-equipped infantry fighting vehicles and a variety of logistical vehicles, recovery vehicles and field ambulances.²¹³ It was imperative that the task force maintain a high level of mobility. Its vehicles needed to be sufficiently reliable to allow its troops to reach the target at Indungo without any disruptive breakdowns, after travelling over long distances on uneven terrain. Before they made contact with the enemy, the SADF forces debussed from their vehicles, leaving them behind to apprehend the enemy on foot. This strategy was standard for the motorised infantry soldiers of the SADF for fighting a guerrilla force.

A fourth unit, 101 Battalion, was to operate in a supporting role for the main attacking force. Each of the four companies of 101 Battalion was divided into four teams, and each team was equipped with four Casspirs. As the command Casspir brought the total for each company to 17, the four companies of 101 Battalion fielded 68 Casspirs altogether. In addition, the Casspirs were augmented by a further ten vehicles. Consequently, 101 Battalion was not fully integrated with the main force, which had to launch the attack at Indungo.

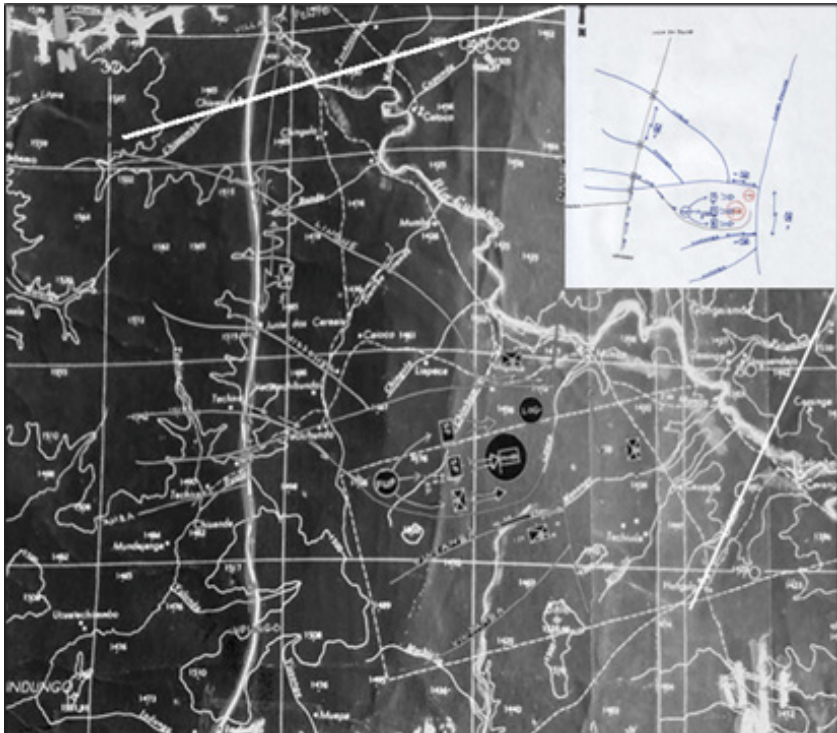
The larger component of the SWAPO force was absent, conducting military exercises at the Tobias Hanyeko Training Centre at Lubango.²¹⁴ Large numbers of SWAPO soldiers began arriving at the Indungo base during the battle, only to come immediately under SADF fire, with severe casualties being inflicted.

During the planning for the attack by the task force, the leader group constructed a sand model of the layout of the SWAPO base, which depicted the main features of the target area according to scale. Its features included:

- the main road, which ran from north to south;
- the T-junction at which the access road towards the enemy base at Indungo joined the main road;

- the direction of the access road towards the base;
- the size of the target area, all according to scale; and
- the large Vinjamba Shona or marsh, which lay to the south of the base.

On the main road, there were at least four low-water bridges where the road crossed dry riverbeds and small ditches. As the base at Indungo was surrounded by shonas on three sides and the access road from the west, the decision to attack it from this direction by following the access road was not a difficult one to make. In addition, the model included representations of the locations of the temporary operational headquarters and the medical post to the west of Indungo, and of the area in which the vehicles of the echelon were to remain, at a safe distance further away to the south.²¹⁵



Note: The inserted map is a sketch of the area that is not according to scale (Chris Snyman)²¹⁶.

Figure 2: Map of the SWAPO base at the battle at Indungo on 31 October 1987 during Operation Firewood. The background map is the original operational map that was displayed at 32 Battalion headquarters during operations.

Source: Museum of Military History, Johannesburg.

The attack by the main task force

On 31 October 1987, before the attack by the main task force commenced, the vehicles that were to be used in the attack on the main target area formed up in a specific order. The soldiers of 51 Recce Commando were mounted in their own four Casspirs. To their right, were the Casspirs of 52 Recce Commando; further right was 53 Recce Commando, while still further right, were the three Buffels of the Citizen Force detachment from 2 Reconnaissance Regiment, and on the far-right flank, were another eight Buffels, which carried soldiers from D Company of 1 Parachute Battalion. The force was supported by a mortar group of four Ratel 81 mortar-equipped infantry fighting vehicles. The Casspirs of the four 101 Battalion reaction force companies had to patrol the area to the north, east and west of Indungo.

The H-hour for the attack, which commenced with an air strike, was 12:00.²¹⁷ The SAAF fighter jets dropped their bomb loads, withdrew and immediately left the area.²¹⁸ The plan for the attack by the main task force entailed applying overwhelming force while chaos still prevailed at the target area in the aftermath of the air strike.

Owing to the fierce resistance that the main attacking force of the task force encountered during the engagement, the battle could probably be considered one of the most bitterly contested of the war.²¹⁹ Consequently, progress was exceedingly slow. When the Recces and Parabats encountered a trench, they broke into it, fired with their RPG-7s and bombarded the enemy with more 60 mm mortars.

The first fatality suffered by the Parabats occurred when Corporal Nico Smith Olivier, 19 years of age, died from a wound to the neck area when he debussed from a Buffel. According to information received from a personal account,²²⁰ the two platoons of the Parabats were positioned in the centre of the main force when the fighting started. Accordingly, it is likely that they came under the heaviest SWAPO assault in the form of small arms fire and exploding mortar bombs. The Parabats remained in their line as they moved towards the target, traversing an area approximately 500 metres wide.

When they arrived at another large open area, which resembled a military parade ground, they again came under fierce enemy small arms fire. Due to a lack of cover of any sort, five paratroopers were killed.²²¹ Lance Corporal Raymond Mark Light (21) was the next soldier to die, in this case from a wound to his chest. During a period of probably not more than an hour, four more Parabats were mortally wounded. Riflemen Hugues Norbert de Rose (21), Wayne Valentine Ewels, (21) and Dirk Willem van Rooyen (20) died during the attack. Rifleman Jean Mark Schuurman (21), who had also been seriously wounded during the fighting, later succumbed to his wounds while he was being transferred to a military hospital by an aircraft.²²²

A Buffel from 2 Recce Regiment was immediately knocked out after having taken a direct hit from a rocket fired from a B-10 recoilless gun. The soldiers who had been in the vehicle earlier were extremely fortunate, as they all survived the explosion, although a few sustained multiple shrapnel wounds.²²³

The main attacking force succeeded in maintaining its forward momentum, which was crucial in any motorised attack on fortified SWAPO camps. Although the men were able to clear the enemy trenches by carrying out mopping-up drills, at 15:00, they encountered fierce resistance from enemy soldiers who were hiding in trenches²²⁴ to the south-west of the target area.²²⁵ The Recces were ordered to perform a final sweep of the area and to leave. After they had accomplished their mission, they withdrew from the area.²²⁶

The captured and destroyed Casspirs

As an official military report confirms, three destroyed Casspirs from 101 Battalion were not recovered from an area to the north of Indungo.²²⁷ Corporal Trevor (Tandekas) Stander's abandoned Casspir, from call sign 33B, was subsequently discovered by FAPLA and placed on public display for propaganda purposes. It was riddled with bullet holes, although the vehicle appeared to have remained fairly intact. A large opening, which could have been caused only by the explosion of a rocket from a B-10 gun, was visible on the side of another Casspir. An intelligence officer from the Recces, Second Lieutenant Dylan C Cobbold, was killed inside this vehicle by the explosion.²²⁸ At least two Casspirs were destroyed beyond recognition as a result of hits by rockets from either B-10 recoilless guns or exploding RPG-7 rockets. The events that were to result in the loss of personnel and military vehicles by 101 Battalion require adequate investigation.

From the available evidence, it appears that the first incident in the operation to affect 101 Battalion directly during its deployment could have occurred when some vehicles of call signs 31, 32 and 32C were attacked when they drove into a SWAPO ambush to the north of the main target area.²²⁹ In this incident, the soldiers under Second Lieutenant AC (David) Bock (call sign 32) and Corporal Stander (call sign 33B) served as early warning groups. They were deployed in the area to the north of the target at Indungo, where they patrolled in an easterly direction. Although the soldiers who were with Bock and Stander came under heavy mortar and small arms fire in the ambush, they returned fire with the .50 calibre Browning machine guns that were mounted on their vehicles. The predicament in which Bock found himself was exacerbated as a consequence of some of his soldiers being wounded and others dismounting from their vehicle and hurriedly fleeing the scene, in an attempt to escape certain death from enemy fire.²³⁰ Bock and Stander continued to fire on the SWAPO force, in order to protect their wounded soldiers, as these men refused to abandon the soldiers where they lay alongside the destroyed vehicles. After the fighting had died down, the men under Bock were the last soldiers from the task force to remain at the scene.²³¹

As the unit had suffered a number of fatalities and injuries and its Casspirs had been destroyed by enemy fire, call sign 32 requested support from its company.²³² The men who served under Captain Andries H de B (Radies) Rademeyer, the company commander (call sign 30), left their positions east of the target area, probably after their commander had received orders from Commandant JK (Jaco) Kruger for call sign 30 to make its way towards the position that Bock was holding. The group that Rademeyer commanded was heavily armed: sixteen Casspirs were fitted with .50 calibre (12.7 mm) and .30 calibre (.303-inch or 7.62 mm) Browning machine guns and its soldiers carried an array of small arms.²³³

The Casspirs that were destroyed and abandoned by the SADF at Indungo had been assigned to Captain Rademeyer (call sign 11) and Second Lieutenant Deon Botes (call sign 33C). The causes of these losses also warrant further investigation. At 16:00, Rademeyer's convoy drove in an extended line formation in a westerly direction alongside a shona towards the main road.²³⁴ As Rademeyer had difficulty in establishing radio communication with his headquarters by means of his small radio, he requested Botes, who had radio contact, to pass his messages on to headquarters. When it encountered an obstacle in its path, the convoy was forced to form up in a single line. At that moment, it was attacked in an ambush by SWAPO soldiers,²³⁵ which resulted in the convoy coming under heavy fire from RPG-7 rockets and machine guns.²³⁶

To the north-east of the target area, a commotion erupted and the Casspirs of Rademeyer and Botes, which had become bogged down in an ambush, were destroyed as a result of direct hits by enemy fire.²³⁷ Rademeyer and a soldier quickly abandoned their vehicle, while another soldier remained inside it. The soldiers in the other Casspirs attempted to come to the rescue of the wounded soldiers, but their progress was hindered when the tyres of their vehicles were damaged and deflated to the rim as a result of intense enemy fire.²³⁸ Stander, in the call sign 33B Casspir, assumed command of the remaining vehicles of call signs 31 and 32.²³⁹

While Rademeyer was embroiled in the SWAPO ambush, a terrifying noise was heard over the radio network from someone who was obviously in great distress, screaming, "Help! Help! They are killing us, they are killing us!" The caller was Second Lieutenant Cobbold, one of the Recces whose Casspir had accompanied that of Rademeyer and an officer of Colonel Hills' home unit.²⁴⁰ If Colonel Hills had not been apprised earlier by his senior staff of the impending crisis at the positions of 101 Battalion to his north, hearing these cries on the internal radio network would surely have drawn his attention to it immediately. Hills' immediate reaction to the call could not be established in interviews with members of his staff who had been close to him, as they appeared to be prepared to provide only scant details concerning Hills' role in the operation. One inference that could be drawn was that the only likely reason for Hills' apparent failure to respond immediately, by devising a plan to rescue the soldiers, was that Commandant JK Kruger, the commander of 101 Battalion, had assumed full responsibility for the welfare of his men. Accordingly, the answer to the question that this assessment raises, namely whether the task force operated as an integrated unit during the operation, would be a resounding 'no'.

Other related events are equally deserving of attention. Personnel in vehicles of call sign 42 of 101 Battalion were instructed to join up with Lieutenant NJA (Seis) Prinsloo and Corporal Justin Theunissen (call sign 20), to provide support and render assistance to the call signs that were under attack by SWAPO. They arrived at the contact area at almost the same time as call sign 10 under Captain Koos Maritz. Call sign 10, which was positioned to the south of the company under the command of Rademeyer, was also requested to provide reinforcements to the beleaguered convoy.²⁴¹ Maritz was accompanied by Corporal DL (Wikus) Cronjé, a Recce intelligence operative.²⁴² According to Cronjé, when their Casspir came under small arms fire, Maritz sustained two gunshot wounds

from bullets that went through one of his arms, which left him unconscious. Although he was obliged to assume command of the men who had been under the command of Maritz, Cronjé was unable to staunch the severe bleeding from the wounds.²⁴³

After some time had elapsed, call sign 10 left the scene of the contact, but damage to its tyres resulted in the Casspir becoming bogged down. After Maritz had been rescued by Prinsloo, he was taken to the medical post, where his wounds were treated and his life was saved.²⁴⁴ When call signs 10 and 42 arrived at an open shona area, the Casspirs formed up in an extended line formation. They charged forward through a shona and passed a hill on their way towards the SWAPO positions. The purpose of the feint was to draw the attention of SWAPO away from the Casspirs in Rademeyer's convoy.

The troops under the command of Maritz also came under attack from SWAPO soldiers. Corporal Cronjé saw a few SWAPO men jumping onto a Casspir that was adjacent to the one in which he was travelling, while the vehicles were in motion. SWAPO had employed this tactic in the past, when they had endeavoured to force Casspirs of the SADF to stop by opening their rear doors in order to throw hand grenades into them. In this instance, the SWAPO small arms fire bounced off the sides of the armour of the Casspirs.²⁴⁵ Had the attempt by the SWAPO soldiers succeeded, the men in the Casspir would have been killed. Although the SWAPO soldiers exposed themselves to a great deal of risk by attempting to destroy the Casspirs in this manner, their unorthodox methods were foiled by Maritz's men.

As the fighting continued, Lieutenant Pierre (Blikkies) Blignaut (call sign 11) also assisted Rademeyer and Botes.²⁴⁶ Blignaut's .50 calibre Browning machine gun was immediately rendered unserviceable when the turret on which it had been mounted was destroyed by a direct hit from an RPG-7 rocket. Blignaut's vehicle was a mere 50 metres away from where Rademeyer and Botes were last seen. As a result of the hit, Blignaut sustained a wound to his right arm, while Sapper Casper Steyn, who had accompanied him, was killed instantly. Blignaut managed to continue firing his R-4 rifle with his left arm, abandoning his Casspir and fleeing under heavy enemy fire towards the Casspir of Botes. He sustained a further wound, as a result of a sliver of shrapnel that became lodged in his eye, for which he received treatment upon arriving at the medical post. Although Botes (call sign 33C) abandoned his vehicle just moments before it burst into flames from the explosion of an enemy rocket, his body was engulfed in flames and he died next to his burning vehicle.²⁴⁷

Although Lieutenant Cobbold survived the ordeal that had elicited his desperate cries for help over the internal radio network, he became yet another casualty when his Casspir suffered a direct hit by B-10 rockets after driving directly into a well-positioned SWAPO ambush. The men who attempted to recover his body came upon the lifeless body of Captain Rademeyer, lying some distance from his vehicle, under a bush beside a large pile of discarded cartridge cases.²⁴⁸ One of his arms had been severed by enemy fire and he had died as a consequence of severe blood loss.²⁴⁹

Next to arrive at the scene of Blignaut's plight was Corporal JJ (Bronkies) Bronkhorst (call sign 11C), who rushed to his rescue.²⁵⁰ He was joined by Casspirs of call sign 40,

which also arrived at the scene at high speed. Using their Casspirs as weapons, the SADF drivers drove directly into a group of SWAPO soldiers, who perished under the large tyres of their vehicles. Bronkhorst's driver also proceeded to drive into another group, which comprised at least seven heavily armed SWAPO soldiers, who had been carrying a variety of RPG-7 rockets and machine guns. Bronkhorst suffered a wound from a bullet, which had entered and exited one of his arms.²⁵¹ Sergeant Lappies Labuschagne sustained two broken ribs when his Casspir smashed into more SWAPO soldiers, pulverising them against the side of a large anthill.²⁵²

The vehicle of Second Lieutenant Marco (Velle) Smit, call sign 13 of 101 Battalion, took a direct hit from an RPG-7 rocket, which left both his gunner and his driver dead.²⁵³ Smit continued to urge his driver to proceed forward, unaware that he was already dead. Under severe fire from SWAPO RPG-7 rockets, Smit also abandoned his vehicle. The men under Smit were too shocked and disoriented to carry on fighting at this point. In a display of outstanding presence of mind, initiative and leadership in combat, Smit seized an R-4 rifle from one of his bewildered soldiers, with which he managed to kill some enemy soldiers.²⁵⁴

Another significant incident that concerned 101 Battalion occurred after the men under Captain Rademeyer had been ambushed by a SWAPO group. Corporal Chris Snyman, WO1 Chris Schutte (call sign 22C), the vehicles of Lieutenant Prinsloo and Corporal Theunissen of call sign 20 and the men of call sign 42 under Captain Van Niekerk were sent to render assistance. They drove on the left side of the main road in an extended line formation, anticipating that they would make contact with the SWAPO group that had attacked the soldiers under the command of Second Lieutenant Bock.²⁵⁵ As they experienced a great deal of difficulty in maintaining their formation, the vehicles soon started moving off in different directions. Prinsloo and Theunissen opened fire at an enemy BM-14 truck that was fleeing the scene. It was quickly destroyed.²⁵⁶

Driving in the extended line formation, they pushed northwards along the road that would take the convoy to the position of the beleaguered vehicles of the men under Bock. As some vehicles left the road, they were obliged to make sharp right turns.²⁵⁷ Theunissen, accompanying them in a Casspir, was unaware of the sudden change of direction. He proceeded along the road, but soon realised that he was driving alone towards the positions of the enemy. He made an abrupt turnabout and beat a hasty retreat.

Theunissen was later awarded the distinguished *Honoris Crux* medal for the bravery that he had demonstrated by continuing to drive while under severe enemy fire. His was one of five such medals awarded for action in Operation Firewood.²⁵⁸ According to the report that served as the motivation for making the award, he had endangered his own life by committing to a course of action that saved the lives of several other SADF soldiers.

Probable explanation for solid defence by SWAPO

The SWAPO soldiers were sufficiently trained to enable them to fire their rockets with accuracy and precision. It seems likely that the experience that they had acquired during Operation Colosseum the previous year had provided them with an opportunity to

learn some valuable lessons. The SWAPO soldiers were clearly far more resilient and much better prepared to defend themselves against an attack during the carrying out of Operation Firewood than they had been the previous year.²⁵⁹

In the meanwhile, SWAPO soldiers who were busy performing routine military training exercises and rehearsals in an area to the north of the Indungo base attacked Rademeyer's convoy. When they heard the clamour of the attack on the main target area, they immediately dispatched their anti-tank platoons to engage in defensive action. These SWAPO soldiers were all heavily armed, each carrying a number of RPG-7 and RPG-75 rockets. They approached Rademeyer's convoy and engaged the vehicles by rapidly firing their rockets, reloading and firing again in rapid succession. Owing to the rapid rate at which the rockets could be fired, the superior design of the RPG launcher as a weapon for destroying armour and the ability of SWAPO to master the weapon, the SWAPO soldiers succeeded in destroying several SADF vehicles. Many rockets found their targets, penetrated the armoured steel of the Casspirs and detonated inside of them, setting them alight.²⁶⁰

The detachment of SWAPO soldiers – who had been to the north of the main target area – unexpectedly crossed paths with the Casspirs of Rademeyer and Botes, after which an intense firefight broke out. Had the SWAPO soldiers not encountered the Casspirs, they might have passed them undetected and would have been able to join the forces at the main target area and provided much-needed reinforcements to fend off the main attack of the task force. By being at the wrong place at the wrong time, the Casspirs of 101 Battalion were able to halt this advancing force, thereby saving the lives of many SADF soldiers at the main target area.²⁶¹

The retreat by the task force from Indungo

As darkness approached rapidly, the rear end of the task force convoy managed to join up with the remainder of the vehicles and proceeded with recovery procedures until 20:00. The task force was able to recover three or four Casspirs that had been set ablaze by enemy artillery fire. The vehicles then made their way to the logistical area, where their occupants endeavoured to maintain silence until midnight.²⁶²

Owing to the enormous difficulty that the task force had experienced in recovering abandoned Casspirs that had not been accounted for and preventing them from falling into the hands of the enemy and the impossibility of returning to the target area near Indungo to do so, some drastic measures were needed. On 1 November, the SAAF launched another air strike on the target area. According to a report by Colonel EG Viljoen from Sector 10, two Impala Mk II attack aircraft conducted the air-to-ground attack at the Central Area Headquarters of SWAPO, “to destroy logistical positions”.²⁶³ This euphemism tends to suggest that the actual purpose was to destroy the SADF vehicles that had been left behind at Indungo. It is unclear how many of the abandoned vehicles were successfully destroyed beyond recognition by the air strike. A photograph of FAPLA soldiers standing next to an intact Casspir at Indungo provides evidence that at least one had remained unscathed.²⁶⁴

The captured Buffel

While the task force was withdrawing from the target area in the aftermath of the operation, a call sign 22B Buffel vehicle drove into a large hole, overturned, and landed on its side. The excavation resembled the bunkers that had been prepared to hide a tank in the hull-down position. As the occupants of the Buffel were not injured in the accident, they were able to board another vehicle.²⁶⁵

According to the report of the SADF, the task force was unable to recover or destroy the stricken vehicle,²⁶⁶ and the intact Buffel, together with its camouflage net and some equipment, was left behind at the target area. The abandoned Buffel was a significant find for FAPLA, and the vehicle was also later displayed at Luanda.²⁶⁷



Figure 3: Photograph of a Buffel and Withings recovery vehicle that were displayed at Luanda after the war. The Buffel is probably the vehicle which the SADF abandoned at Indungo.²⁶⁸

In total, four SADF vehicles were abandoned at Indungo, including the three Casspirs of Stander, Rademeyer and Botes. The fact that the SADF troops did not attempt to salvage movable equipment from the stricken Buffel suggests that they could have felt severely pressed for time or even panicked and left the area in haste, fearing a counter-attack by a large SWAPO contingent.

Other accounts of the forfeiture of military vehicles to FAPLA by the SADF

The above was not the first occasion on which a Buffel was captured by the enemy. At a meeting at Lubango on 13 September 1987, several weeks before the battle at Indungo, FAPLA announced that a SADF Buffel MPV and an Eland 90 armoured car

had been captured and put on display.²⁶⁹ This Buffel was obviously the vehicle that had been captured on 2 September 1987, near Cuamato.²⁷⁰ The Eland 90 armoured car was among five armoured vehicles that had been abandoned by the SADF more than a decade before, on 23 November 1975, during the carrying out of Operation Savannah at Ebo.²⁷¹ Apart from these vehicles, a SADF recovery vehicles is also on display at a military exhibition in Luanda, Angola.

The SADF task force DF lost an intact Buffel to the enemy in an ambush at Caiundo on 18 December 1983, while it was carrying out Operation Askari.²⁷² On 15 August 1986, in the aftermath of the cancellation of Operation Alpha Centauri, the SADF was forced to destroy with explosives and abandon the wreckage of a Withings recovery vehicle and a Kwêvoël 100 transport vehicle on the Chaminga Heights, in an attempt to avoid their capture by the approaching FAPLA force.²⁷³

On 6 September 1987, during the carrying out of Operation Modulêr, a column of FAPLA's 59th Brigade located the position of a 32 Battalion Recce team. The men from 32 Battalion joined a team of the Chief Staff Intelligence in beating a hasty retreat. They left behind a Casspir and a Withings recovery vehicle, which fell into the hands of FAPLA. A week later, a Ratel armoured vehicle from 32 Battalion was abandoned after it had been completely obliterated at the Lomba River, during the fiercest fighting of the war, while the detachment was participating in Operation Modulêr.²⁷⁴ A few months later, on 24 March 1988, three SADF Olifant 105 mm tanks were left abandoned in a minefield during the last days of the fighting at the Tumpo triangle, west of Cuito Cuanavale, during the carrying out of Operation Packer.²⁷⁵ This particular loss of armoured equipment was to be a huge propaganda coup for the Cubans and FAPLA once the war had ended. On 26 June 1988, during the fighting south of Techipa in the south-west of Angola, the SADF also lost and left behind a destroyed Ratel 90 mm armoured vehicle.²⁷⁶

These incidents account for between 16 and 20 SADF vehicles that were damaged beyond repair and abandoned in Angola during the 23-year-long Angolan Border War, but which are still reasonably recognisable as military equipment. While some of these vehicles were left behind still intact, the abandoned wreckage consists of either large pieces of vehicles, such as undercarriages, or large portions of them. The makes of some of these vehicles are known, as the SADF abandoned them while they were still intact. Some vehicles remain to this day at various locations in Angola where they were abandoned.

Explaining the loss of vehicles

During an official military debriefing on 15 March 1988, which was chaired by Brigadier FJ (Frank) Bestbier on behalf of the Chief of the SADF, a report was presented, which covered a wide range of topics pertaining to Operation Firewood. The four vehicles the SADF lost at Indungo undoubtedly formed part of the discussion that followed.²⁷⁷

The debriefing was also intended to generate an accurate evaluation of how effectively the SADF had managed to strike at an enemy base that was situated deep in southern

Angola. Relevant considerations included the size of the task force that had been deployed and the long distances over rough terrain over which the force had been obliged to travel before it could launch the attack on the target that had been identified at Indungo.²⁷⁸

The instructions for the carrying out of the operation by the Recces originated from a number of directives that specifically required the Recces to lead the assault on Indungo. According to the directive:

The forces which were to participate in the operation were to consist of BG Special Forces, provided by BG SA Army Forces SWA, from its own sources. No additional support was to be provided by the Republic of South Africa.²⁷⁹

The Recces were tasked with most of the fighting duties, although their principal function was generally not considered to entail assuming roles that were normally assigned to infantry soldiers. The Recces were highly trained in sophisticated military disciplines that included reconnaissance, locating enemy positions, and demolishing military and strategic installations in locations that were far behind enemy lines. They operated in small teams, which seldom comprised more than four men.²⁸⁰ They were not intended to fight in fixed formations as members of large forces. The costs training of Recce operators entailed were considerably higher than those that were incurred for the training of soldiers to perform more conventional roles. Consequently, losing any Recce operators in abortive attacks on SWAPO bases entailed severe loss with respect to expertise, and required a considerable investment in terms of time and money to locate and train replacements. As it turned out, the losses that the Recces had suffered by the end of Operation Firewood amounted to only one soldier.

At least two more sets of losses were recorded during the war, when the Recces attacked SWAPO bases while assuming the roles of regular rifle infantry soldiers. Operation Colosseum in 1986 has already been mentioned in this article. In addition, during the carrying out of Operation Kropduif in 1977, 90 soldiers were selected from 1, 2, 4 and 5 Recce Regiments for an attack on a SWAPO base at Eheke. Seven Recces were killed during the engagement.²⁸¹ The participants at the military conference²⁸² did not debate the decision to include the Recces in Operation Firewood, although many senior officers held fairly strong views concerning where the true strengths of the Recces lay, and did not believe they should have been used in regular infantry roles.

By 1987, the SADF was making full use of its Casspir armoured vehicles. At Indungo, 101 Battalion deployed 68 and lost 3 Casspirs. If certain measures had been put in place during the planning of the operation, these losses might not have occurred.

The Casspir was designed and built specifically to cope with the types of rough terrain and treacherous conditions that were encountered by the task force en route to the target area. Normally, a Casspir could be pushed to its limits and still be relied upon to perform adequately under extremely adverse conditions. During the carrying out of Operation Firewood, the tortuous journey to the target area had to expose the inherent

weaknesses of these extraordinary vehicles, and breakdowns were the inevitable consequence of pushing them beyond their limits. Some features of the Casspir's design made it vulnerable during enemy attacks. At Indungo, the tyres of several vehicles were punctured, and their main weapons did not function properly. Due to its limited application as a combat vehicle, Casspirs should not have been deployed in the front line when an enemy base was attacked.

In terms of durability, Casspirs were not in the same class as the Ratel armoured vehicles of the SADF. Although Casspirs were cheaper to manufacture and maintain, the Ratels were considerably tougher, as an Afrikaans idiomatic expression suggests. The English translation of 'so taai soos 'n ratel' is 'as tenacious as a honey badger'. Consequently, it should not be surprising that the report submitted by Commandant JK Kruger concerning Operation Firewood included a request that the more resilient Ratel armoured vehicles should replace the Casspirs in future operations.²⁸³ The standard infantry vehicles that were issued to 101 Battalion, the Recces and the Parabats when Operation Firewood was carried out did not include any of the sophisticated Ratels, but were rather the more common Casspirs and Buffels. Motorised infantry units were not trained to perform in mechanised infantry roles during operations. It was not anticipated at the time that 101 Battalion would undergo mechanised infantry training for some time to come. The war soon drew to a close, before the wish that Commandant JK Kruger expressed for his infantry unit to be provided the opportunity to be trained in mechanised warfare, could be realised.

Another difficulty arose as a consequence of deploying Casspir armoured vehicles and Buffel MPVs during the same operation, as the designs and specifications of the two types of vehicles were significantly different.²⁸⁴ Owing to the narrower axle length of the Buffels, they encountered a great deal of difficulty in attempting to follow in the tracks that the Casspirs had left behind. The difficulties arose due to the deep tracks that the Casspirs imprinted in the soft sand in Angola. The Buffels also had smaller engines than the Casspirs, which made it difficult for them to keep up with the faster Casspirs. In addition, the Buffels made slower progress while driving through densely wooded areas, owing to their limited bush-breaking ability, by comparison with progress made by the better-suited Casspirs. It needs to be emphasised that operational planning should have taken adequate cognisance of the likelihood of such an eventuality. Like any other large army of its kind at the time, the SADF did not standardise its range of different vehicles with respect to axle size.

The Ratel 81 mortar-equipped infantry fighting vehicles were not the weapons of choice for the operation, because they were not able to deliver intense firepower and they could not inflict sufficient damage on the enemy at the commencement of and during an attack. The preferred weapons would rather have been larger artillery pieces, such as the 140 mm G-2 Howitzer guns and the greatly favoured 127 mm Multiple Rocket Launchers mounted on Unimog vehicles. Although Colonel EG Viljoen, the Senior Staff Officer: Operations at the military Sector 10 headquarters at Oshakati, who had formerly served as the commanding officer of 32 Battalion, had requested General Kat Liebenberg, the Chief of the South African Army at the time, to equip the task force with Multiple

Rocket Launchers for the operation, the request was refused.²⁸⁵ Consequently, the task force was obliged to attempt to make do with the 81 mm mortars that were supplied.

Those present at the debriefing in 1988 also gave due consideration to the lack of the type of support that artillery guns could have provided to the task force.²⁸⁶ The support provided by fire from 81 mm mortars on Ratel 81 mortar-equipped infantry fighting vehicles had proved to be largely ineffective, despite the perceived suitability of the highly mobile Ratsels for operations, such as Operation Firewood. In addition, the 127 mm Multiple Rocket Launchers that would have enabled the task force to respond effectively to the tactics of SWAPO had not been available for Operation Firewood.²⁸⁷ On the other hand, artillery guns, such as the 140 mm G-2 howitzer, were not suitable for operations that were carried out deep in Angolan territory, as it was not possible to transport the guns over such long distances.

There were several expressions of surprise at the military conference in 1987²⁸⁸ concerning the ability the enemy had displayed in launching effective counter-attacks against the task force of the SADF.²⁸⁹ Although the spirited resistance of the SWAPO forces was considered a rare occurrence during the Angolan Border War, the SWAPO soldiers had proved themselves to be well disciplined, as they had responded not by fleeing, but by engaging 101 Battalion with a high level of commitment.²⁹⁰ By 1987, PLAN was a far better trained force than it had been at the beginning of the war, and it was able to make effective use of its anti-tank teams against the Casspirs. The SWAPO soldiers were able to fire rapid volleys of RPG-7 rockets and they used the more advanced Czech-manufactured RPG-75 rockets, which had disposable lightweight tubes. These weapons and the B-10 recoilless guns provided their anti-tank teams with massive firepower, which enabled them to damage or destroy many Casspirs. The .30 and .50 Browning machine guns that were intended to protect the Casspirs and their crews were not sufficient to prevent SWAPO from launching successful counter-attacks.²⁹¹

The delegates at the debriefing in 1987 also considered whether the main objective of Operation Firewood had been achieved, namely to prevent SWAPO forces from entering South West Africa/Namibia in large numbers.²⁹² In the final analysis, the answer to the question was a resoundingly affirmative one, as the ability of SWAPO to infiltrate during the approaching annual rainy season had received a severe blow, and infiltrating SWAPO soldiers had once again been thwarted. SWAPO continued to operate from bases that were situated far deeper inside Angola.²⁹³

It was also quite unprecedented that an SADF force should leave vehicles and equipment behind after carrying out an operation. As has already been discussed, with the exception of a few operations, after almost every attack on SWAPO bases, the SADF forces retrieved all of their damaged vehicles. Operation Firewood was unique in this respect, as the task force had left the Indungo area before all of its vehicles could be accounted for.²⁹⁴

A final analysis is provided in paragraph 15.b of a document that bears the reference number OPS/070/311/31, in which the manner in which 101 Battalion was deployed during the attack is described as having been 'highly dangerous'.²⁹⁵ This assessment

indicates that the higher command disapproved of the risks that had been incurred during the deployment of the soldiers of 101 Battalion during the carrying out of the operation. It must have had a direct bearing on the decision to deploy 101 Battalion in enemy territory deep inside Angola. There can be no doubt that 101 Battalion was well suited to performing as a reaction force. Its soldiers were well trained to track the spoor of fleeing SWAPO soldiers in dense bush during follow-up operations. They were even able to overcome mild resistance when SWAPO led their vehicles into ambushes. The SADF commanders, who were well trained in combat, should have known that it would not be advisable for 101 Battalion to operate in areas where SWAPO had retained the upper hand, as its vehicles were not protected against the anti-tank weapons that SWAPO had at its disposal. Senior officers who planned the operation were, perhaps, overconfident, and might have underestimated the strength of SWAPO forces, which was evident at SWAPO bases deep in Angola.

From a careful analysis of the conditions that prevailed during the carrying out of Operation Firewood, it becomes evident that a number of different factors contributed to the loss of vehicles and the casualties that 101 Battalion suffered. The soldiers of some of the platoons of 101 Battalion that participated in Operation Firewood were inadequately trained, as the platoons comprised mainly new recruits.²⁹⁶ The relative rawness (i.e. a lack of proper preparation and training before an attack on a SWAPO base) of the soldiers provides a plausible explanation for their inability to check the surprise attacks by SWAPO soldiers. Most of the companies of 101 Battalion were already being deployed as a segment of the task force for another operation, Operation Modulêr, in the Mavinga area. It seems likely that the companies of 101 Battalion that were deployed in the task force for Operation Firewood were made up of soldiers from sections that had not been selected to participate in the other operation and that they were deployed for Operation Firewood because they were the only soldiers who were available.

This official military report of 1987 also acknowledged that the operations of the SADF that had been carried out under similar conditions as those of Operation Firewood (which entailed attacking enemy targets deep in southern Angola) had been extremely difficult to accomplish. One of the operations to which the report referred in this context was probably Operation Colosseum, in which the SADF forces suffered a similar fate. During both of the operations, the vehicles of the task forces were subjected to a great deal of punishment, such as travelling great distances over difficult and uneven terrain. During both operations, the recovery of damaged and destroyed vehicles from the remote areas where the operations had been carried out, was extremely difficult.²⁹⁷

At the battle at Indungo, 15 SADF soldiers were killed and 56 were wounded. These figures reflect, arguably, the highest numbers of casualties that the SADF suffered in a single day during the entire Angolan Border War.²⁹⁸ Apart from the names of the six Parabats who were listed among the dead, the other casualties were:

- Second Lieutenant Dylan Chevalier Cobbolt (26);
- Captain Andries Hercules de Bruyn Rademeyer (27);
- Second Lieutenant Deon Botes (20);

- Sapper Erasmus Albertus Steyn (19);
- Rifleman B Abrahams (25)
- Rifleman V Petrus (21);
- Rifleman P Epafu
- Rifleman T Sheepo; and
- Rifleman M Vuushona.

The ages of the last three are unknown.²⁹⁹

Conclusion

The number of vehicles that were lost at Indungo during Operation Firewood, together with the vehicles that were lost in Angola during other operations that have been covered briefly in this article, amount to between 16 and 20 SADF vehicles. This figure represents the total number of vehicles that were still fairly recognisable as military equipment, which had been damaged beyond repair and abandoned in Angola during the 23 year-long Angolan Border War.³⁰⁰ It is the considered opinion of the authors of this article that these figures, place the loss of four vehicles at Indungo in a realistic perspective. Here, the SADF paid a high price in the form of military equipment which was captured by the enemy.

ENDNOTES

- ²⁰¹ J Geldenhuys. *Ons was daar: Weners van die oorlog om Suider-Afrika*. Pretoria: Kraal, 2012, 66.
- ²⁰² Source: Museum of Military History, Johannesburg.
- ²⁰³ Department of Defence Archives, File HLeer/d OPS/309/1 OP Firewood B, Nabetrugting, par 7.e, 1 December 1987.
- ²⁰⁴ Department of Defence Archives, H Leer/D Sein/UG/309/1/OP Firewood B, 15 March 1988.
- ²⁰⁵ K Stadler. *Recce: Kleinspan-operasies agter vyandelike linies*. Cape Town: Tafelberg, 2015, 265.
- ²⁰⁶ M Scheepers. "The Battle at Indungo, 31 October 1987: An SADF military venture against SWAPO in the Angolan Border War". MA thesis. University of Pretoria, 2019.
- ²⁰⁷ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, p. 1. (Translated from the Afrikaans text)
- ²⁰⁸ Department of Defence Archives, OPS/070/311/31 October 1987, 312300B, par 7.
- ²⁰⁹ Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*, par 6.a.iii, 6.a.iv; Department of Defence Archives, FIK/070 31 October 87, par 7.
- ²¹⁰ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*
- ²¹¹ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 3.g;
- ²¹² Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*
- ²¹³ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 5.b.iii; according to an unidentified report that does not have a heading, there were 153 vehicles.
- ²¹⁴ Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*
- ²¹⁵ LJ Bothma. *Anderkant Cuito: 'n Reisverhaal van die Grensoorlog*. LJ Bothma, 2011; Chris Snyman, personal interview, 16 March 2019, when reference was made to par 4.b of the appendix to the report on the reflection of Operation Firewood.
- ²¹⁶ Corporal Chris Snyman served at 101 Battalion in 1987. He accompanied 101 Battalion's Regimental Sergeant Major Chris Schutte. During the battle at Indungo, they were stationed with the logistical vehicles to the south of the target area. They received orders to patrol the area south of the base at a shona marsh, to look for any signs of SWAPO soldiers approaching the target area from outside of the base. At some stage during the battle, they received an urgent request on their radio from Maritz to assist his sections, which were at locations to the north of Snyman's group, and to evacuate some wounded soldiers from the command post to a safe area on the main road. Snyman made detailed observations during the battle, when he took part in the evacuation of wounded soldiers. He made a valuable contribution to this article.
- ²¹⁷ Department of Defence Archives, FIK/070 *op. cit.*
- ²¹⁸ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 6.b.iii; recollection by Wickus Cronjé.
- ²¹⁹ *The Pretoria News*. 3 November 1987.
- ²²⁰ Johan Kruys, company commander of 1 Parachute Battalion, personal interview, 18 May 2021.
- ²²¹ Department of Defence Archives, File MED 10/UG/309/1 OP Firewood, February 1988, CF Scheepers collection box 10; an unidentified report that does not carry a heading.
- ²²² Kruys, personal interview, 18 May 2021.
- ²²³ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 6; Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 6.b.vii; Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*; Department of Defence Archives, FIK/070 *op. cit.*, par 5; Kruys, personal interview, 19 May 2019.
- ²²⁴ Kruys, personal interview, 19 May 2019.

- ²²⁵ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 7; Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 6.b.vii; Kruys, personal interview, 19 May 2019.
- ²²⁶ Christo Roelofse, company commander of 5 Reconnaissance Regiment, personal interview, 26 October 2018.
- ²²⁷ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 10; Department of Defence Archives, FIK/070 *op. cit.*, par 10; Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*; Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 6.b.xiii (both reports state that three burning Casspir vehicles were recovered); Snyman *op. cit.*, when reference was made to the annexure to the report concerning the reflection upon Operation Firewood; reference was also made to par 2 and 7.b of the explanatory notes and par 5 of Appendix 2 to the annexure to the report concerning the reflection upon Operation Firewood. According to par 19.b of the report, four Casspirs were recovered, three of which had been totally destroyed. As it was later confirmed from photographs, the third Casspir remained completely intact. According to par 20.a of Appendix 1, at midnight, six Casspirs were towed by other types of vehicles. In addition, according to par 19.b, the last remaining three Casspirs were left behind at 20:00, owing to heavy bombardment of the area by the enemy
- ²²⁸ Snyman *op. cit.*
- ²²⁹ *Ibid.*, when reference was made to par 9 and 14 of Appendix 1 and par 1 of the appendix that provides explanatory notes to the report concerning the reflection upon Operation Firewood.
- ²³⁰ I Uys. *Cross of Honor*. Germiston: Uys, 1992, 134; Snyman *op. cit.*, when reference was made to par 6 of Appendix 1 of the annexure that contains the report concerning the reflection upon Operation Firewood.
- ²³¹ Snyman *op. cit.*
- ²³² Uys *op. cit.*, p. 134; Snyman *op. cit.*, when reference was made to par 2 of the appendix titled “Explanatory notes” and par 16–18 of Appendix 1, the annexure that contains the report concerning the reflection upon Operation Firewood.
- ²³³ Snyman *op. cit.*
- ²³⁴ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 8; Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 6.b.x; Snyman *op. cit.*, when reference was made to par 2 of the appendix titled “Explanatory notes” in the annexure that contains the report concerning the reflection upon Operation Firewood.
- ²³⁵ Uys *op. cit.*, p. 134; Snyman *op. cit.*, when reference was made to par 1 of the appendix titled “Explanatory notes” in the annexure that contains the report concerning the reflection upon Operation Firewood.
- ²³⁶ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 8; Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 6.b.x; Snyman *op. cit.*, when reference was made to par 2 of the appendix titled “Explanatory notes” to the annexure that contains the report concerning the reflection upon Operation Firewood. According to the report, the Casspirs of call signs 33, 33B and 39s were hit by RPG-7 rockets.
- ²³⁷ Snyman *op. cit.*
- ²³⁸ Uys *op. cit.*, p. 134; Snyman *op. cit.*, when reference was made to par 2 of the appendix titled ‘Explanatory notes’ and par 17.b and 17.c of Appendix 1 to the annexure to the report upon the reflection of Operation Firewood.
- ²³⁹ Uys *op. cit.*, p. 134; Snyman *op. cit.*, when reference was made to par 2 of the appendix titled “Explanatory notes” and par 17.a and 17.d of Appendix 1 to the annexure to the report concerning the reflection upon Operation Firewood.
- ²⁴⁰ Snyman *op. cit.*

- ²⁴¹ Uys *op. cit.*, p. 134; Snyman *op. cit.*, when reference was made to par 3 of the appendix titled “Explanatory notes” attached to the annexure to the report concerning the reflection of Operation Firewood. The report incorrectly places Maritz with call sign 30.
- ²⁴² Uys *op. cit.*, p. 134.
- ²⁴³ *Ibid.*, p. 134; Department of Defence Archives, PERS OPS/705/1 Nov 87.
- ²⁴⁴ Corporal DL (Wickus) Cronjé, personal interview, 31 October 2017.
- ²⁴⁵ *Ibid.*
- ²⁴⁶ Snyman *op. cit.*, when reference was made to par 4 of the Appendix called explanatory notes attached to the annexure to the report on the reflection of Operation Firewood.
- ²⁴⁷ Uys *op. cit.*, p. 134.
- ²⁴⁸ *Ibid.*
- ²⁴⁹ Snyman *op. cit.*
- ²⁵⁰ Uys *op. cit.*, p. 134; Snyman *op. cit.*, when reference was made to par 4 of the appendix titled “Explanatory notes” attached to the annexure to the report concerning the reflection of Operation Firewood.
- ²⁵¹ Department of Defence Archives, Pes/542/13 Nov 87.
- ²⁵² Snyman *op. cit.*
- ²⁵³ Snyman *op. cit.*, when reference was made to par 4.b of the appendix titled “Explanatory notes” to the annexure to the report concerning the reflection upon Operation Firewood. According to this report, the other two call signs that were hit by RPG rockets were call sign 11, according to par 4.a, and call sign 11B, according to par 4.c of the appendix titled “Explanatory notes”.
- ²⁵⁴ Snyman *op. cit.*
- ²⁵⁵ Snyman *op. cit.*, when reference was made to par 1 of Appendix 1 and par 6 of the appendix titled “Explanatory notes” to the annexure to the report concerning the reflection upon Operation Firewood.
- ²⁵⁶ Uys *op. cit.*, p. 135; Snyman *op. cit.*, when reference was made to par 18.d of Appendix 1 and par 1 of Appendix 2 to the annexure to the report concerning the reflection upon Operation Firewood. The report states that that three enemy soldiers were killed and one was captured while they attempted to flee the area.
- ²⁵⁷ Snyman *op. cit.*, when reference was made to par 18.b of Appendix 1 to the annexure to the report concerning the reflection upon Operation Firewood.
- ²⁵⁸ [https://wiki2.org/en/Honoris_Crux_\(1975\)#Recipients](https://wiki2.org/en/Honoris_Crux_(1975)#Recipients); Uys *op. cit.*, p. 134. Uys incorrectly cites a sixth soldier who received an Honoris Crux medal. Although he might have been associated with 101 Battalion, he did not participate in Operation Firewood.
- ²⁵⁹ Stadler *op. cit.*, p. 265.
- ²⁶⁰ Snyman *op. cit.*
- ²⁶¹ *Ibid.*
- ²⁶² *Ibid.*
- ²⁶³ Obie Oberholzer, personal interview, 31 October 2017; Department of Defence Archives, OPS385/03 Nov 87, par 5.c.iv.
- ²⁶⁴ Snyman *op. cit.*
- ²⁶⁵ Krays, personal interview, 19 May 2019; Snyman *op. cit.*
- ²⁶⁶ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 10.
- ²⁶⁷ Department of Defence Archives, FIK/070 *op. cit.*, par 10.
- ²⁶⁸ Source: The source of the photograph is unknown.
- ²⁶⁹ Department of Defence Archives, INL/833/08 Sep 87.
- ²⁷⁰ *Ibid.*
- ²⁷¹ Department of Defence Archives, Opsomming Ops Foxbat; S du Preez. *Avontuur in Angola: Die verhaal van Suid-Afrika se soldate in Angola 1975–1976*. Pretoria: Van Schaik, 1998, 137.

- ²⁷² M Scheepers. *Striking inside Angola with 32 Battalion*. London: Helion, 2012, 98.
- ²⁷³ W Steenkamp & H Heitman. *Mobility conquers: The story of 61 Mechanised Battalion Group 1978–2005*. London: Helion, 2016, 708; P Stiff. *The silent war: South African recce operations, 1969–1994*. Alberton: Galago, 1999, 536.
- ²⁷⁴ P Nortje. *The terrible ones: A complete history of 32 Battalion* (Vol 1 & 2). Cape Town: Zebra Press, 2012, 991; F Bridgland. *The war for Africa: Twelve months that transferred the continent*. Gibraltar: Ashanti, 1990, 84.
- ²⁷⁵ Bridgland *op. cit.*, p. 330.
- ²⁷⁶ Scheepers *op. cit.*, p. 128.
- ²⁷⁷ Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*
- ²⁷⁸ *Ibid.*
- ²⁷⁹ File HLeer/d OPS/309/1 *op. cit.*
- ²⁸⁰ Stadler *op. cit.*
- ²⁸¹ Stiff *op. cit.*, p. 199
- ²⁸² Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.* This document, dated 1 December 1987, is the report of a military conference held at the South African Army Headquarters in Pretoria.
- ²⁸³ Snyman *op. cit.*, when reference was made to par 5.a of the annexure to the report concerning the reflection upon Operation Firewood.
- ²⁸⁴ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, p. A-5.
- ²⁸⁵ *Ibid.*
- ²⁸⁶ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 7.d.i, p. A-5.
- ²⁸⁷ Snyman *op. cit.*, when reference was made to par 5.b of the annexure to the report on the reflection of Operation Firewood.
- ²⁸⁸ Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.* This document, dated 1 December 1987, is the report of a military conference held at the South African Army Headquarters in Pretoria.
- ²⁸⁹ *Ibid.*
- ²⁹⁰ Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 7.b.ii.
- ²⁹¹ Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*
- ²⁹² Department of Defence Archives, File HLeer/d OPS/309/1 *op. cit.*, par 7.e.
- ²⁹³ Department of Defence Archives, H Leer/D Sein/UG/309/1 *op. cit.*
- ²⁹⁴ Snyman *op. cit.*
- ²⁹⁵ Department of Defence Archives, OPS/070/311/31 *op. cit.*, par 14.g.
- ²⁹⁶ *Ibid.*, par 14.h.
- ²⁹⁷ *Ibid.*, par 15.b.
- ²⁹⁸ Department of Defence Archives, File MED 10/UG/309/1 *op. cit.*; Department of Defence Archives, an unidentified report that does not carry a heading.
- ²⁹⁹ Department of Defence Archives, PERS OS/159/10/10 Nov 87.
- ³⁰⁰ Mathematical calculation of the incidents shown higher up of confirmed SADF vehicle losses in Angola.

SCIENTIA MILITARIA

South African Journal of Military Studies



Professional military instructor identity in the South African National Defence Force

*William Wagner,³⁰¹ Sonja van Putten³⁰² & Willem Rauscher³⁰³
University of Pretoria*

Abstract

In 2015, the chief of human resources at the South African National Defence Force (SANDF) ordered the improvement of the instructional quality and military ethos of military instructors. This article, based on a comprehensive study in this regard, reports on the perceptions of a sample of military instructors in the SANDF on the existence of a construct, known as the professional military instructor identity and its effect on military ethos and instructional quality. A qualitative approach was followed, using an interpretivist/constructivist paradigm, involving data collection by means of a focus group discussion and expert interviews and using thematic networks analysis as data analysis method. A conceptual framework for the professional military instructor identity, consisting of sub-identities, influencing factors and identifying indicators, was constructed. Findings suggest that the professional military instructor identity is not recognised as a construct in the SANDF; however, the elements are known, although only vaguely. The findings also support the view that this situation may have affected the current declining military ethos and instructional quality of military instructors. It is concluded that the institutionalisation and popularisation of the professional military instructor identity, as well as professional recognition of military instructors in the SANDF, could improve the current situation.

Keywords: instructional quality, military instructor, identity, military ethos, PMII

Introduction

As early as 2010, senior educational managers in the South African National Defence Force (SANDF) commented on the decline in instructional quality and military ethos of military instructors.³⁰⁴ SANDF chief of human resources (hereafter referred to as CHR) subsequently instructed in September 2015 that the level of training provided to and by military instructors should be improved.³⁰⁵ Meanwhile, preliminary investigations at the SANDF College of Educational Technology (SANDF COLET) found no evidence of a professional military identity (PMI) or of a professional military instructor identity (PMII), being discussed or formulated in the SANDF – not even in the latest military policy of the SANDF at the time.³⁰⁶

A military instructor is a soldier who, by means of a variety of instructional techniques and media, facilitates learning of other soldiers to acquire competencies for the execution of their unique tasks as modern warriors³⁰⁷. One can thus postulate that as a professional, a military instructor should possess a PMII, which, according to Bulei and Dinu, as well as Johansen, is indicative of the work performance of the military instructor, i.e. the more pronounced the PMII, the better the performance of such military instructor.³⁰⁸

Identity is a concept described as the understandings, feelings and expectations of the overall self in a social position.³⁰⁹ According to James, a person has an identity for every position he or she holds in the community³¹⁰ and, says Van Knippenberg, the salient or primary identity has a positive influence on the individual's performance in the relevant position or positions.³¹¹ Professional identity, being a combination of identities that influence the roles and behaviour that individuals adopt when they perform their work therefore affects individual performance in the workplace.³¹² Likewise, Johansen found that, in the military environment, the PMI of soldiers has a predictive influence on military performance.³¹³ Due to its predictive influence on military performance, a lack of a PMII could be the primary reason for the relapse in military ethos and quality of instruction to and by military instructors.³¹⁴

The purpose of the study on which this article reports was to explore the existence of the PMII construct and its effect on the military ethos and quality of instruction to and by military instructors, based on the perceptions of a sample of military instructors in the SANDF. The research was done using an interpretivist/constructivist paradigm and an inductive/qualitative approach. The research design was exploratory in purpose. As methods of data collection, semi-structured conversations, specifically focus group discussions (FGDs), as well as expert interviews were conducted. Thematic networks analysis (TNA) was used as the data analysis method.³¹⁵

Theoretical background

When appraising existing knowledge on a subject, one maps out a conceptual framework, which can be used to interpret the findings of further research.³¹⁶ Therefore this discussion starts with the view of the overall self, denoted as "Self", leading to the concepts of identity and professional identity as well as a conceptual framework for the PMII, as a specialised derivative of the PMI.

According to James, the Self is a mental construct of how "I" think of "me".³¹⁷ The Self consists of multiple selves, including the social self, physical self, spiritual self and the "pure Ego".³¹⁸ Cooley postulates that the Self is not only influenced by one's view of oneself, but it is inseparably linked to how one perceives the views of others of oneself.³¹⁹ This opinion is confirmed by James, as he describes man's social self, as "the recognition which he gets from his mates".³²⁰ The need for recognition leads to the Self experiencing the will to succeed, to be acceptable, or to be victorious.

Based on Mead's "self reflects society" dictum, maintaining, "[s]ociety shapes self shapes social behavior",³²¹ Stryker and Burke confirm the views of James and Cooley by hypothesising that there is a relationship between the Self and the community.³²² One has an 'identity' for every position in the community, which can be described as constructions of the past, present and future view of one's self, based on feelings, expectations or understanding of one's social role or position in a group.³²³ Identities are arranged according to a "salience hierarchy",³²⁴ reflecting the commitment to the role relationships requiring that identity. Furthermore, states Van Knippenberg, one's salient identity motivates one to work for the group interests, which then influences individual performance.³²⁵

Bulei and Dinu define professional identity as “a concept composed by a combination of identities that shape the roles individuals adopt and the ways in which they behave when they perform their work”.³²⁶ They also conclude that professional identity is primarily concerned with work performance, results, and the opinion of others.³²⁷ Relating to professional identity within an educational context, Beijaard, Meijer and Verloop are of the opinion that professional identity refers to the views of others as well as the view of oneself, based on one’s background, experience and what one regards as important in one’s work.³²⁸ Beijaard et al., supported by Day, Kington, Stobart and Sammons, also point out that professional identity is constantly evolving and consists of several sub-identities.³²⁹

Literature with regard to professional identity is mostly context-specific, of which teaching, counselling, nursing, medical, legal and military practices are but a few. Considering the variety of opinions on professional identity, it is postulated that, within the military, the PMI, being the professional identity of a soldier, consists of three elements.

The first element is described by Beijaard et al., Day et al. and Bulei and Dinu as a combination of sub-identities that form the nucleus of the professional identity of the soldier.³³⁰ Central to the set of sub-identities is the autonomous construct, the Self. This is the core identity and is unique to the individual, while not being influenced by the community. This is the place where the value system resides and is the only identity which distinguishes the individual from all other individuals.³³¹ Snider provides the other sub-identities for the soldier, namely the warrior, the military professional, and the leader. The warrior, or war fighter, is skilled in combat and is ready to participate in battle. The military professional executes the orders of government and sees himself³³² as a servant of the nation.³³³ Organisational values reside in the military professional, which also ensure ethical conduct, competence and teamwork.³³⁴ Some soldiers, specifically officers and non-commissioned officers, are trained military leaders who have to display enhanced cognitive readiness in order to adapt to and manage the ever-changing environment.

The second element of the PMI consists of conceptual constructs, which affect the nature of the identity and are therefore known as influencing factors. Johansen suggests four influencing factors, i.e. idealism, warriorism, professionalism and individualism.³³⁵ Idealism is based on “strong collectivism, patriotism and altruistic values”.³³⁶ The soldier sees himself, and is seen by the community as the protector of his people and country. Warriorism expresses attitudes toward war fighting, expectations of fighting in a war, and satisfaction when actually fighting in battle.³³⁷ Professionalism consists of the willingness to participate in peacekeeping operations, known as the expeditionary ethos, the development of skills and execution of operations (operational ethos), as well as team cohesion and fellowship (peer ethos). Military professionalism is characterised by ‘noble’ characteristics, such as altruism, adherence to shared values and norms, as well as well-honed military and other skills.³³⁸ Professionalism also breeds a strong organisational culture and self-categorisation. According to Triandis and Gelfand, individualism is characterised by four traits, namely self-definition, the importance

of personal goals as opposed to group goals, rationality against relatedness, as well as attitudes and norms.³³⁹ It is also based on modern humanism and displays characteristics such as self-righteousness, opposition to authority, and a breakdown in values.³⁴⁰ Individualism often manifests as occupationalism, where the military as an institution becomes an occupation, and self-interest takes precedence over organisational values and motives.³⁴¹ Occupationalism, as explained by Moskos, rejects the idea of a 'calling' or a collective ethos in terms of military service, leading to degradation in the combat readiness of the force.³⁴² The SANDF, as an all-volunteer force, displays all the features of occupationalism and the occupational model.³⁴³ It seems that the SANDF is following the trend of other modern armed forces,³⁴⁴ such as the Norwegian, British and Israeli armed forces where modern individualism is undermining professionalism.³⁴⁵

The third and last element of the PMI consists of identifying indicators, the 'markers' that show the PMI in action, and are observed by the soldier himself, fellow soldiers and society. Snider provides four knowledge clusters, which, when combined with Johansen's performance indicators, provide the four identifying indicators, namely military-technical competence, general military competence, military ethical conduct, as well as leadership and character.³⁴⁶

Using the PMI as template, the PMII can also be described in terms of the three identity elements, i.e. the sub-identities, influencing factors, and identifying indicators. The professional identity of a military instructor stems from the dualistic nature of this profession, namely being a soldier and a teacher, and consists of the four PMI sub-identities, augmented by elements of a teacher identity, albeit adapted for the military context.³⁴⁷ The five sub-identities of a military instructor are therefore the Self, the warrior, the military professional, the leader, and the teacher. The first four sub-identities have been described under the PMI. The teacher sub-identity distinguishes the military instructor from other soldiers. It requires specific educational expertise and the ability of the military instructor to operate effectively and efficiently in various roles according to his rank.

Being a soldier himself, the soldier-related influencing factors for the military instructor remains the same as for the PMI, namely idealism, warriorism, professionalism, and individualism. Analysis of the military influencing factors and teacher influencing factors, such as those provided by Beijaard et al. and Van Putten, shows that military influencing factors embrace the teacher influencing factors as well, for instance the teacher influencing factors 'domain knowledge' and 'teaching context', which can be incorporated in the military influencer's 'professionalism'.³⁴⁸ The influencing factors of the PMII thus remain the same as those of the PMI.

Beijaard et al. and Van Putten also provide identifying indicators for the teacher, namely subject matter expertise, teaching and learning expertise, and developmental and nurturing skills.³⁴⁹ The identifying factors found in the PMI conceptual framework are military-technical competence, general military competence, military ethical conduct, as well as leadership and character. Military competences, both general and technical, compare with and include subject matter expertise. Teaching and learning competences

are, however, of such importance to the military instructor that it should be listed separately. This is one of the indicators of a teacher and of a military instructor, and therefore becomes one of the identifying indicators of the PMII. Nurturing students is also integrated in the characteristics of a leader. The five identifying indicators of PMII are therefore military-technical competence, general military competence, military ethical conduct, leadership and character, and teaching and learning competence.

Having provided all the elements of the PMII, both a conceptual framework (see Figure 1) and a definition for PMII can now be formulated.

Conceptual framework and definition

The nucleus of the conceptual framework of the PMII is the sub-identities with the Self as the central sub-identity. The teacher sub-identity forms the apex, being the defining element of the PMII, while the plinth – solid and unchanging – is formed by the military professional sub-identity. The next layer, the influencing factors, comprises idealism, warriorism, professionalism and individualism, with the teacher influencing factors ingrained in each one. The outer layer consists of five identifying indicators, where military competencies, general and technical, are combined, and teaching and learning competencies are added as alluded to above. Based on its elements, the PMII can be defined as follows:

Professional military instructor identity (PMII) is a construction of the past, present and future perceptions of oneself as a warrior, a leader and a teacher, based on military ethical conduct, general and technical military competence, as well as leadership, character and affiliation with a cohort of military professionals.

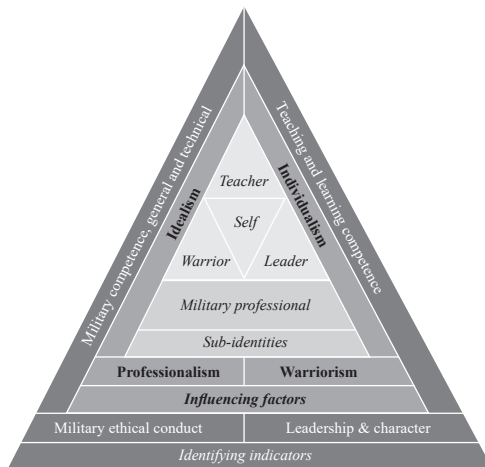


Figure 1. Conceptual framework of the PMII³⁵⁰

Research methodology

This research followed a qualitative approach using an interpretivist/constructivist paradigm. A collective case study design was implemented, involving semi-structured conversations and interviews, specifically a FGD and expert interviews, as methods of data collection. As a qualitative research project, non-probability sampling, in particular purposive sampling, was used to select the participants for the FGD and the interviews.³⁵¹

The population from which the participants for the FGD were chosen consisted of all military instructors, stationed in various units throughout South Africa. Since knowledge of different training methods was required to provide informed responses, the sample comprised trained military instructors, attending a retraining programme at SANDF COLET, where additional training methods were taught. The sample originally comprised 20 members, of whom seven withdrew from the FGD for various reasons, such as prior commitments and unwillingness to volunteer. Although slightly more than the number suggested by Richie et al. and Boddy, the interviewer allowed the sample size (now 13 participants) for the FGD, as this size was within the standard practice of the SANDF Military Psychological Institute (MPI).³⁵² Even though the researcher had no control over the demographics of the sample, or over the members who were willing to participate in the FGD, the sample was broadly representative of South African demographics and SANDF policy. The FGD was facilitated, audio recorded and transcribed by a research assistant, who was a senior officer in the SA Military Health Service at the time, holding a PhD in Industrial Psychology and who had conducted numerous FGDs in the course of his career in the SANDF. In order to minimise the effect of military rank, the research assistant, as well as the participants, wore civilian clothes.

For the expert interviews, the population comprised ten members, all former military instructors, being senior officers and warrant officers, serving in senior staff positions at the time or shortly before the FGD, being or having been able to direct military instructor training in the SANDF. Given the thematic focus of the interviews, the limited number of directing posts where the incumbent had an effect on departmental policy and the level of expertise required, a final sample of three participants was interviewed. The interviewees comprised a senior military instructor and two former military instructors, who were senior educational directors in the SANDF at the time. Using the present incumbents in the various posts, demographics were not taken into account. The aim of the interviews was to obtain methodological triangulation and to determine their view with regard to the PMII.³⁵³ As theoretical saturation was found within the three interviews, it proved to be sufficient. The interviews were conducted by the first author, audio recorded and transcribed.

Thematic analysis, in particular TNA, was used as the data analysis method and coding was done by means of ATLAS.ti 7 Windows, utilising a theory-driven codebook, derived from the conceptual framework of the PMII.³⁵⁴ Braun and Clark define thematic analysis as “a method for identifying, analysing and reporting patterns (themes) within data”,³⁵⁵ which is in agreement with Attride-Stirling, who provided a web-like method for thematic analysis, which she called thematic networks analysis (TNA).³⁵⁶ The

process of TNA extracts themes at different levels from the data and systematically combines them into higher-order themes. There are three classes of themes, starting with the lowest-order theme, known as **basic themes**, which are synthesised from the textual data, using codes and discussions in the data. By combining basic themes, which are related in terms of similar topics, and a process of abstraction, the next level of themes, called **organising themes**, is created. The organising themes lead to the over-arching constructs, which capture the important concepts in the data, known as **global themes**.

Strategies employed to ensure quality data

Several strategies were employed to ensure quality data. In terms of the *trustworthiness*, or *rigour*, of this qualitative study, Lincoln and Guba, as well as Ary, Jacobs, and Sorensen, propose four standards, namely credibility, transferability, consistency and confirmability.³⁵⁷ **Credibility** was ensured firstly by structural corroboration, facilitated by two different sources of data, i.e. FGD and interviews. Secondly, verbatim quotes were used to confirm the coding and theme-building process, thereby confirming referential adequacy, while theoretical adequacy was obtained by voicing all the elements of the PMII in either the FGD or the interviews. **Transferability** was addressed by a comprehensive description of the participants and interviewees, as well as comparing findings to similar studies as proposed by Norway and Israel.³⁵⁸ **Consistency** implies repeatability, which is relative in a constructivist approach. The study on which this article reports strived for consistency by using so-called ‘overlapping methods’, such as FGD as well as interviews, and by leaving a detailed description of the method applied in the research, in order to facilitate similar research in any comparable environment. Leaving an audit trail in this manner also facilitated **confirmability**, which means neutrality and objectivity in the acquisition and analysis of the data and findings.

Before starting with the research, ethical clearance was requested from and granted by the Ethical Committee of the Faculty of Education of the University of Pretoria, as well as the SANDF. **Ethical matters**, based on the principles of informed consent, voluntary participation, privacy, confidentiality and benevolence were also considered and addressed during the research.³⁵⁹ In terms of **voluntary participation**, all participants were legal adults and volunteers who completed letters of consent. Conditions of **privacy and confidentiality** were adhered to by appointing a research assistant who, although also being in the SANDF, was unknown to the participants. **Anonymity** with regard to the inputs in the discussion was guaranteed by the research assistant who transcribed the discussion and did not identify any of the participants. All three interviewees requested anonymity, and are therefore not identified in the research documents. Furthermore, the transcription of the interviews was done by a third party who had no interest in the research. Although the research was done in a strict military environment, every effort was made to create an atmosphere of **benevolence** while executing the discussion and interviews. The FGD, for example, was conducted in civilian clothes to prevent intimidation by uniform and rank.

Findings

The results of the research are reported according to two global themes, following the TNA process of the FGD and three interviews. The first global theme is ‘PMII elements exist in the SANDF’, which was constructed from four organising themes that stemmed from 14 basic themes. The second global theme, namely ‘The PMII and its elements are nebulous’, was derived from three organising themes, being the result of eight basic themes (see Table 1). Given the anonymity of the participants of the FGD, quotes will only be labelled as “participant” whereas the three participants in the interviews will be referred to as “Interviewee 1”, “Interviewee 2” and “Interviewee 3”. Please note that all interviewee responses are reproduced verbatim and unedited.

Table 1. Global themes and their corresponding organising themes

GLOBAL THEMES	ORGANISING THEMES
Global Theme 1: PMII elements exist in the SANDF	1. The military Instructor regards his sub-identities as the Self, teacher, leader and military professional
	2. PMII influencing factors are idealism, individualism and professionalism
	3. General and technical military competence, teaching and learning competence, leadership and character, as well as military ethical conduct are PMII indicators
	4. These exists socio-political and competency tensions amongst elements of the PMII
Global Theme 2: The PMII and its elements are nebulous	1. The military instructor is firstly a warrior and his professional identity should be founded on military professionalism
	2. Individualism informs a dormant PMII
	3. Resistance to change prevents the institutionalisation on the PMII

Global theme 1: PMII elements exist in the SANDF

The FGD and interviews confirmed that the construct of a PMI and a PMII does not exist in the SANDF and as such is not discussed, taught or applied. Interviewee 1 alluded to the lack of a PMI as follows:

With regard to the professional military identity, I think it’s an area that’s currently lacking in the Defence Force [...] it’s been shot down I would say since 2000 ... 2001. (Interviewee 1)

During the FGD and the interviews, it was evident that the elements of the PMII, as proposed in the PMII conceptual framework, but not the PMII as a construct, are known and occasionally considered. The focus group participants, however, displayed a

restricted view of sub-identities. Although the concept of the first sub-identity, the Self, was not fully understood, it was acknowledged as primary and described as follows:

Ja. What I mean by that is that your personal background should reflect through your role as an instructor in class. So, you bring yourself to the class, very honest and you use the same traits. Through your personality to reflect back in your training or teaching style, instructor style (Participant).

The second sub-identity the participants discussed was that of the leader, and they agreed with Snider that the military instructor, as a leader, should display the characteristics of discipline, humility, compassion and a constructivist mind-set.³⁶⁰ The third sub-identity, the teacher, was mentioned twice during the FGD, but only vaguely and not in the context of a sub-identity, as alluded to by Dynes.³⁶¹ In terms of the fourth sub-identity, namely the military professional, the participants confirmed Snider's view that the military professional is the servant of the nation with strict organisational values, ethical conduct and discipline.³⁶² Contrary to the less experienced instructors in the focus group, who regarded the Self as the primary sub-identity, the more experienced Interviewee 2 and Interviewee 3 viewed the military professional as the primary sub-identity:

[T]he military instructor is always firstly defined in terms of his ... own ... mustering or the corps that he belongs to ... (Interviewee 3)

In terms of sub-identities, the participants discussed the Self and the leader and made hardly any references to the teacher and the military professional. Mention of the warrior was purely incidental. Concerning this lack of a warrior identity, Interviewee 1 had a specific view:

I would say that the warrior its ... soldiers these days is more to do with work and getting paid than being a warrior. (Interviewee 1)

Without realising that the four concepts, namely idealism, individualism, warriorism and professionalism, are the influencing factors of the PMII, the participants discussed three of the factors, namely idealism, individualism and professionalism.³⁶³ Idealism, encompassing elements such as altruism, patriotism, *esprit de corps* and a military value system, as well as professionalism, which involves motivation towards the task at hand and self-development, were both only briefly implied in the discussion. Individualism, based on self-righteousness and opposition to authority, was associated with democratic conduct and regarded as follows:

And now ... from my experience, I have seen people been so dynamical and tyrants nè, and in their way to ... their way or no way. So, it is important that now you should be democracy ... (Participant)

Having broadly mentioned the sub-identities and the influencing factors, the participants briefly described the identifying indicators of the PMII, expressing a strong view that military instructors should be "specialists" with regard to their general and technical

military competences. With regard to teaching and learning competences, the participants argued the merits of a qualification. Although some realised that a qualification does not guarantee competence, they were predominantly of the opinion that teaching and learning competences can be equated to a qualification.

Leadership and character, as well as military ethical conduct were all mentioned by some of the participants, strongly defending the virtues of discipline, honesty and integrity:

Your yes is your yes, and your no is your no, and it cannot be changed to suit the person, to suit the situation, and to suit your own circumstances. If you want people to learn something from you, you need to be trustworthy. They need to know that they are safe with you. That there are parameters, if they overstep the parameters, you need to take charge and sort it out and bring them back. There is nothing wrong with disciplining people or being autocratic, or being assertive when people are doing something wrong. (Participant)

To conclude therefore, most of the PMII elements are known in the SANDF, but it is undefined, un-institutionalised, does not constitute a PMII, and does not contribute to military instructor performance in a direct or structured way.

Global theme 2: The PMII and its elements are nebulous

The first factor contributing to the vagueness of the PMII and its elements is the absence of a pronounced teacher and warrior sub-identity. Interviewee 2 was the first participant to mention an important factor that specifically has an influence on the teacher sub-identity, namely that any soldier in the SANDF acting as a military instructor does so for a limited period of time. He thereby identified the military professional as the primary sub-identity.

I'd like to distinguish between professional instructor identity [...] in a military sense being subject to the professional identity of that individual as a military professional ... first, in my view, firstly, the instructor identity is subject to the professional identity whether that person is a pilot or a doctor or an infanteer or whatever ... that is the [...] longer-term determinant for the person's [...] identity and this view is based on my personal conviction that the person that is utilised as ... as the instructor is not use ... utilised in the military over an extended period of time in his or her career. (Interviewee 2)

Interviewee 3 held the same view as Interviewee 2, namely that the military instructor is firstly a warrior and his or her identity is founded on military professionalism. In spite of the high regard that Interviewee 3 held for PMII, she, like Interviewee 2, was of the opinion that the PMI is dominant. In terms of PMII, one can conclude that the warrior and military professional guides the PMII, which is consistent with the views of Snider, but contrary to the view of the less experienced instructors, who regarded the Self as the primary sub-identity, adding to the uncertainty and nebulousness with regard to PMII sub-identities.³⁶⁴

Of importance with regard to the influencing factors, Interviewee 1 confirmed the view expressed during the FGD, namely that military instructors primarily display individualism. He was of the opinion that individualism weakens warriorism and professionalism, which it is detrimental to the current military ethos, and that professionalism should receive more prominence in training. Interviewee 2 agreed with Interviewee 3 and shared the view of Ben-Dor et al. regarding the detrimental effect of increasing individualism in modern societies and armed forces.³⁶⁵ Interviewee 2 was of the opinion that South Africa and the SANDF are following suit, contributing to the vagueness of the PMII and its elements.

Interviewee 2 was also very clear about the detrimental effect of resistance to change in training theory and methodology and the effect of resistance to change on the lack of military ethos and the quality of instruction provided to and by military instructors:

Maybe the overriding factor is that the dominant theories at the time and still prevailing ... are historical frames of reference that ... emanated from a non-military environment ... and in fact, it may regress to the same framework that has led to chief HR's decision ... in 2015 to address the lack of expertise and competence amongst our instructors ... we're not correcting the problem. (Interviewee 2)

Discussion

The purpose of the study on which this article is based, was to explore the existence of the PMII construct and its effect on the military ethos and quality of instruction to and by military instructors, based on the perceptions of a sample of military instructors in the SANDF. A conceptual framework of the PMII, comprising three elements, namely sub-identities, influencing factors, and identifying indicators, was used to determine the perceptions of military instructors on the PMII construct, its existence, and its effect on the military ethos and quality of instruction of military instructors in the SANDF.

Analysis of the results of the discussion with a focus group consisting of trained instructors at the SANDF COLET, as well as interviews with senior military instructors and educational directors, being former military instructors, using TNA, is supportive of the elements of the PMII, although inconsistent with regard to its significance. The construct of a PMII was, at the time of writing, unknown in the SANDF. Although most of the participants were trained as combat or combat support soldiers, the absence of a warrior ethos emanating from the discussion was particularly obvious. The participants discussed their position in civilian terms and were more concerned with qualifications than with competence and with democratic leadership than with professionalism. The views on individualism confirmed that, at the time, the SANDF was following the trend of other modern armed forces, where modern individualism is perceived to undermine professionalism and warriorism.³⁶⁶ Uncertainty with regard to the importance of sub-identities and resistance to change pertaining to the training of military instructors obscured the issue of a PMII in the SANDF even further.

Given Van Knippenberg's understanding that the presence of an identity, connected to a social group, leads to individual performance, as well as Johansen's view that the PMI has a predictive influence on the performance of soldiers, it might be expected that the lack of a PMII could provide the basis for the decline in the performance of military instructors.³⁶⁷ McKinlay and Nuciari assert that a profession, with its professional identity, is characterised by several indicators, namely a theoretical and practical body of knowledge, autonomy and self-control, a unique ethic, and a professional body.³⁶⁸ The lack of instructional performance to and by military instructors, as indicated by the CHR, is consistent with the absence of a professional identity and a theoretical and practical body of knowledge.³⁶⁹ The same argument applies for the lack of a unique military ethos, which is in keeping with the want of a unique ethic.

Conclusion

In conclusion, the study indicated the need for an institutionalised PMII in the SANDF and the promotion of professionalism and warriorism to the extent required. The institutionalisation of the PMII could be through official doctrine, openly supported by the Chief of the SANDF. In addition, the explanation and popularisation of the PMII could be done by means of a document similar to the US Army Profession of Arms and through motivational events, such as ceremonies.³⁷⁰ This conclusion also indicates the need for visual recognition through competency badges and monetary recognition by means of an instructor allowance. Both methods for recognition are already mentioned in a CHR instruction.³⁷¹

According to Johansen, identity can be used to predict certain elements of performance.³⁷² Further research into the predictive potential of the PMII could therefore be of value to the SANDF. Given the growing individualism in the SANDF and the views of Van Knippenberg and Johansen, research with regard to the effect of individualism would also provide valuable inputs in the attempt to improve the military ethos and the training of and by military instructors.³⁷³

The study reported here explored the proverbial uncharted waters to contribute to the body of knowledge of military education and training. This could lead to the enhancement of the military ethos and the effectiveness of the training of and by military instructors in order to improve training in the SANDF, thereby saving soldiers' lives. The findings support the poignant adage at the SANDF COLET:

“Behind every good soldier there is an even better instructor”

ENDNOTES

- ³⁰¹ Brigadier General (Dr) William J Wagner, SA Army (ret) is a contract lecturer at the Faculty of Education of the University of Pretoria. Before retiring from the SANDF in 2017, he was the Commandant (General Officer Commanding) of the SANDF College of Educational Technology (COLET). The results in this article are based on his PhD thesis, “Professional military instructor identity and the effect of collaborative instructivism”, supervised by Prof. Van Putten and Prof. Raucher.
- ³⁰² Prof. Sonja van Putten is an associate professor at the Department of Science, Mathematics and Technology Education in the Faculty of Education at the University of Pretoria. Her field of research is professional identity of those who teach.
- ³⁰³ Prof. Willem Rauscher is an associate professor at the Department of Science, Mathematics and Technology Education in the Faculty of Education at the University of Pretoria. His field of research is the process of design, including the design of teaching structures.
- ³⁰⁴ South African Department of Defence. *CHR Instruction: HR Development: Directorate ETD Systems Integrity: Accreditation & Quality Insurance: 003/10: Profile, selection, appointment, training and rotation of instructors and directing staff at DOD ETD providers*. Pretoria, 2010.
- ³⁰⁵ South African Department of Defence. *Decision brief to CHR on the transformation of the training of military instructors by adopting and integrating digital learning*. COLET/R/103/2. Pretoria, SANDF, 2015.
- ³⁰⁶ South African Department of Defence. *South African Defence Review*. Pretoria, 2015; South African Department of Defence. *Chief Human Resources Instruction 04/2018 Military Instructor Management System and Learning Path dd 06 Feb 18*. Pretoria, 2018.
- ³⁰⁷ Military educational managers and directors are mostly military instructors promoted to a management level and are therefore included in the collective known as military instructors, except where exclusion or specification is required.
- ³⁰⁸ I Bulei & G Dinu. “From identity to professional identity: A multidisciplinary approach”. In *Proceedings of the 7th International Management Conference*, Bucharest, 2013, 249–258; R Johansen. “The impact of military identity on performance in the Norwegian Armed Forces”. PhD dissertation. University of Bergen, 2013.
- ³⁰⁹ J Stets & P Burke. “A sociological approach to self and identity”. In MT Leary (ed), *Handbook of self and identity*. New York, NY: Guilford Press, 2003, 128–152.
- ³¹⁰ W James. *The principles of psychology*. New York, NY: Henry Holt, 1890.
- ³¹¹ D van Knippenberg. “Work motivation and performance: A social identity perspective”. *Applied Psychology* 49/3. 2000. 357–371.
- ³¹² Bulei & Dinu *op. cit.*
- ³¹³ Johansen *op. cit.*
- ³¹⁴ *Ibid.*
- ³¹⁵ J Attride-Stirling. “Thematic networks: An analytic tool for qualitative research”. *Qualitative Research* 1(3). 2001. 385–405.
- ³¹⁶ J Mouton. *How to succeed in your master’s & doctoral studies: A South African guide and resource book*. Pretoria: Van Schaik, 2001; J Creswell. *Research design* (4th ed). Lincoln, NA: Sage, 2014.
- ³¹⁷ James *op. cit.*, p. 292
- ³¹⁸ James *op. cit.*, p. 292
- ³¹⁹ N Rousseau. *Self, symbols & society*. Lanham, MD: Rowman & Littlefield, 2002.
- ³²⁰ James *op. cit.*, p. 293.

- ³²¹ S Stryker & P Burke. “The past, present, and future of an identity theory”. *Social Psychology Quarterly Special Millennium Issue on the State of Sociological Social Psychology* 63/4. 2000. 284–297.
- ³²² *Ibid.*; James *op. cit.*; Rousseau *op. cit.*
- ³²³ *Ibid.*
- ³²⁴ *Ibid.*, p. 286.
- ³²⁵ Van Knippenberg *op. cit.*
- ³²⁶ Bulei & Dinu *op. cit.*, p. 254.
- ³²⁷ *Ibid.*
- ³²⁸ D Beijaard, P Meijer & N Verloop. “Reconsidering research on teachers’ professional identity”. *Teaching and Teacher Education* 20. 2004. 107–128.
- ³²⁹ *Ibid.*; C Day, A Kington, G Stobart & P Sammons. “The personal and professional selves of teachers: Stable and unstable identities”. *British Educational Research Journal* 32/4. 2006. 601–616.
- ³³⁰ Beijaard *et al. op. cit.*; Day *et al. op. cit.*; Bulei & Dinu *op. cit.*
- ³³¹ J Hewitt. *Self and society: A symbolic interactionist social psychology* (7th ed). Boston, MA: Allyn & Bacon, 1997; S Hitlin. “Values as the core of personal identity: Drawing links between two theories of self”. *Social Psychology Quarterly* 66/2. 2003. 118–137; D Oyserman. “Identity-based motivation: Implications for action-readiness, procedural-readiness, and consumer behavior”. *Journal of Consumer Psychology* 19/3. 2009. 250–260.
- ³³² For ease of reading, masculine nouns and pronouns are being used; however, it does not refer to a single gender exclusively.
- ³³³ D Snider. “Officership: The professional practice”. *Military Review* January–February 2003. 3–8.
- ³³⁴ *Ibid.*
- ³³⁵ Johansen *op. cit.*
- ³³⁶ *Ibid.*, p. 19.
- ³³⁷ *Ibid.*
- ³³⁸ *Ibid.*
- ³³⁹ H Triandis & M Gelfand. “Converging measurement of horizontal and vertical individualism and collectivism”. *Journal for Personality and Social Psychology* Vol 74, No 1. 1998. 118–128.
- ³⁴⁰ Johansen *op. cit.*
- ³⁴¹ C Moskos. “Institution vs occupation: Contrasting models of military organisation”. Woodrow Wilson International Center for Scholars, 1981. <<http://www.dtic.mil/dtic/tr/fulltext/u2/a096966.pdf>> Accessed on 1 June 2017.
- ³⁴² *Ibid.*; J Faris. “The looking-glass army: Patriotism in the post-Cold War era”. *Armed Forces & Society* 21/3. 1995. 411–434; J Griffith. “After 9/11, what kind of reserve soldier?”. *Armed Forces & Society* 35/2. 2009. 214–240.
- ³⁴³ South African Department of Defence. *South African Defence Review 1998*. Pretoria, 1998; South African Department of Defence, *South African Defence Review 2015 op. cit.*
- ³⁴⁴ L Heineken. “The military, war and society: The Achilles heel of sociology and the need for reflection”. Inaugural lecture, 11 February 2014. <<http://scholar.sun.ac.za/handle/10019.1/86806>> Accessed on 8 June 2017; A Esterhuysen. “Educating for professionalism: A new military for a new South Africa”. *Scientia Militaria* 34/2. 2006. 135–151.

- ³⁴⁵ R Johansen, J Laberg & M Martinussen. "Military identity as predictor of perceived military competence and skills". *Armed Forces & Society* 40/3. 2014. 521–543; J Dynes. "Professionalism and practice: The development of situational, vocational professional identity amongst UK Army reserve instructors". PhD dissertation. University of Brighton, 2014; G Ben-Dor, A Pedahzur, D Canetti-Nisim, E Zaidise & A Perliger. "I versus we: Collective and individual factors of reserve service motivation during war and peace". *Armed Forces & Society* Vol 40(3). 2008. 565–592.
- ³⁴⁶ Snider *op. cit.*; Johansen *op. cit.*
- ³⁴⁷ Dynes *op. cit.*
- ³⁴⁸ Beijaard *et al. op. cit.*; S van Putten. "Professional Mathematics teacher identity in the context of pre-service training". PhD dissertation. University of Pretoria, 2011.
- ³⁴⁹ Beijaard *et al. op. cit.*; Van Putten *op. cit.*
- ³⁵⁰ Source: Author's own compilation
- ³⁵¹ J Ritchie, J Lewis, C McNaughton Nicholls & R Ormston. *Qualitative research practice*. Los Angeles, CA: Sage, 2014; R Stake. "Case studies". In NK Denzin & YS Lincon (eds), *Handbook of qualitative research*. London: Sage, 1994, 236–247.
- ³⁵² *Ibid.*; C Boddy. "A rose by any other name may smell as sweet but 'group discussion' is not another name for a 'focus group', nor should it be". *Qualitative Market Research: An International Journal* 8/3. 2005. 248–255; LA Meyer, personal communication, 12 February 2019.
- ³⁵³ U Flick. *Managing quality in qualitative research*. Los Angeles, CA: Sage, 2007.
- ³⁵⁴ Attridge-Stirling *op. cit.*
- ³⁵⁵ V Braun & V Clarke. "Using thematic analysis in psychology". *Qualitative Research in Psychology* 3. 2006. 77–101.
- ³⁵⁶ Attridge-Stirling *op. cit.*
- ³⁵⁷ Y Lincoln & E Guba. *Naturalistic inquiry*. Thousand Oaks, CA: Sage, 1985; D Ary, L Jacobs & C Sorensen. *Introduction to education research* (8th ed). Belmont, CA: Wadsworth, 2010.
- ³⁵⁸ Johansen *op. cit.*; Ben-Dor *et al. op. cit.*
- ³⁵⁹ Mouton *op. cit.*
- ³⁶⁰ Snider *op. cit.*
- ³⁶¹ Dynes *op. cit.*
- ³⁶² Snider *op. cit.*
- ³⁶³ Johansen *op. cit.*
- ³⁶⁴ Snider *op. cit.*
- ³⁶⁵ Ben-Dor *et al. op. cit.*
- ³⁶⁶ Heinecken *op. cit.*; Esterhuysen *op. cit.*
- ³⁶⁷ Van Knippenberg *op. cit.*; Johansen *op. cit.*
- ³⁶⁸ R McKinlay. "Professionalization, politicization and civil-military relations". *Mens & Maatschappij* 45/6. 1970. 393–408; M Nuciari. "Rethinking the military profession: Models of change compared". *Current Sociology* 42/3. 1994. 7–21.
- ³⁶⁹ South African Department of Defence, *Decision Brief to CHR ... op. cit.*
- ³⁷⁰ Department of the Army. *The profession of arms*. Fort Eustis: TRADOC, 2010.
- ³⁷¹ South African Department of Defence, *Chief Human Resources Instruction op. cit.*
- ³⁷² Johansen *op. cit.*
- ³⁷³ Van Knippenberg *op. cit.*; Johansen *op. cit.*

SCIENTIA MILITARIA

South African Journal of Military Studies



Food wastage management at the South African Military Academy officers' mess

*Nomboniso Moss, Ivan Henrico and Hennie Smit³⁷⁴
Stellenbosch University*

Abstract

Globally, an estimated one-third of the total of food produced for human consumption is never consumed. This affects food security. South Africa has obligations to meet international commitments to reduce food wastage. The United Nations Sustainable Development Goal (SDG) 12.3 aims to reduce food loss through wastage by 30 per cent by 2030. To contribute to the achievement of this goal, South Africa has to formulate policies to reduce food loss to achieve national food security. The South African National Defence Force (SANDF), as an organ of the state, should align with national policies aimed at reducing food loss and waste. The current study was conducted at the South African Military Academy (SAMA), an institution of higher learning for SANDF members. The institution has a catering facility that serves approximately 350 resident students and other living-in members³⁷⁵ daily. To date, no research has been done on food wastage management either in the broader SANDF or at this institution. This lack of information and analysis on food wastage management in the military in South Africa prompted the current research. The study analysed food wastage management at the SAMA mess to identify the level of knowledge and skills of SAMA officers' mess personnel regarding the status of food wastage and best management practices. Through this qualitative study, online semi-structured interviews, using Microsoft Teams, were utilised to collect data from SAMA mess personnel. The findings revealed that there are set measures in place at the SAMA mess for managing food wastage, such as booking meals in advance and being able to repurpose food. The participants also indicated that most SAMA chefs are trained in food wastage management and possess the necessary skills to reduce food wastage in the mess; yet, not optimally so. Recommendations from this research are that more and improved training of personnel, as well as awareness programmes among mess staff and SAMA students would further reduce food wastage. Implementing such food wastage management measures would benefit the SAMA and the SANDF, and would contribute to national food wastage management and the realisation of the United Nations SDG 12.3.

Keywords: Food security, food wastage, food wastage management, South African Military Academy, semi-structured interviews

Introduction

According to the Food and Agricultural Organization (FAO) of the United Nations,³⁷⁶ statistics on food loss and food wastage calculated from the post-harvest stage indicates that about 14 per cent of food produced never reaches retail shelves or the consumer. Historically, food supply for human consumption depends on three systems, namely

croplands, which mostly produce grains; rangelands that produce meat from grazing livestock; and ocean fisheries which generate the world's fish.³⁷⁷ Society nurtures the natural resources produced, and shapes the products that we consume.³⁷⁸ Rapid urbanisation and population growth have contributed to increased global food production in urban areas due to considerable changes in people's dietary plans and the related increased demand for food.³⁷⁹ Within this production, food loss and food wastage start with agricultural production and continues right through to human consumption.³⁸⁰ Most of the food wasted during the consumption stage takes place in high-income countries, and the amount and type of consumption are directly proportionate to household wealth.³⁸¹

A significant amount of food wastage during human consumption is produced by the hospitality sector.³⁸² This sector comprises restaurants, pubs, educational facilities with a residential component, hotels, healthcare and nourishment facilities, catering, and military training, operational and housing services.³⁸³

The Department of Defence secures catering services for the SANDF, both at static bases and at temporary bases during special operations. In the SANDF, food waste is disposed of through a waste disposer attached to the kitchen drain, which collects food waste as pigswill.³⁸⁴ Standard procedures for the disposal of food are required to ensure that the hygiene, health and safety of mess staff and living-in members are not compromised.

The SAMA is an institute of higher learning, mandated by the SANDF to develop and educate young officers.³⁸⁵ It has a hospitality section (mess facility) that caters for three meals per day for the approximately 350 members (students and staff) residing in military accommodation inside the unit. Food wastage in the hospitality sector occurs in any one area or in a combination of three streams: during the preparation of food, during food consumption, and during discarding leftover food. Whenever food ends up as waste, it means that not just the food product, but the water, energy and resources that had been used to produce such food have been wasted as well.³⁸⁶

Ideally, food wastage management (FWM) should prevent waste generation in the first place.³⁸⁷ From a geographical perspective, FWM consists of managing the environment, specifically relating to the landfill disposal of food. SAMA is located in a conservation area with vulnerable and endangered species, such as the black harrier.³⁸⁸

Bearing in mind environmental concerns, the area where food disposal occurs needs to be kept free from pollution by any kind of waste to ensure the conservation of biodiversity. Suboptimal or ineffective FWM could lead to financial losses, environmental degradation, unpleasant smells and diseases, and the food waste site itself might become a breeding ground for insects, and attracting stray animals, such as dogs and cats. It is therefore important to ensure the correct management of food wastage through all phases of handling of food at the SAMA mess.

Globally, food loss and wastage have been a growing topic of discussion on different platforms due to its environmental, economic and social implications.³⁸⁹ Annually, South Africa generates about nine million tonnes of food wastage, which amounts to 29 per

cent of the local agricultural production.³⁹⁰ Oelofse and Nahman found that the bulk of this wasted food (8.67 million tonnes per annum or 95.9 per cent) is generated during the pre-customer phase.³⁹¹

Additionally, an estimated 1 billion South African rand (ZAR) worth of energy is wasted during the production of food that will eventually be wasted. This figure includes fuel and electricity costs used for producing and preparing the food.³⁹² Nahman and De Lange conducted research on the cost of household food wastage in South Africa and found that roughly 21.7 billion South African rand (ZAR) or 0.8 per cent of the gross domestic product (GDP) is wasted by South African households in the form of food every year.³⁹³

Most previous research on food wastage focused on institutions of learning and higher learning (universities and other), hotels, restaurants and hospitals.³⁹⁴ A study by Marais et al. (2017) investigated the extent of food wastage by Stellenbosch University students in their respective residences. The study also researched attitudes and practises of food service managers, catering personnel and students, which affected food wastage. The findings indicated that high food wastage was influenced substantially by the meal booking system, related menu planning, and the meal serving format and style.³⁹⁵ A similar study was conducted by Mabaso and Hewson (2018) on employees' perceptions of FWM in hotel kitchens, focusing on a hotel group in Gauteng, South Africa. The findings revealed that the employees understood the implications of food wastage and that they contributed positively towards addressing issues relating to food wastage.³⁹⁶

To date, no research has been conducted on the wastage of food and FWM at the SAMA. There are also no known studies related to this issue in the SANDF, the mother organisation of this institution. This lack of an empirical study regarding FWM in the SANDF in general, and at the SAMA in particular, presented a research gap worth investigating, since South Africa is part of Target 12.3 of the United Nations SDGs (UNSDG), which is committed to reducing food wastage by 30 per cent by 2030.³⁹⁷ The results of research on food wastage at the SAMA will contribute to improved FWM at the SAMA, as well as in the broader SANDF.

In this article, the literature applicable to FWM in general, and to FWM in a military context specifically, will be introduced. The methods used to gather information on FWM at the SAMA mess are explained thereafter, and the recorded views of participants regarding FWM are reported. The article is concluded by revisiting the results of the study and discussing the implications of the results, drawing conclusions from the data collected, highlighting limitations, and recommending measures to enhance FWM at the SAMA mess.

Food wastage in a military context

In the following subsections, the concept of food wastage is illuminated, the types of food wastage identified, and the causes of food wastage explained. This is followed by a discussion of the consequences associated with food wastage, and effective and/or non-effective FWM in the South African National Defence Force (SANDF).

Defining food wastage

The Global Food Waste Management Report defines **food** as –

*[A]ny substance processed, semi-processed or raw that is needed for human consumption as well as edible parts associated with food that is not intended to be consumed by humans.*³⁹⁸

Waste is defined as –

*[A]ny substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be reused, recycled or recovered.*³⁹⁹

According to Priestley (2016), there is no legal or universal definition of food wastage. She states that food wastage studies normally include varied methodologies, reporting and discussion that cannot be compared directly.⁴⁰⁰ The FAO, however, describes food wastage as “food appropriate for human consumption being discarded, whether or not after it is kept beyond its expiry date or left to spoil”. Riley defines food wastage as “raw or cooked food materials and includes food loss, before, during or after meal preparation in the household, as well as food discarded in the process of manufacturing, distribution, retail, and food service activities”.⁴⁰¹ These definitions are similar, and address discarded food at customer level. A more recent definition of food wastage was created by the FAO after consulting experts to synchronise definitions of food wastage. The FAO differentiates between food loss and food wastage. **Food loss** is defined as “the decrease in the quantity or quality of food resulting from decisions and actions by food suppliers in the chain, excluding retailers, food service providers and consumers” and **food wastage** is defined as “the decrease in the quantity or quality of food resulting from decisions and actions by retailers, food service and consumers”.⁴⁰²

From the above definitions, one can deduce that food wastage is any consumable material meant for humans that ends up being discarded for any reason. The operational definition of food wastage adapted for this study is ‘[w]asted food is any unwanted or discarded food at the SA Military Academy mess that was meant for human consumption and is now at the point of being disposed of.’

Types of food wastage

Food disposed of as waste can be divided into avoidable and unavoidable waste. Avoidable food wastage is food and drink that were discarded because of inefficient or ineffective food management, which at the point of disposal was still fit for human consumption.⁴⁰³ This includes food damaged during food preparation, such as burnt food or food which expired before consumption. This type of wastage can be prevented through better planning and an effective estimation of food prepared per meal, per day in the kitchen.⁴⁰⁴ According to Enos (2019), fresh fruit and vegetables are among the most wasted items in the world because of their relatively short shelf life.⁴⁰⁵

Unavoidable food wastage refers to food, which is non-edible at the time of disposal.⁴⁰⁶ This includes peels, leftover food, rotten food, food that goes bad before its anticipated expiry date, and raw meat bones. This food can be managed by converting it into animal feed and through resource recovery.⁴⁰⁷

Being able to identify the difference between avoidable and unavoidable food wastage, will assist relevant food managers in monitoring and controlling food wastage, and will contribute to finding alternative ways of curtailing food wastage. The current study mainly focused on avoidable food wastage.

Causes of food wastage

Globally, food loss and food wastage occur during agricultural production, post-harvest handling and storage, and during consumption (see Figure 1). The first level at which food loss and wastage occurs is the agricultural production level. Here, food loss and food wastage are influenced by ineffective soil preparation, unsuitable harvest timing, adverse weather conditions, compromised seed quality, and pest infections.⁴⁰⁸ Food loss and food wastage also occur during mass production and mass distribution of food. A lack of transportation and storage infrastructure from the place of production to the place of consumption, also contributes to food loss and wasting of food.⁴⁰⁹

At wholesale and retail level, food wastage is caused by the difficulty in forecasting demand, overstocking, staff behaviour towards food and food wasting, and the inappropriate ordering of food.⁴¹⁰ In highly developed countries, food loss also occurs due to consumable food not meeting retailers' quality standards. In such countries, retailers sell only perfectly produced perishable food and discard substandard food. Retailers focus on the affordability status of food; i.e. food that can be easily replaced, easily disposed of or waste consumable food.⁴¹¹ In developing countries, such as sub-Saharan countries, food loss occurs mainly not at the consumer level, but due to a lack of storage space, inadequate packaging, and unfit storage conditions (e.g. poor temperature control). Globally, fruit and vegetables contribute 15 per cent to food loss and wastage, while in sub-Saharan Africa, this is estimated at 35 per cent – mainly due to the lack of suitable storage.⁴¹²

At consumption level, food wastage is higher in developed countries than in developing countries. This is caused by those who can afford engaging in impulse spending, practising poor storage, and preparing more food than is required.⁴¹³ Food wastage also occurs because food is not consumed before the expiry date. This might be due to oversight or not correctly differentiating between 'best before' and 'consume by' dates of food. Other causes of food wastage include stockpiling, breakages, not preserving food once opened, and package failure. Furthermore, poor cooking skills, serving excessive portions of food, and over-ordering takeaways ultimately lead to waste.⁴¹⁴ Generally, people are not aware of the amount of food they regularly waste.⁴¹⁵

In the hospitality sector, a larger amount of food wastage is produced in the kitchen than other types of solid waste. This is caused by poor planning in food acquisition, overcooking, food left on plates, and not allowing customers to take food home,

especially in buffet eateries, which involves cooking large amounts of an equally large variety of food without certainty of patron numbers or their consuming capacity.⁴¹⁶ This uncertainty creates increased pressure on natural resources, hinders the cost-effective use of food, and necessitates the disposal of huge amounts of food as waste.⁴¹⁷

The consequences associated with food wastage

Food loss and food wastage affect the physical quantity and economic value of available food. According to the FAO's Food Loss Index (FLI) and in terms of economic value, the latest estimation (Food and Agriculture Organization of the United Nation (FAO), 2019) shows that approximately 14 per cent of food produced globally is lost after harvesting (not including the retail level). According to the FAO (2019), at 21 per cent, Central and Southern Asia are the largest contributors to food wastage in the world in terms of economic value. Globally, the second-largest contributors to food (continent-wise) are North America and Europe with 16 per cent in economic value lost, which accounts to 12 per cent loss in calories, globally. In sub-Saharan Africa, the economic value (FLI) of food loss is 14 per cent, and the loss of nutritional value (measured in calories) is 17 per cent.⁴¹⁸

A survey conducted by the FAO in 2016 across the commodity groups and value chain, measured the economic waste from post-harvest to distribution. This study found that the major contribution to food wastage comprised highly perishable commodities, namely roots, tubers, and oil-bearing crops at 26 per cent, followed by fruit and vegetables at 22 per cent. Meat and animal products accounted for 12 per cent and cereal and pulses (beans, peas and lentils), 8 per cent of food wastage.⁴¹⁹ From the above-mentioned reasons for food wastage and the descriptions of food wastage, it is evident that food wastage is not an issue that can be viewed in isolation, but should be addressed holistically. It affects the environment, the economy, and society at large.⁴²⁰

It is worth mentioning that in 2012, an estimated amount of 88 million tonnes of food wastage was generated in Europe, estimated at a loss in monetary terms of approximately 143 billion euros (approximately ZAR 2.9 trillion). Of the 88 million tonnes of food wastage, 19 per cent occurred at the food processing level and 53 per cent at the household level.⁴²¹ The United States of America is also one of the major contributors to food wastage. In 2010, an estimated 31 per cent of the 430 billion pounds (= approximately 195 billion kg) (worth approximately ZAR 10 trillion) of food generated in the United States for humans was wasted, never even available for consumption.⁴²²

Food wastage is a global concern because of the impact it has on the environment and on natural resources.⁴²³ Around the world, soil is eroded due to deforestation when forests are converted into crop-yielding farmland instead of it being used as natural grazing land for animals.⁴²⁴ Another concern is the release of greenhouse gas emissions caused by the decomposition of discarded food, which relates to ineffectively managed landfills.⁴²⁵ However, not only does food wastage contaminate soil, waterways and groundwater via runoffs when dumped in landfills, it also contributes significantly to water wastage during food production. Water is the source of life and essential to sustain plants towards

harvest time and to sustain livestock, but is also used during the production of food. Kibria (2017) states that 1 500 litres of water are required to produce one kilogramme of rice, 500 litres are required to produce one kilogramme of potatoes, 1 000 litres for one litre of milk and astonishingly, 16 000 litres of water are used to produce one hamburger. Kibria (2017) furthermore states, “conservative estimates of water loss caused by discarded food indicate that about half of the water withdrawn for irrigation is lost”.⁴²⁶ It is evident from the above-mentioned descriptions that food wastage not only affects the environment and natural resources, but also has considerable financial implications for which society and future generations have to pay.

In economic terms, food wastage contributes to increased food prices and consequently reduces the number of people who can afford to eat healthy food.⁴²⁷ In the case of the hospitality sector, food wastage results in a loss of costs to procure and process the food and adds to business expenses of requiring additional labour to dispose of the food.⁴²⁸ Food wastage affects all stages in the food supply chain, from the production of raw materials through to consumption. These impacts are generally difficult to notice, but through research and awareness campaigns about food wastage, societies may be alerted to this very important aspect of human security. The economic value of the food wasted along the food supply chain can never be recovered, which affects both low-income and high-income countries at different stages of the food supply chain. The ultimate outcome of ineffectively managed food wastage is food insecurity for present and future generations. Food insecurity does not necessarily mean the total loss of food, but refers to the imbalance and separation that exists in the availability and access to food on a global scale between rich and poor societies and developed and developing countries.⁴²⁹

Food wastage is also shaped by population growth, a shift in dietary preferences, social upbringing, cultural background, and attitudes of people towards wastage.⁴³⁰ In addition to losses during the food production stages, food wastage affects the development and prospects of society, such as to build houses or generate recreational areas. Although reducing food wastage may not directly assist in solving food insecurity in developing countries, it does reduce the pressure on limited land, water and biodiversity resources.⁴³¹ The lack of knowledge and awareness of food wastage and ways of reducing this waste leads societies to dispose of food wastage in large quantities continually, oblivious to the consequences on their long-term security, especially when preservation is not a social norm. Evidentially, there is a difference between the consumption of food for luxury versus necessity. Some social and cultural demands entail being served buffet meals, cooking different types of cuisine and being spoilt for choice, while others are compelled to eat what is at their disposal. Some cultures dispose of certain edible, even much-preferred food types because it is either considered not palatable or it is not condoned in a prescriptive culture. Other people do not believe in eating leftover food; whatever was not consumed, is discarded after each meal.

The consequences associated with food wastage in the hospitality sector, including at military institutions, is well documented in literature.⁴³² However, no research exists for food wastage and FWM in the SANDF. The next section highlights this matter.

Food wastage management in the South African National Defence Force

According to Chapter 4, section 16(1) of the National Environmental Management: Waste Act 59 of 2008, it is the responsibility of the holder of waste to ensure that the minimising measures, such as prevention, reduction, re-use, recycling and landfills are followed in an environmentally sound manner according to the waste management hierarchy by placing the waste with the least negative impact on top of the structure.⁴³³ The FAO identified a strategy toolkit from most to least environmentally friendly level, which is aimed at reducing the food wastage footprint.⁴³⁴ At the time of writing, no such strategy existed within the SANDF.

In some militaries, such as the United States (US) Army, the installation of a food waste tracking system in military kitchens monitor all wastage that takes place. They use technologies that guide the reduction of wastage in the mess, and promote environmental protection. The United States Army is currently using the LeanPath system that can reduce the food loss per person in the mess. LeanPath is a system that concentrates on the avoidance of wastage by utilising a smart meter that examines and classifies the last discarding of food wastage. The LeanPath system considers the weight of disposed food and then records and categorises the food wasted. The data captured by the LeanPath system is transmitted to a client-specific website that can be analysed by the client to ascertain which type of food is wasted most. This information can then be used to determine the food types that consumers prefer.⁴³⁵ This is a contribution towards the Net Zero goals for the US Army. They also have Net Zero Water and Net Zero Energy goals, which focus on the reduction of wastage of water and energy.⁴³⁶ As explained earlier, reduction in food wastage through effective, fit-for-purpose management contributes to a reduction in both water and energy wastage.

In the SANDF, three types of catering models, namely the conventional model, the commercialised model, and outsourcing, were recommended by the Defence Command Council and have been approved by National Treasury to be implemented in the SANDF.⁴³⁷

The **conventional model** is a static 'cook and serve' type of catering system.⁴³⁸ The procurement of food items of the highest quality is centralised in the storage depot of the unit. The unit receives food rations through the nearest depot based on the culinary requirements of the unit.⁴³⁹ The state uses contractors in the procurement of food for the military, and the relevant military mess then communicates their food requirements to the contractors. Rations are distributed from a central depot.⁴⁴⁰ The advantage in this process is that there is no need for each unit to procure its own food. The disadvantages are that the state procures food at a relatively high price because it is on contract, and at times, contractors do not deliver food on time, which might affect wastage.

The **commercialised model** consists of a process to procure rations independently using non-public funds (NPF). The NPF creates a ration account that reflects the funds received from the Department of Defence ration budget and spends towards rations. This process assists in the procurement of food according to the requirements of the unit. It reduces

the procurement of unnecessary food or stockpiling of food in the mess.⁴⁴¹ A move towards commercialisation will require the state to move funds to the operational funds of a specific unit for procuring rations.⁴⁴² The benefits of this model are that there is no intermediary in the procurement of rations, ration funds will be managed by the relevant unit, and unit commanders may purchase the rations according to their requirements. This will, therefore, assist the state in a more cost-effective procurement process, and the unit will be minimising the food wastage footprint through sound management of its food requirements.

Outsourcing involves the contracting of specific activities, which could have been provided in-house, to an outside individual or organisation.⁴⁴³ This means that a private company will provide the goods and services. This is done when there is a skills gap, a lack of manpower, or when it is more expensive to render food services internal than externally. Outsourcing aims to reduce and control the cost operating measure.⁴⁴⁴

All these models provide a nutritional meal using the ration scale to cater for military personnel according to their physical and professional environmental conditions. The ration scale specifies and quantifies all food items required to plan a menu.⁴⁴⁵ It is essential that the food ordered be of the highest quality, and that the person placing the order be fully informed of the consumer needs. The stock levels of food must be monitored constantly by the ration clerk to avoid buying the same items more than once and to prevent wasteful expenditure for the military. Seasonal food should be favoured, as buying food in season reduces cost. There must be enough storage space for storing and preserving ordered items to reduce possible wastage. The space should be kept neat and hygienic to avoid food loss and secure healthy food for later consumption.⁴⁴⁶

Rations must be transported from the quartermaster to the preparation area and utilised according to the menu of the day.⁴⁴⁷ The main chef (shift leader) is responsible for the control and safekeeping of the rations. It is important that food be handled according to the first-in-first-out (FIFO) principle in the mess. This means that new items are stored behind the old items to ensure there is food rotation. Food expiry dates should always be reflected on the products.

The responsibility of environmental health service and hospitality personnel is to ensure that food is handled with care from the production to the consumption thereof. Food is to be monitored constantly to avoid damage to food, or poor hygienic practices in the kitchen. The mismanagement of food may allow contamination of food, which will result in food wastage. Food hygiene programmes are conducted to prevent poor practices in receiving, storing, preparing and serving food.⁴⁴⁸ Storage temperature should always be checked to ensure that it complies with the requirements prescribed for products ordered to avoid food wastage.⁴⁴⁹

An effective approach, aimed at reducing food wastage before cooking, is to optimise the type of catering model used by the mess. These catering models differ in their procurement and ordering of goods from outside suppliers to the unit. The food should be ordered according to food preference and the current market to minimise wastage by living-in members. The mess personnel have tasks and responsibilities in planning,

preparing and managing food in the kitchen. This starts from the person ordering food through to the storeman who packs the food. Ration scale and unit strength may assist in meal planning as these are used as measuring instruments to prepare meals. Effective control and management in the mess is essential to reduce food wastage during the transportation, storage and preparation of food.

In the military, as in the hospitality sector, investing in prevention is the most effective and efficient way to combat food wastage. It is about controlling food wastage at consumption level, while the other measures are corrective; thus, occurring after consumption as food management practise.⁴⁵⁰ Prevention reduces the use of resources by adhering to mechanisms in place to ensure that the risk that is linked to the environmental, economic and social impacts when generating waste is minimised.⁴⁵¹ Food wastage can also be prevented by improving food labelling, better planning in food preparations, and improving the packing and storing of food in the best available place at correct temperatures.⁴⁵²

Researching food wastage management

The FAO and the United Nations Environment Programme (UNEP) have created two indicators that monitor food processing at different levels in the food chain. The Food Loss Index monitors, the Food Loss Post-Harvest Index, and the Food Waste Index are still being developed and will monitor food wastage by retailers and consumers. The current study focused on the last part of the Food Waste Index: Public and household consumption (see Figure 1).

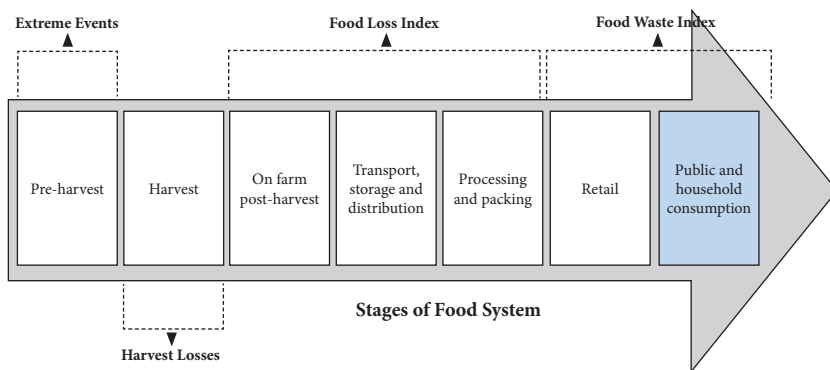


Figure 1: Scope of Food Loss Index along the food supply chain⁴⁵³

The aim of the current study was to analyse FWM at the SAMA mess. To reach this aim, the objectives identified were to:

- establish how the FWM system at the SAMA functions;
- determine the level of training of mess personnel in FWM in the kitchen; and
- provide recommendations to improve FWM at the SAMA mess.

The study area

The study was conducted at the South African Military Academy (SAMA) mess. The SAMA was established in April 1950. It is a military unit of the SANDF and houses the Faculty of Military Science, Stellenbosch University. Initially, the SAMA had an agreement with the University of Pretoria to present Military Studies to permanent military officers at the Military College in Pretoria. However, in 1953, the SAMA permanently relocated to its current location in Saldanha Bay, with the first officers starting their studies in 1955. In 1961, the Faculty of Military Science (FMS) was officially established.

Saldanha Bay is approximately 105 km northwest of Cape Town in the West Coast District Municipality, in the Western Cape, South Africa. The SAMA was selected for the study because some of the authors are alumni of the SAMA and some are current lecturers in the FMS, and it made sense to conduct the study where access to the SAMA mess is not restricted. Figure 2 shows the location of the study area.

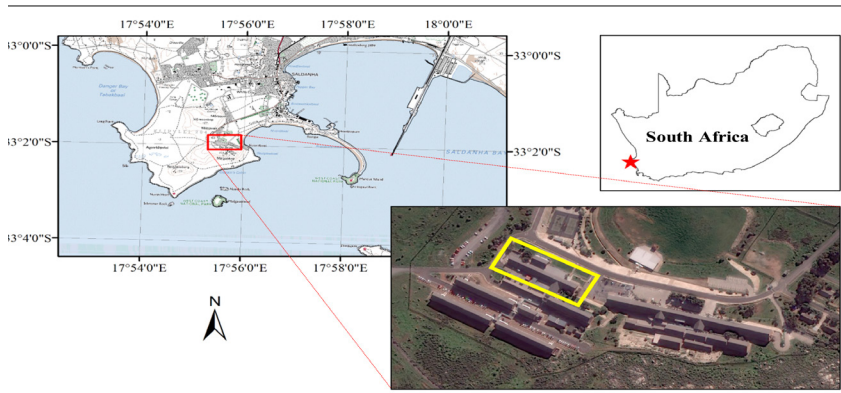


Figure 2: Orientation map showing the location of the SAMA (indicated by the red star). The SAMA mess building is indicated by the yellow rectangle⁴⁵⁴

Participants in the study

All thirteen personnel working in the SAMA mess were invited to participate in the study. Because the mess personnel comprised a small and captive group, it was possible to invite all the participants. Ten participants gave consent to take part in the study. Institutional permission to conduct this study was obtained from the Commandant of the SAMA. Ethical clearance was requested and approved by the Stellenbosch University Research Ethics Committee. The participants completed and signed written consent forms before the study commenced to protect their rights to confidentiality of information. Throughout the study, the researcher secured participants' anonymity.

Research design

To acquire relevant information from the participants in the study, primary data were collected in the form of an online semi-structured interview. Interview questions were formulated based on a combination of a thorough review of relevant literature and the researchers' own experience of military mess facilities. The interviews were guided by a protocol with a set of semi-structured questions, notes were taken for clarity, and answers were transcribed verbatim. The semi-structured interview questionnaire consisted of:

- 30 semi-structured interview questions, namely dichotomous questions (for basic validation);
- multiple-choice questions (to match expected outcomes); and
- open-ended questions (to collect feedback and/or suggestions).

The interview questionnaire was divided into three sections, namely biographical information, information on FWM, and information on training or education of participants on FWM. The questions asked to the participants are indicated in Table 1.

Table 1: Semi-structured interview questions

1. Age group? (18–29 years; 30–39 years; 40–49 years; 50–60 years)
2. Years of experience working in a mess
3. Years of experience working at the Military Academy mess
4. What type of a catering model is the Military Academy using?
5. How many meals does the mess prepare per day during the week?
6. How many meals does the mess prepare per day on weekends?
7. How many people on average eat in the mess during the week?
8. How many people on average eat in the mess during the weekend?
9. How is the scale of issue per meal for rations calculated at the mess?
10. What happens in the event where less people show up than what was calculated?
11. Is there a person who monitors the food expiry dates when receiving in the food in the mess?
12. Do you dispose of food that has exceeded its use-by-date & how? What do you do with food that has exceeded its 'use-by' or 'best before' date?
13. How often do you receive fresh vegetables and fruits from the main store/supplier?
14. How often do you receive starch from the main store/supplier?
15. How often do you receive meat from the main store/supplier?

16. How often do you receive frozen vegetables?
17. What happens to the food wastage (“offcuts” such as vegetable peels and bones after de-boning of meat) during the preparation of the meal?
18. What happens to the food that is burnt at times of cooking?
19. What happens to the food that has been prepared for living-in members that were not consumed at all?
20. What happens to the leftover food on the plates after each meal?
21. How is the food waste currently stored outside the mess?
22. How often is the waste removed from sight and by whom?
23. Does the mess have any internal bins to support the segregation of food wastage (e.g. bin for raw uncooked vegetables/fruits or bin for cooked food and bones)?
24. How do you dispose of the food that has been prepared for living-in members that were not consumed?
25. How do you dispose of leftover food after each meal?
26. Are there any restrictions that may prevent the collection of disposed of food?
27. Does the School of Catering present modules regarding food wastage management in the kitchen?
28. Did you receive training on food wastage management on the courses you have completed?
29. Does the Military Academy mess have Standard Working Procedure or any document that gives guidance to the Chefs regarding food wastage in the mess, e.g. SWP?
30. Does the Military Academy have a public awareness campaign to discuss food wastage in the mess?

Data collection

Online semi-structured interviews were used to collect the data for this study using the Microsoft Teams (MS Teams) online collaborative platform. MS Teams was selected in order to adhere to social distancing measures as prescribed by SAMA and Stellenbosch University’s COVID 19 protocols. The interviews took place between 7 and 18 September 2020. Each interview was recorded, and took approximately one hour to complete. The interviews were conducted in English, and were scheduled for after 14:00 when participants were not so busy in the kitchen.

The researcher developed a written interview schedule in advance to guide the interviews with ten participants, and provided probing examples where necessary. A limitation of this instrument is that an interview may go in an unintended direction at times; hence, the need for an interview schedule.

Data analysis

Data analysis comprised the study of notes taken during each interview, and analysis of the interview recordings. Descriptive statistics (e.g. mean, maximum, minimum) using Microsoft Excel were generated to view and analyse the data. Data analysis comprised three phases:

- The **first** phase consisted of transcribing the interviews word for word searching for meaning. The data were extracted manually from transcripts building the framework for displaying and analysing data using underlying patterns in the data.
- The **second** phase consisted of the compilation of a thematic framework by grouping all similarities and differences in the data.
- **Lastly**, reporting of data results was done in the form of prominent verbatim quotes to illustrate the points made by participants. Such responses added richness and depth to the research report.

The participants' views and discussion about food wastage management at the SAMA

This section provides a detailed report on the results of the study according to the three sections mentioned above, namely biographical information of participants, results pertaining to FWM at the SAMA, and training or education of participants.

Biographical information of participants

Table 2: Demographic profile of participants

Demographic profile	Years	Percentage (%)
Experience working in a military mess	1–5 years	30
	6–10 years	20
	11–15 years	20
	16 years and more	30
Experience working at the SAMA mess	1–5 years	60
	6–10 years	30
	11 years and more	10

Biographical information of the participants was used to gain insight into the age, years of experience working in a military mess, and years of experience working at the Military Academy mess specifically (see Table 2). Although gathered, information regarding age was omitted from this article to protect the participants' anonymity. Ten out of a possible thirteen members participated in this study, and the data are moot when there is only one person in the group who fits a certain age group.⁴⁵⁵

The results show that three of the participants occupied managerial posts and seven were general chefs. Regarding “experience working in any military mess”, 30 per cent (n = 3) of participants had 1 to 5 years’ experience, 20 per cent (n = 2) had 6 to 10 years’ experience, 20 per cent (n = 2) had 11 to 15 years’ experience, and 30 per cent (n = 3) had more than 16 years’ experience. Results also showed that the majority of participants (60 per cent; n = 6) had 5 years or less experience working in the SAMA mess, while 30 per cent (n = 3) had 6 to 10 years’ experience and 10 per cent (n = 1) had between 11 and 15 years of experience. The results show that the chefs working at the SAMA had good experience working in a military mess, with the majority (70 per cent) having more than 5 years’ experience. The results also show that the majority of chefs (60 per cent) had 5 years’ or less working experience at the SAMA, which might be related to instances where military members are promoted to a higher post and transferred to another unit. However, these reasons were not part of the scope of this study.

Food wastage management at the SAMA

The results from this section are presented under various themes related to the different questions asked to the participants (i.e. catering system, management of rations and food preparation, receiving and storage of food in the mess, handling of unavoidable food wastage, disposal of food, and measures in place to prevent food wastage). Only certain direct quotations received from the participants (P1 to P10) under each section are presented. All quotes from participants’ responses are therefore reproduced verbatim and unedited. Although not all answers received from the participants are included in this article, summaries of responses and general discussions for each theme are included to validate the analysis of the results.

Catering system

All participants responded that the SAMA is using a conventional model and is in the process of moving towards commercialisation:

This one is just a normal army one. We have not commercialised so it is a conventional. It is a conventional mess, conventional you order meals from ASB [Army Support Base] (P1).

It’s a conventional model, but we are moving towards commercialisation (P7).

The mess is an old kitchen system, I think it is conventional but they are currently sorting out commercialised because the process takes quite longer maybe about a year or two. They have already started the paperwork (P9).

Management of rations and food preparation

According to participants, there is a document that guides all military chefs on how they issue food per meal per person. This document is still under review by the SAMA:

“We are using Ration Scale 1. The Ration Scale 1 is a document that specifies what type of food must be issued per person per meal per day.” (P1) The Department of Defence *Hospitality Services Manager Learner Manual* affirms what the participants reported, namely that the SANDF, including SAMA, is using Ration Scale 1 (as amended), which is a list of foods and drinks specified in quantities that a soldier is allowed to consume per day.⁴⁵⁶ According to the Limpopo Department of Health, the purpose of a ration scale is to be able to cater in bulk for a nutritional meal for a group of people based on scientific international standards, and to cater within a regulated budget.⁴⁵⁷ Deuster et al. (2017) mention that the type of rations that military personnel receive depends on the day-to-day activities of the unit and the availability of equipment and employees to prepare the required meals.⁴⁵⁸ The ration quantity that is issued in the military is calculated according to the ration strength, scale of issue, and the number of meals provided that day.⁴⁵⁹

The results in this study indicate that the number of people eating in the mess during the week ranged between 250 and 350 per meal per day. This strength is supplied by the SAMA human resource (HR) section. The average number provided is 300 per meal per day. This number decreases significantly over weekends to an average of 150 per meal per day. Participant responses regarding weekday and weekend meal preparation revealed that, on average, 19 meals are cooked per week (including weekends). A weekly meal comprises three servings per day, which equates to 15 meals during weekdays: “Its 3 meals per day. That is breakfast, lunch, supper. For the weekdays, it’s 15 meals” (P9). However, there was a lack of consistency in the answers given by participants regarding the weekend meals. Answers varied from between 4 to 6 meals over weekends, but 50 per cent (n = 5) of the participants agreed that only 4 meals are cooked on weekends:

Two meals per day on Saturday and Sunday that will be brunch and supper (P1).

That will be four meals (P3).

That is four meals on weekend. It is brunch and supper. Brunch is breakfast and lunch together. That is Saturday and Sunday (P6).

The participants all confirmed that, at the time of the study, SAMA was using the traditional catering system of three meals per day during weekdays, namely breakfast, lunch and supper with snacks in between. The brunch catering system on weekends entails an early morning light snack and a two-course meal per day. The provision of a written ration strength to the mess is the responsibility of the HR section. This verified ration strength is used to book meals in the mess for present living-in members residing in single sleeping quarters. This can therefore be considered a means to reduce food wastage during the weekdays.

Receiving and storing food in the mess

According to participants, there is inconsistency in suppliers delivering food on time (i.e. fresh fruit and vegetables), which affects food quality. The majority of participants

stated that food is delivered once a week:

Supposedly once a week. Suppose it if things goes correctly, sometimes we don't receive for three weeks and then we receive three weeks at once and that's a problem. Then we will waste a lot. We try to work it out as fast as possible (P1).

Once a week, if they don't deliver that certain week, we must make more fresh vegetables and more salads in a week and distribute more to the students (P3).

The supplier comes once a week and it is on Thursdays. If the supplier does arrive that week then they do a double issue and we try to cook all the fresh vegetables that week. If there is still more by the end of that week, we then don't demand vegetables the following week until the one we have is finished (P9).

The results further indicate that frozen vegetables are delivered twice a month and starch products and meat are delivered twice a week.

The majority of participants indicated that quality control of the rations in the mess is the responsibility of the floor manager, also known as the ration clerk. The floor manager ensures that the issuing and cooking of food are prioritised according to the expiry date. However, some participants had alternate responses, stating that quality control is the responsibility of each chef: "It is the responsibility of all chefs to check the best-before and the use-by date before preparing a meal" (P10). They also indicated that the health inspectors are responsible for further examining quality control in the mess. All participants agreed that the different types of food rations are stored in the mess separately from one another and according to the required temperature and other conditions. From the responses of the participants, it was clear that the floor manager is ultimately responsible for quality control of the rations, including checking the best-before and expiry dates. This indicates that a standard operating procedure exists to conduct quality control of rations. However, some participants mentioned that it is the responsibility of each chef, which might be an indication that some confusion may exist regarding the responsibility of chefs to do quality checks. It might also be an indication that chefs at the SAMA take it upon themselves to double-check the quality of the rations to ensure suitability to the consumers.

Handling of unavoidable food wastage

Regarding the handling of unavoidable food wastage, the majority of participants mentioned that the food off-cuts during preparation are thrown in the pigswill:

That also goes into the pigswill (P1).

It goes to the pigswill (P3).

We put it in the pigswill (P9).

Food off-cuts are small pieces of waste food that are cut off from larger pieces, such as fatty tissue and bones. The pigswill is given to local farmers who come to the SAMA and collect the pigswill once it is full: “There are two farmers that come and fetch the pigswill, I don’t know who they are” (P1). See Figure 3 below for the pigswill containers being used at the SAMA officers’ mess.



Figure 3: The pigswill containers used at the SAMA officers’ mess

On a positive note, one participant actually made a vegetable garden behind the mess using the off cuts:

I want to tell you, from my personal point of view, on what I do with it. Like onions, the peel of the onions, the roots of the onions, you know the onion has got a root. I grow them; it’s a creation of spring onions. If you could go at the back of the mess, you will see some of my spring onions there. I created a garden at the back (P4).

Figure 4 shows pictures of the vegetable garden started by one of the staff members of the SAMA officers’ mess. The vegetable garden was planted by using leftover food from the kitchen, and is located behind the mess building and is maintained by the mess personnel.



Figure 4: Vegetable garden created by a staff member of the SAMA officers’ mess

All the participants answered that they hardly burn food and, if food gets burned, then it would be redirected to the pigswill:

That is something very, very seldom. It is seldom. But if it burns and it's not consumable, we'll have to throw it away. But if so then you have to write the letter why, we have to throw away that food, but is very seldom to burn food (P1).

It is not often that food is burnt in the mess and everyone monitors their pots but if it should happen, it will go to the pigswill (P3).

If the food gets burnt, that is rare. But sometimes the food doesn't really, really gets burnt, it's just underneath. But we improvise to make everything edible. But the floor manager is the one that can sort that thing out (P7).

We don't normally burn food. Because they burn the chefs must sort it out themselves because if you are a chef you can't burn food. Then that's a problem, a real problem. It's an offence. If I issue that meal and if you are a chef for the shift leader, one of your chef burn the food you must answer and you must get that meal sorted out. We can't re-demand, the question will be why (P9).

Concerning expired food, the majority of participants said that food that has passed the expiry date is taken back to the SAMA quartermaster (QM) in the Logistics section:

We inform the stores and they come and fetch it and I don't know what they do with it thereafter (P3).

We don't dispose it, we return it to Logistics. We use the same format we use when we demand goods (P4).

If like for example, there is food that is expired, do we take it back to the logistics and logistics takes it back where it comes from. It's the floor manager who is the ration clerk that does that (P8).

Disposal of food

The majority of the participants mentioned that disposed food is stored in drums in a room with lockable doors at the back of the mess:

There is a storeroom, a pigswill store. It is a closed store with ventilation doors that is lockable (P1).

The pigswill [store] is a big room where all the big drums are with doors and it's locked. And we just keep the key in the mess (P2).

It is in stored in a room that has drums outside the mess. That place is locked. When people of pigswill come, the chief goes and open for them and they take the full drums and leave empty drums in that store (P3).

There is a storeroom with bins outside, we lock it so cats don't go there. It is opened every time they come and collect the pigswill (P8).

According to the participants, the pigswill is removed twice a week by contractors that have permits to access to the unit:

Twice a week, I will say (P2).

Those people come twice or three times a week at times (P3).

They come and fetch the food twice a week and they have permits (P8).

It was also mentioned by some participants that there is no contract in place for the pigswill:

No, pigswill is the only method used in the military academy to dispose food disposal, if you don't have a vegetable gardens or something like that to repurpose food, just dispose them. According to me, there is no contract in place (P1).

Every second day the food is removed from the pigswill and there is a person who fetch the food but there is no contract in place but they are working on it (P9).

Measures in place to prevent food wastage

Results showed that additional raw food received is delivered and stored by the unit QM and measures are in place to use surplus food still fit for consumption as extra portions during functions or to cater for special events:

The extra food we take it down to savings at the quartermaster. There is savings at the QM where we put all the extra food, we use it when students want to have a braai or when students request for functions then we give them extra meat from that (P10).

Conversely, the majority of participants agreed that the leftover cooked food is repurposed into different meals:

We repurpose the food and make something else before it gets to be thrown away (P3).

What happened to me as an individual, I give a recycles which means that food goes on in a cooling process and then it's refrigerated, the next day it is used for breakfast (P4).

If it is after breakfast, such as eggs, and the food is re-usable, we use it for tea (P5).

You see, normally when we have food that is extra, the people that did not book can be given the food. Or the people that were not full can come for second plates. The edible food we put it in the fridge and use it for tea time snack (P7).

Leftover food that cannot be preserved for future use is disposed of after each meal by throwing it in the pigswill:

No, pigswill is the only method used in the military academy to dispose food disposal, if you don't have a vegetable gardens or something like that to repurpose food, just dispose them (P1).

We prepare food as the strength given to us and whatever is leftover give it to the pigswill (P3).

Proactive management requires the mess personnel to think ahead, manage foreseeable risks, and devise strategies in advance in order to minimise food wastage. Reactive management, on the other hand, requires a response to situations as they arise. According to Alonso-Almeida and Bremser (2015), a reactive management strategy is mostly prioritised as it is expected to ensure the survival of the business.⁴⁶⁰ The most desirable option, however, is proactive management, because it has a positive effect on cutting costs. Furthermore, through proactive management, it is possible to take steps to reduce potential damage or risks.

On proactive and reactive ways of avoiding food wastage, participants demonstrated ways of avoiding food wastage by improvising the preparation, cooking and portioning of meals:

Okay, six months after the expiry date, we may still use dry rations because the area military health says it is still safe for consumption. But we must still check it before we cook it obviously ... If it is canned food, the same thing applies, we must check if the can is not damaged and if it has passed its expiry date, we can still use the can as it is. But when it comes to bread, milk and fresh fruit and veggies, that must be disposed immediately. We put an order at the medic and they send health officer to come and dispose of it. And then there's a disposal process but the disposal process is logistics (P1).

[W]e give people extra fruits and vegetables, but when we have a shortage because of no deliveries we make use of whatever is extra in the fridge, maybe extra tomatoes (P7).

Training or education of participants on food wastage management

All participants revealed that the School of Catering, where military chefs are trained in the SANDF, presents a basic FWM module in their courses. The research results show that the majority of participants (80 per cent, n = 8) received training in FWM. Only two of the participants (20 per cent) had not received any training:

Yes, I did during my own personal studies hotel management through Intec College (P1).

I think so, but the last time I did a course in School of Catering was in 1999 and that is about 21 years ago so I don't know if the syllabus has changed or it is a new things attached to the syllabus itself. But that time I was there was no food wastage management courses (P4).

Not yet, I will do it in the next course, they used to start at C4 or rank of a staff sergeant to teach about this but the curriculum has changed so even MSDS [Military Skills Development System] that started with basic chef course are now taught about food wastage management (P7).

With respect to standard working procedure of FWM, the results showed that most of the respondents (90 per cent, n = 9) had never seen a document on FWM at the SAMA mess, which is quite significant for FWM at the SAMA. One participant mentioned that such a document does exist; yet, failed to provide the document after numerous attempts to acquire it ("Yes, I think so, but I will have to look for that document and ensure you get it"). The results of the study further showed that there had been no public awareness campaigns in or around the SAMA or at the West Coast in FWM. Another significant aspect derived from the study was that the participants themselves did not consider food wastage a problem – probably because the kitchen staff at the SAMA was managing food wastage as best they could and did not necessarily see the effect that poor FWM might be causing. This creates the realistic problem of effectively addressing food wastage at the SAMA, especially if the kitchen staff and chefs do not consider it a priority. The lack of awareness among the local community, kitchen staff, students and faculty members about the impact of food wastage may unconsciously cause existing food wastage or lead to an increase in food wastage.

Conclusion

The focus of this study was to analyse food wastage management (FWM) at the SAMA mess. The SAMA mess follows a conventional catering model where the state provides all the labour and rations needed for the functioning of the mess, as well as maintenance of mess facilities. Rations are delivered at a central depot and food is distributed to the unit based on its stated demand. The food is prepared according to the prescribed ration scale and ration strength submitted to the mess. This system may change in future with a move towards commercialisation.

Results indicated that during weekdays, food wastage is prevented by preparing food according to the strength provided by the HR section. On weekends, a meal register is used by all living-in members to book meals in advance. This is used to calculate savings on rations over the weekend and as means of reducing food wastage. Unused but still fit for consumption food is reused by converting it into a secondary meal for tea break. Alternatively, it is redistributed as a second option for a meal. Unavoidable food waste is removed from the kitchen and discarded as pigswill. Although there is no consistency in delivering fresh fruit and vegetables at SAMA, mess personnel

have managed to mitigate or minimise food wastage by distributing more fruits and vegetables to the students to prevent its loss or spoilage and by correctly storing each type of commodity to avoid contamination of food. This option minimises the potential of food entering the waste stream and has a financial and environmental benefit.⁴⁶¹ The participants confirmed that they ensured that perishable cooked food is utilised on the day of preparation and that food is reused for another purposes to minimise wastage. 'Re-use' refers to using the material again for a similar or different purpose without altering its physical form, thus removing it from the waste stream.⁴⁶² Re-using food limits the impact on natural resources and will have a positive effect on food security and sustainability, especially in terms of poor societies.⁴⁶³ It is better to redistribute edible food to humans before discarding it or using it for animal feed. The option of donating re-usable food to less fortunate people is the least favourite due to the societal impact it might have should a person fall ill from eating the donated food. As a result, although the poverty rate in the area is fairly high, businesses generally opt for the disposal of food. This complies with section 61 of the Consumer Protection Act (68 of 2008), where a manufacturer, supplier, or retailer of goods may be held liable for the detrimental effects caused from providing unsafe goods, flaws or threats by goods provided, product failure, or insufficient information provided to the customer relating to the danger that may result from using the product.⁴⁶⁴

The results further showed that, although SAMA mess personnel are trained in FWM, such training is limited. One of the most significant conclusions relates to the fact that no standing working procedures (SWPs) are in place and no initiatives exist to advocate awareness campaigns in order to implement better managerial strategies for further reduction of food wastage. Also of concern is that the kitchen staff and chefs at the SAMA do not consider FWM a problem, which might limit initiatives to addressing food wastage effectively at the SAMA. No specific reason was provided for the comment that FWM is not a problem, but it is possible that the kitchen staff at the SAMA is doing what must be done regarding the management of food wastage and therefore do not necessarily see the impacts associated with food wastage.

Although the results of the study indicated a generally good food wastage prevention regime in place at the SAMA mess, it is recommended that training and awareness campaigns be offered to reduce food wastage further. It is also recommended that relevant documentation, such as standing working procedures (SWPs), on FWM need to be made available to all mess personnel, students and faculty staff. The benefit of involving students and faculty staff in awareness campaigns might create a positive attitude towards FWM not only at the SAMA, but may even spill over into their personal lives. It might also be feasible to organise awareness campaigns for the local community and to include local businesses as sponsors and ambassadors of such campaigns to motivate the public to take action against food wastage. The potential benefits of conducting awareness campaigns will bring change to the FWM at the SAMA and inadvertently save time, money and resources and improve the overall efficiency and cost-effectiveness of food services at the SAMA.

It is recommended that meal bookings be implemented during weekdays, as is the case over weekends. Some of the wastage can be attributed to members skipping meals during the week when there is no booking system in place. If a meal is booked and a person does not attend, such person should be held accountable for the payment of the meals he or she did not consume.

It is further recommended that policies and awareness programmes, which specifically address FWM in the military, be in place and visible to all mess personnel at all units.

A limitation identified during this study was the size of the population. This study was limited to the thirteen members working at the SAMA mess, and ten participated in this study. The small size of the sample makes it difficult to extrapolate the results achieved in this study to other units in the SANDF. The small sample also undermines the internal and external validity of the study. It is therefore recommended that further research on this topic involve more SANDF units to obtain a better understanding of analysing FWM in the SANDF. For such a study, it might be feasible to include military messes from the different Arms of Services (i.e. SA Army, SA Navy, SA Air Force and SA Medical Health Services), which will provide results that are more inclusive of FWM in the SANDF. It is lastly recommended that an area for future research also include the attitudes and perspectives of food consumers, such as students who dine at the SAMA.

As a last thought, currently the pigswill is given to two local farmers as a support initiative to the local community. In addition, it might also be feasible for the SAMA to draft a service level agreement with a pigswill company to receive incentives and generate additional funds from rendering these services. Money received from such an initiative can be directed towards training and education of mess personnel and funding of awareness campaigns in FWM.

ENDNOTES

- ³⁷⁴ Cdr (Prof.) HAP Smit and Dr I Henrico are senior lecturers in the Department of Military Geography at the Faculty of Military Science (Stellenbosch University) and were the supervisors for Maj NP Moss who successfully completed her BMil Hons in Military Geography with this research project.
- ³⁷⁵ In the SANDF, a 'living-in member' is a person permanently staying in military accommodation and normally eating at the military mess associated with this accommodation.
- ³⁷⁶ FAO. "The state of food and agriculture". 2019. <<http://www.fao.org/3/ca6030en/ca6030en.pdf>> Accessed on 21 September 2020.
- ³⁷⁷ GT Miller & S Spoolman. *Living in the environment: Principles, connections, and solutions* (14th ed). Belmont, CA: Thompson Brooks/Cole, 2011.
- ³⁷⁸ S Bringezu, A Ramaswami, H Schandl, M O'Brien, R Pelton, J Acquatella, E Ayuk, A Chiu, F Flanegin, J Fry & S Giljum. *Assessing global resource use: A system approach to resource efficiency and pollution reduction*. Paris: International Resource Panel of the United Nations Environmental Programme, 2017.
- ³⁷⁹ D Satterthwaite, G McGranahan & C Tacoli. "Urbanization and its implications for food and farming". *Philosophical Transactions of the Royal Society B: Biological Sciences* 365/1554. 2010. 2809–2820.
- ³⁸⁰ S Jain, D Newman, R Cepeda-Márquez & K Zeller. "Global food waste management: An implementation guide for cities". World Biogas Association, 2018, 145. <<https://www.worldbiogas-association.org/wp-content/uploads/2018/05/Global-Food-Waste-Management-Full-report-pdf.pdf>> Accessed on 27 September 2020.
- ³⁸¹ FAO *op. cit.*
- ³⁸² J Marthinsen, P Sundt, O Kaysen & K Kirkevaag. *Prevention of food waste in restaurants, hotels, canteens and catering*. Copenhagen: Nordic Council of Ministers, 2012. doi: <http://dx.doi.org/10.6027/TN2012-537>
- ³⁸³ S Priestley. *Food waste briefing paper*. United Kingdom: House of Commons Library, 2016, 44.
- ³⁸⁴ South African Qualifications Authority. *Cook: National Occupational Qualification (OFO CODE 512101): Learner manual*. Department of Defence, Pretoria, 2017.
- ³⁸⁵ Department of Defence. "South African Defence Review 2015". 2015. <<https://static.pmg.org.za/170512review.pdf>> Accessed on 23 September 2020.
- ³⁸⁶ L Nguyen. "Food waste management in the hospitality industry: Case study: Clarion Hotel Helsinki". Bachelor's Degree thesis. Haaga-Helia University of Applied Sciences, 2018.
- ³⁸⁷ Garcia-Garcia, G., Woolley, E., Rahimifard, S., Colwill, J., White, R., & Needham, L. (2017). A methodology for sustainable management of food waste. *Waste and Biomass Valorization*, 8(6), 2209-2227.
- ³⁸⁸ JT Marx. "Military integrated environmental management at the Donkergat military-training area". PhD dissertation. Stellenbosch University, 2014.
- ³⁸⁹ R Jackson. "Most people waste more food than they think – here's how to fix it". *National Geographic – Environment*. 2021. <<https://www.nationalgeographic.com/environment/article/people-waste-more-food-than-they-think-psychology>> Accessed 19 January 2021.
- ³⁹⁰ SH Oelofse & A Nahman. "Estimating the magnitude of food waste generated in South Africa". *Waste Management & Research* 31/1. 2013. 80–86.
- ³⁹¹ *Ibid.*

- ³⁹² P Notten, T Bole-Rentel & N Rambaran. *Developing an understanding of the energy implications of wasted food and waste disposal: Understanding the food energy water nexus*. South Africa: WWF-SA, 2014.
- ³⁹³ A Nahman, W de Lange, S Oelofse & L Godfrey. "The costs of household food waste in South Africa". *Waste Management* 32/11. 2012. 2147–2153.
- ³⁹⁴ ML Marais, Y Smit, N Koen & E Lötze. "Are the attitudes and practices of foodservice managers, catering personnel and students contributing to excessive food wastage at Stellenbosch University?" *South African Journal of Clinical Nutrition* 30/3. 2017. 60–67; CH Mabaso & D Hewson. "Employees' perceptions of food waste management in hotels". *African Journal of Hospitality, Tourism and Leisure* 7/4. 2018. 1–15; L Sakaguchi, N Pak & MD Potts. "Tackling the issue of food waste in restaurants: Options for measurement method, reduction and behavioral change." *Journal of Cleaner Production* 180. 2018. 430–436; S Schiavone, CP Pelullo & F Attena. "Patient evaluation of food waste in three hospitals in Southern Italy". *International Journal of Environmental Research and Public Health* 16/22. 2019. 4330.
- ³⁹⁵ Marais *et al. op. cit.*
- ³⁹⁶ Mabaso & Hewson *op. cit.*
- ³⁹⁷ N Jenkin & L de Vries. "Loss and waste: Facts and futures: Taking steps towards a more sustainable food future". WWF-SA, 2017. <https://www.researchgate.net/publication/322266191_Food_Loss_and_Waste_Facts_and_Futures_Taking_steps_towards_a_more_sustainable_food_future> Accessed on 24 August 2020.
- ³⁹⁸ Jain *et al. op. cit.*
- ³⁹⁹ World Health Organization. "Research ethics committees: Basic concepts for capacity-building", 2009, 76. <www.who.int/ethics/publications/en/%0Ahttp://www.who.int/ethics/Ethics_basic_concepts_ENG.pdf> Accessed on 23 August 2020.
- ⁴⁰⁰ Priestley *op. cit.*
- ⁴⁰¹ FAO. "Food wastage footprint: Impacts on natural resources, Summary report", 2013, 9. <<http://www.fao.org/3/i3347e/i3347e.pdf>> Accessed on 21 August 2020; GL Riley. *Food waste: Practices, management and challenges*. Waste and Waste Management. New York, NY: Nova Science, 2016, 123.
- ⁴⁰² FAO, *Food wastage footprint op. cit.*
- ⁴⁰³ Mabaso & Hewson *op. cit.*
- ⁴⁰⁴ Nguyen *op. cit.*
- ⁴⁰⁵ A Enos. "Assessing the socio-economic impact of food waste among international students". MA thesis. Szent István University, 2019. <https://www.researchgate.net/publication/332353148_Assessing_the_Socio-Economic_Impact_of_Food_Waste_Among_International_Students> Accessed on 26 June 2020.
- ⁴⁰⁶ Mabaso & Hewson *op. cit.*
- ⁴⁰⁷ *Ibid*; Department of Environmental Affairs. "National Waste Management Strategy", 2011, 75. <https://www.environment.gov.za/sites/default/files/docs/nationalwaste_management_strategy.pdf> Accessed on 18 September 2020.
- ⁴⁰⁸ FAO, *The state of food and agriculture op. cit.*
- ⁴⁰⁹ Barilla Center for Food & Nutrition. "Food waste: Causes, impacts and proposals", 2012, <<https://www.barillacfn.com/en/publications/food-waste-causes-impacts-and-proposals.pdf>> Accessed 08 October 2020.
- ⁴¹⁰ *Ibid.*
- ⁴¹¹ FAO, *The state of food and agriculture op. cit.*; Enos *op. cit.*
- ⁴¹² FAO, *The state of food and agriculture op. cit.*
- ⁴¹³ *Ibid.*
- ⁴¹⁴ Shift. "Domestic food waste: Insights report", 2014. <https://shiftdesign.org/content/uploads/2014/09/Shift_Food-Waste-insights.pdf> Accessed on 5 January 2021.

- ⁴¹⁵ C Hamilton, R Denniss & DG. Baker. *Wasteful consumption in Australia*. Canberra: The Australia Institute, 2005.
- ⁴¹⁶ Buchner *et al. op. cit.*
- ⁴¹⁷ JRC Sandaruwani & WAC Gnanapala. “Food wastage and its impacts on sustainable business operations: A study on Sri Lankan tourist hotels”. *Procedia Food Science* 6. 2016. 133–135.
- ⁴¹⁸ FAO, *The state of food and agriculture op. cit.*
- ⁴¹⁹ *Ibid.*
- ⁴²⁰ Enos *op. cit.*
- ⁴²¹ Å Stenmarck, C Jensen, T Quested, G Moates, M Buksti, B Cseh, S Juul, A Parry, A Politano, B Redlingshofer & S Scherhauser. *Estimates of European food waste levels*. Sweden: IVL Swedish Environmental Research Institute, 2016.
- ⁴²² JC Buzby, H Farah-Wells & J Hyman. “The estimated amount, value, and calories of postharvest food losses at the retail and consumer levels in the United States”. *USDA-ERS Economic Information Bulletin*. 2014. 121.
- ⁴²³ S Yaqub. “Social and socio-demographic effects on food waste: The case of suboptimal food”. MA thesis. Norwegian University of Life Sciences, 2016. <<https://core.ac.uk/download/pdf/154672268.pdf>> Accessed on 17 August 2020.
- ⁴²⁴ CK Chrobog. “Wasted: Understanding the economic and social impact of food waste”. MA thesis. Brazilian School of Public and Business Administration, 2014.
- ⁴²⁵ Enos *op. cit.*
- ⁴²⁶ G Kibri. “Food waste impacts on climate change and water resources”. Research on community-based environmental and sustainability education model, April 2017. <https://www.researchgate.net/publication/316547640_Food_Waste_Impacts_on_Climate_Change_Water_Resources> Accessed on 20 January 2021.
- ⁴²⁷ FAO. “Toolkit: Reducing the food wastage footprint”, 2013. <<http://www.fao.org/3/i3342e/i3342e.pdf>> Accessed on 21 August 2020.
- ⁴²⁸ Nguyen *op. cit.*
- ⁴²⁹ Committee on World Food Security. “Food losses and waste in the context of sustainable food systems: A report by the High Level Panel of Experts on Food Security and Nutrition”, 2014. <<http://www.fao.org/3/i3901e/i3901e.pdf>> Accessed on 28 August 2020.
- ⁴³⁰ M Bagherzadeh, M Inamura & H Jeong. *Food waste along the food chain*. OECD Food, Agriculture and Fisheries Papers, No. 71. Paris: OECD Publishing, 2014.
- ⁴³¹ *Ibid.*
- ⁴³² C Chadderton, CM Foran, G Rodriguez, D Gilbert, SD Cosper & I Linkov. “Decision support for selection of food waste technologies at military installations”. *Journal of Cleaner Production* 141. 2017. 267–277; SD Cosper, DS Gilbert, IE MacAllister, MZ Rahman, J Ricketts, SR Rock & G Rodriguez. “Feasibility study of food waste co-digestion at US Army installations”. Defense Technical Information Center, 2017. <<https://apps.dtic.mil/sti/citations/AD1038188>> Accessed on 31 September 2020; EE Hubbard, A Villadsen, P Rathje, CC Jensen, M Haselbach & B Sakintuna. Planning green in cities and military installations. In: M. Goodsite, S. Juhola (eds). *Green defense technology*. NATO Science for Peace and Security Series C: Environmental Security. Springer, Dordrecht. 2017, 253–268 <https://doi.org/10.1007/978-94-017-7600-4_12> Accessed on 30 September 2020.
- ⁴³³ Republic of South Africa. “National Environmental Management: Waste Act 59 of 2008”. *Government Gazette* 525/32000. 2008. <www.environment.gov.za/%2Fsites/%2Fdefault/%2Ffiles/%2Flegislations/%2Fnema_amendment_act59.pdf&clen=1986735&chunk=true> Accessed on 25 September 2020.
- ⁴³⁴ FAO, *Food wastage footprint op. cit.*

- ⁴³⁵ S Rock & A Lan. “Food waste reduction in military kitchens: A tracking technology demonstration at Fort Jackson”. US Environmental Protection Agency, 2019. <https://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=346767&Lab=NRMRL> Accessed on 13 August 2020.
- ⁴³⁶ VF Medina, M Wynter, SA Waisner, S Cosper & G Rodriguez. The Army Net Zero Waste Program and its implications for energy: In: I. Linkov (ed). *Sustainable cities and military installations*. NATO Science for Peace and Security Series: C: Environmental Security. Springer, Dordrecht. 2013, 263-281. https://doi.org/10.1007/978-94-007-7161-1_13> Accessed on 08 October 2020.
- ⁴³⁷ Department of Defence. *Logistics instruction no. 81/2019: Commercialised Catering Model for DOD Clubs/Messes*. Pretoria, 2019.
- ⁴³⁸ Department of Defence. *Hospitality services manager: Learner manual*. Pretoria, 2018.
- ⁴³⁹ Department of Defence *op. cit.*
- ⁴⁴⁰ Department of Defence. *Kitchen hand: Learner Manual*. Pretoria, 2018 *op. cit.*
- ⁴⁴¹ Department of Defence 2018 *op. cit.*
- ⁴⁴² South African Qualifications Authority 2017.
- ⁴⁴³ M Sako. “Outsourcing and offshoring: Implications for productivity of business services”. *Oxford Review of Economic Policy* 22/4. 2006. 499–512.
- ⁴⁴⁴ S Bera. “The concept of outsourcing”. *IOSR Journal of Computer Engineering* 19/4. 2017. 37–39.
- ⁴⁴⁵ Department of Defence. *Kitchen Hand National Occupational Qualification, OFO:512101 learner manual*. Pretoria, 2018.
- ⁴⁴⁶ Department of Defence, 2018 *op. cit.*
- ⁴⁴⁷ *Ibid.*
- ⁴⁴⁸ Department of Defence. *Hospitality services manager: Learner manual*. Pretoria, 2018.
- ⁴⁴⁹ South African Qualifications Authority 2017.
- ⁴⁵⁰ Department of Defence. *Hospitality services manager: Learner manual*. Pretoria, 2018.
- ⁴⁵¹ South African Government. “White Paper on integrated pollution and waste management for South Africa: A policy on pollution prevention, waste minimisation, impact control and remediation”, 1998. <https://www.environment.gov.za/sites/default/files/legislations/integrated_pollution-and_wastemanagement_1.pdf> Accessed on 8 October 2020.
- ⁴⁵² E Papargyropoulou, N Wright, R Lozano, J Steinberger, R Padfield & Z Ujang. “Conceptual framework for the study of food waste generation and prevention in the hospitality sector”. *Waste Management* 49. 2016. 326–336.
- ⁴⁵³ FAO, *The state of food and agriculture op. cit.*
- ⁴⁵⁴ Map copyright © 2020 CDNGI; Image credit: GEO Data Design, CNES 2020).
- ⁴⁵⁵ M Cleary, J Horsfall, & M Hayter. Data collection and sampling in qualitative research: does size matter? *Journal of advanced nursing*. 2014. 473-475.
- ⁴⁵⁶ South African Qualifications Authority 2017.
- ⁴⁵⁷ Limpopo Department of Health. “Food ration scales for hospitals and health institutions”, Vol. 3, 2001. <<http://policyresearch.limpopo.gov.za/bitstream/handle/123456789/874/Food%20ration%20scales%20for%20hospitals%20V3.pdf?sequence=1>> Accessed on 14 October 2020.
- ⁴⁵⁸ PA Deuster, T Kemmer, L Tubbs, S Zeno & C Minnick. “The Special Operations Forces nutrition guide”, 2017, 255. <<https://navyseals.com/wp-content/uploads/2012/12/special-operations-nutrition-guide.pdf>> Accessed on 14 October 2020.
- ⁴⁵⁹ Department of Defence. *Hospitality services manager: Learner manual*. Pretoria, 2018.

- ⁴⁶⁰ M Alonso-Almeida, K Bremser & J Llach. "Proactive and reactive strategies deployed by restaurants in times of crisis: Effects on capabilities, organization and competitive advantage". *International Journal of Contemporary Hospitality Management* 27/7. 2015. 1641–1661.
- ⁴⁶¹ Rock & Lan *op. cit.*
- ⁴⁶² Department of Environmental Affairs *op. cit.*
- ⁴⁶³ National Geographic Society. "Food safety and security", 2021.
<https://www.nationalgeographic.org/topics/food-safety-and-security/?q=&page=1&per_page=25> Accessed on 23 February 2021.
- ⁴⁶⁴ South African Government. "Consumer Protection Act 68 of 2008". *Government Gazette* 526/32186. 2008. <https://www.gov.za/sites/default/files/gcis_document/201409/321864670.pdf> Accessed on 21 August 2020.
-

SCIENTIA MILITARIA

South African Journal of Military Studies



Artificial intelligence and big data in the Maritime Silk Road Initiative: The road towards Sea Power 2.0

Lungani Nelson Hlongwa⁴⁶⁵

National Yang Ming Chiao Tung University (NYCU), Hsinchu, Taiwan

Abstract

China's Belt and Road Initiative continues to attract considerable attention from scholars and observers in diverse fields. However, students of the Belt and Road Initiative ('the Initiative') have focused extensively on the land and sea dimensions of this grand project while only tentatively touching on its other dimensions. This article draws attention to the digital and maritime dimensions of the Initiative, which are respectively known as the Digital Silk Road Initiative and the Maritime Silk Road Initiative. Specifically, the article focuses on how artificial intelligence and big data, as promoted under the Digital Silk Road Initiative, intersect with the Maritime Silk Road Initiative to produce what the author refers to as Sea power 2.0. To contextualise this intersection, the article draws on patent data to show how artificial intelligence and big data are adopted in supply chains. The results from the patent analysis show that artificial intelligence and big data will play a crucial role in future supply chains, and hence, the Maritime Silk Road Initiative. Although the article focuses mostly on the commercial side of Sea power 2.0, it concludes by pointing out how artificial intelligence and big data could serve military objectives.

Keywords: artificial intelligence, big data, supply chain, sea power, Maritime Silk Road Initiative.

Introduction

The Belt and Road Initiative (BRI) ('the Initiative') is China's vision of transcontinental and transoceanic economic integration through trade. This Initiative has various dimensions, most notably a land dimension known as the Silk Road Economic Belt (SREB) and a sea dimension known as the Maritime Silk Road Initiative (MSRI).⁴⁶⁶ Currently, there is a raging debate on what the BRI represents. Some observers see the BRI as presenting an opportunity for cooperative economic development for all countries concerned.⁴⁶⁷ Other observers view the BRI as China's grand strategic project to become an economic⁴⁶⁸ and technological superpower.⁴⁶⁹ Despite growing scholarship on the BRI, there remains a dearth of research beyond the land and sea dimensions. This article aims to examine the digital dimension of the BRI, which is officially known as the Digital Silk Road Initiative (DSRI). Specifically, the article draws attention to how artificial intelligence (AI) and big data, which are crucial components of the DSRI, may be used in the MSRI to produce what may be referred to as Sea power 2.0.

The DSRI, which was first unveiled in 2015, is considered the technology arm of the BRI. It mainly focuses on internet interconnectivity, AI, the digital economy, and the construction of telecommunications technology, smart cities, and smart ports in BRI countries.⁴⁷⁰ As with the BRI at large, most researchers of the DSRI may be divided into two categories, which may be broadly categorised as ‘promoters’ and ‘critics.’ On the one hand, promoters view the DSRI as bringing much-needed technology to developing countries along the BRI.⁴⁷¹ While the DSRI prioritises technology transfer from China to BRI countries, it is the nature of technologies being transferred that has drawn attention from critics. Some point out that, under the DSRI, China is exporting technologies that authoritarian governments along the BRI may use for digital suppression.⁴⁷² Furthermore, some critics argue that the DSRI is creating a new global digital order⁴⁷³ and laying the groundwork for China to project power abroad.⁴⁷⁴

This article attempts to address the following key question: what kind of power emerges from the entangling of the Digital and Maritime Silk Roads in the area of AI and big data? The author argues that what emerges from this intersection might be defined as Sea power 2.0 – the use of novel technologies, particularly those of Industry 4.0, to achieve commercial success at sea, which may be translated into strategic military advantage. Industry 4.0, or the fourth industrial revolution, refers to the ongoing automation of the industrial sector using modern technologies such as big data analytics, the Internet of Things (IoT), robotics, and AI, to mention a few.⁴⁷⁵ It is expected that Industry 4.0 will play an important role in fulfilling one of the major goals of global supply chains: bringing suppliers, producers, transportation services, and customers closer together.⁴⁷⁶

The definition of Sea power 2.0 is grounded in Alfred Thayer Mahan’s conceptualisation of sea power, which is based on the intricate connection between commercial success at sea and naval power. For Mahan, sea power was primarily about securing the benefits of using the sea for ‘one’s own people’.⁴⁷⁷ Sea power 2.0, as it is being constructed through the Digital and Maritime Silk Roads, may be considered a way to secure similar benefits for ‘one’s own people’ while also leaving room for others to benefit. This is certainly how the MSRI is being pushed – as a win-win approach to economic development for China and partner states.⁴⁷⁸

Methodologically, this study employed patent landscape analysis. The aim of the patent landscape was twofold: to frame the MSRI and the DSRI within the context of global supply chains and to show how AI and big data may be used in the MSRI. Following the introduction, this article is divided into four sections. The first section discusses the intersection between the MSRI and the DSRI. The second section provides a patent landscape to show how AI and big data are employed in global supply chains. The third section discusses how Sea power 2.0 operates, followed by a conclusion and recommendations for future research in the final section.

The MSRI as a ‘big data Initiative’

As mentioned above, the MSRI is the sea dimension of the BRI. It was first proposed by Chinese President Xi Jinping in 2013 during his visit to Indonesia.⁴⁷⁹ In a speech

delivered four years later at the Belt and Road Forum for International Cooperation ('BRI Forum') held in Beijing. President Xi referred to the BRI as the biggest project in the 21st century that will benefit people worldwide. The BRI Forum was attended by 29 foreign heads of state, government representatives from over 130 countries, and over 70 representatives of international organizations.⁴⁸⁰ President Xi also pointed out connections between the BRI and the Ancient Silk Road, which connected China to the West via land and sea routes from the second century BCE until the eighteenth-century CE. He called on participating member states at the BRI Forum to embrace the spirit of the Ancient Silk Road, which was about friendly cooperation among nations with mutual interests.⁴⁸¹

Figure 1 shows a map of the BRI. The MSRI starts in the Chinese coastal city of Fuzhou and then proceeds to Southeast Asia through the South China Sea. From Southeast Asia, the MSRI goes through the Malacca Strait into the Indian Ocean, touches on the east coast of Africa, and then via the Mediterranean to Europe. There are also plans to branch the MSRI out to New Zealand and create a new trade route across the Arctic known as the Polar Silk Road.

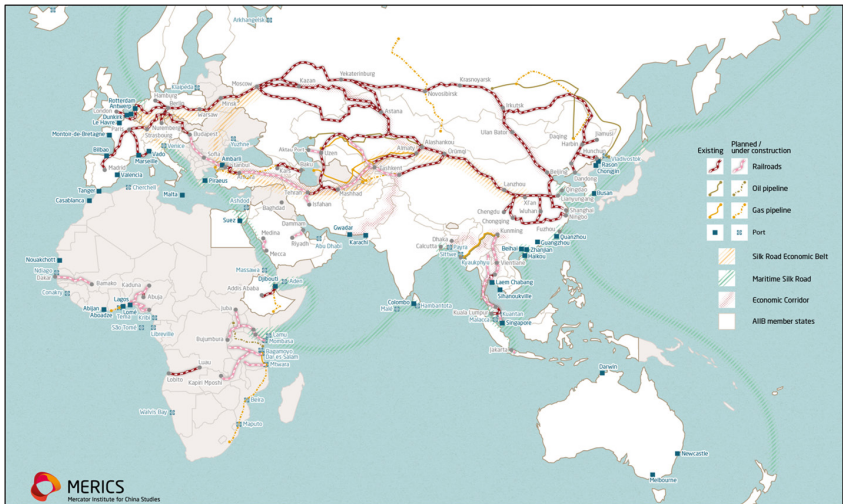


Figure 1: Map of the Belt and Road Initiative.⁴⁸²

The BRI is grounded on a five-pronged approach: policy coordination, connectivity of infrastructure and facilities, unimpeded trade, financial integration, and closer people-to-people ties. In turn, these approaches focus on eight fields, namely infrastructure connectivity, trade and economic cooperation, industrial investments, cooperation on energy resources, financial cooperation, people-to-people exchanges, ecological and environmental cooperation, and maritime cooperation.⁴⁸³ To date, China and dozens of BRI member states have made significant progress in some of these areas, notwithstanding many challenges and criticism. In Africa, for instance, China has

invested billions of dollars in much-needed infrastructure, such as railways, seaports, and telecommunications technology, to mention but a few.⁴⁸⁴

On the one side of the scholarly literature on the MSRI and the BRI, scholars present the Initiative as a 'win-win' approach to cooperative development for participating member states. Many see the BRI as an engine for promoting economic growth for China and participating countries.⁴⁸⁵ Kobojević et al. believe that the Initiative has neither political nor military aims as it is grounded in peaceful principles espoused in the United Nations Charter, namely mutual respect, equality, keeping promises, mutual benefits, and win-win development.⁴⁸⁶ Khan et al. also see the BRI as a model for promoting sustainable regional development among communities with shared interests.⁴⁸⁷ They contend that the BRI could fulfil the global demand for sustainable development, which requires, among others, job creation, poverty reduction, and cooperative economic development.⁴⁸⁸

On the other side of the BRI debate are observers who dismiss the purely win-win rhetoric surrounding the Initiative. Clarke argues that the BRI is China's grand strategy to resolve its domestic issues and to promote economic growth on which the Chinese Communist Party's (CCP) legitimacy depends.⁴⁸⁹ Contrary to Kobojević et al., who argue that the BRI has no military dimension,⁴⁹⁰ Wu and Ji contend that the Chinese military will be called on to deter threats to China's geo-economic expansion and safeguard the BRI.⁴⁹¹ According to Wu and Ji, the involvement of the Chinese military in the BRI gives the Initiative a clear military-security dimension whose geostrategic effect may be assessed through geopolitical lenses.⁴⁹² The sea power lens, as applied in this study, is just one way of assessing the geopolitics of the MSRI.

The BRI is primarily funded by China through its various financial institutions. These include the Export-Import Bank of China (CEXIM), the China Development Bank (CDB) and the Silk Road Fund (SRF).⁴⁹³ China's lending for the construction of infrastructure in BRI countries has received wide criticism. To some observers, China is deliberately lending significant sums of money to BRI countries with the intended aim of capturing them in debt. This strategy of 'debt-trap diplomacy', the argument goes, could eventually lead indebted countries to surrender strategic assets to China.⁴⁹⁴ Sri Lanka's Hambantota Port, which was surrendered to China, is often used as an example of debt-trap diplomacy.⁴⁹⁵ It is important to bear in mind that the BRI is still in its infancy. As the Initiative continues to unfold, time will give credence to or 'debunk' the theory of debt-trap diplomacy.

Another area of Chinese engagement in BRI countries that has received considerable criticism is China's digital diplomacy, which directly implicates the DSRI. Although the DSRI spans more than the maritime domain, it is in this context that the DSRI will be discussed. China's investment in the digital transformation of ports along the MSRI probably represents the clearest example of the fusion between the MSRI and the DSRI. Under the DSRI, China is constructing and upgrading ports with varying degrees of 'smartness' in various countries. In Greece, for example, a local subsidiary of China Ocean Shipping Company, Limited (COSCO) – a Chinese state-owned enterprise focusing on maritime transport – has transformed the Port of Piraeus through modern

technology leading to a rapid increase in container throughput.⁴⁹⁶ Although COSCO's transformation of the Port of Piraeus started before the BRI was announced, the port is now considered the "dragon's head of the BRI" to denote its strategic importance to China's trade with Europe.⁴⁹⁷

According to a report by the Centre for Strategic and International Studies, there are about 46 ports that are either funded, constructed or operated by China in sub-Saharan Africa.⁴⁹⁸ The United States, which is wary of China's port investments on the continent, fears that these ports will align with Beijing's commercial, military and political objectives, among which is to provide a foothold for the Chinese Navy.⁴⁹⁹ The report states that Chinese port facilities in Africa might be used to collect intelligence and deny commercial access to competitors.⁵⁰⁰ However, the report also recognises a need for infrastructure experts and military strategists to collaborate in order to determine specific kinds of threats presented by specific port facilities.⁵⁰¹

Another area where the MSRI and the DSRI come together is in AI and big data. 'Big data' refers to large and unstructured datasets characterised by six main components known as the six Vs: volume, velocity, variety, veracity, validity, and volatility.⁵⁰² These components point to the quantity of data (volume), the pace at which data are generated (velocity), the various sources from which data may be obtained (variety), the biases and noise in the data (veracity), its accuracy for specific uses (validity), and the period of its validity and storage (volatility).⁵⁰³ Organisations utilising big data hope to gain actionable insights on their customers and products, streamline their operations, and unlock new opportunities to make a profit.⁵⁰⁴ The maritime industry, which produces data characterised by the six Vs, will also benefit from big data.⁵⁰⁵ For instance, data gathered from ships could be transmitted to onshore data centres, where such data are analysed to support a wide range of decisions.⁵⁰⁶ Port terminals may also utilise maritime big data to improve their operations and, ultimately, their competitiveness.⁵⁰⁷

Artificial intelligence, which generates insights from big data, also promises to transform the maritime industry.⁵⁰⁸ Initially developed to mimic human decision-making, AI now enables capabilities that were impossible just a decade ago.⁵⁰⁹ In the maritime industry, sophisticated AI systems are being developed to address issues related to sustainable energy, traffic accidents and congestion, logistic management, data analysis, security, and privacy.⁵¹⁰ It is expected that AI and big data will play a crucial role in implementing the BRI.⁵¹¹ In his 2017 speech delivered at the BRI Forum, President Xi also called for advances to be made among BRI member states in the digital economy, AI, big data, cloud computing, and other technology areas.⁵¹² China's State Information Center has already established a BRI Big Data Center – a think-tank that aims to generate insights on trade along the BRI using big data. According to a report⁵¹³ released by the BRI Big Data Center, in collaboration with other Chinese organisations, the insights generated will support government decision-making and serve the needs of enterprises and society. Therefore, it is fair to say that the BRI, in conjunction with the DSRI, is essentially a 'big data Initiative'.

Some commentators point out that, through the DSRI, Beijing will have access to large datasets from BRI countries that can be analysed and exploited to China's advantage.⁵¹⁴ How then might AI and big data be utilised to advance the MSRI? To help address this question, the following section provides a perspective through patents on how AI and big data may be employed in global supply chains. The patent landscape is intended to frame the MSRI and the DSRI within the larger context of global supply chains and maritime supply chains in particular.

A patent perspective

Before explaining how patents referred to in this study were obtained, it is necessary to discuss the idea behind patenting and the anatomy of the patent document. Patents are essentially legal monopoly rights granted by the state to inventors who disclose their inventions to the public. Patent rights are aimed at protecting inventors from having their inventions imitated by third parties.⁵¹⁵ These rights are territorial, meaning that they generally apply in a specific country where a patent was filed. An exception to this is patents filed with the World Intellectual Property Organization (WIPO), which grants international patent protection.⁵¹⁶

Anatomically, the patent document consists of several parts, including the title of the invention, an abstract section summarizing the invention, the background on the invention, and specific claims about the invention. Patent documents also reflect other information, such as important dates associated with the patent, the names of the inventor(s), and patent classification codes used to group technologies according to similarity. The two most common patent classification systems are the International Patent Classification (IPC) and Cooperative Patent Classification (CPC).⁵¹⁷ The CPC system is based on the IPC but provides a more detailed classification of technologies.

In the technology and business environments, patent analysis has long been used to track technological development at firm or industry level,⁵¹⁸ monitor competition, and identify innovation opportunities.⁵¹⁹ While patents remain a largely under-utilised resource in the social sciences, several studies have employed patent data to probe social issues embedded in technology. Shapiro, for instance, utilised patent data to uncover how technology firms compete in the making of the smart city.⁵²⁰ For Shapiro, patents are a “medium of urban futuring” utilised by the urban technocrat to colonise the city.⁵²¹ Delfanti and Frey also employed patent data to expose how Amazon uses its workers to automate its warehouses.⁵²² The present study employed patents in a similar manner, that is, to show how power is embedded in technology. Borrowing from Shapiro, patents in the present context may be seen as mediums for ‘maritime futuring’ where power will be embedded in the substrate of technology.

To obtain patents for analysis, an online patent search and analysis tool called Patentcloud⁵²³ was used. A combined search using keywords and classification codes was conducted to retrieve documents related to AI and big data in the supply chain.⁵²⁴ Patents were retrieved from all patent databases around the world. The search, conducted on 2 July 2021, returned 22 065 patent documents that were subsequently analysed. The data

obtained are presented in two stages. The first stage will be on a global level covering supply chains in general. The second stage will focus specifically on Chinese patents for inventions related to maritime supply chains.

Figure 2 shows the top countries patenting in technologies related to AI and big data for supply chains. The United States dominates in this area with over 11 000 patents. China is second on the list with 3 945 patents. In 2019, China displaced the United States as the top filer of international patents with WIPO.⁵²⁵ The United States had been the top filer of international patents since 1978. According to former WIPO director-general Francis Gurry, China surpassing the United States in WIPO patents signals a shift in the locus of innovation from the West to the East.⁵²⁶ Despite being a newcomer in AI, China is making rapid progress in this technology as the country seeks to become an AI superpower.⁵²⁷

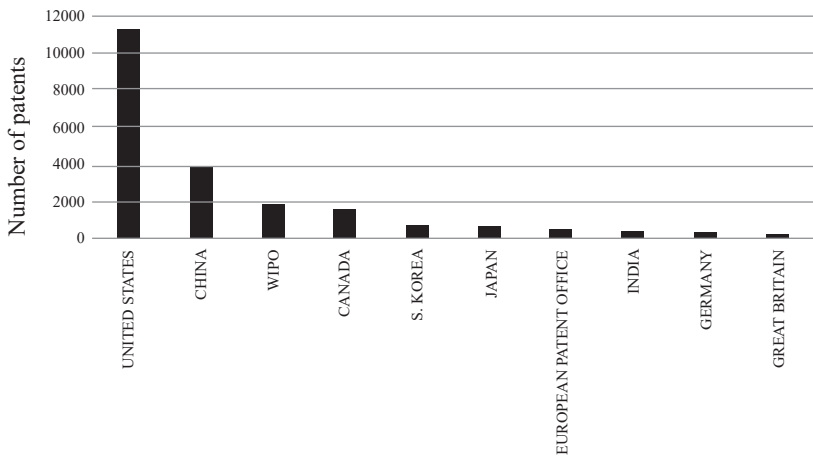


Figure 2: Top patenting countries in technologies related to AI and big data for the supply chain.

Figure 3 shows the patenting trends related to the application of AI and big data in supply chains. Patenting activity has increased rapidly since 2011. Due to a delay in patent publication, which is about 18 months in most jurisdictions,⁵²⁸ 2020 and 2021 were omitted from Figure 3, as those years would have given a false decline in patent applications. However, it is evident from Figure 3 that AI and big data are in the rapid growth phase and will thus play a vital role in the future of supply chains.

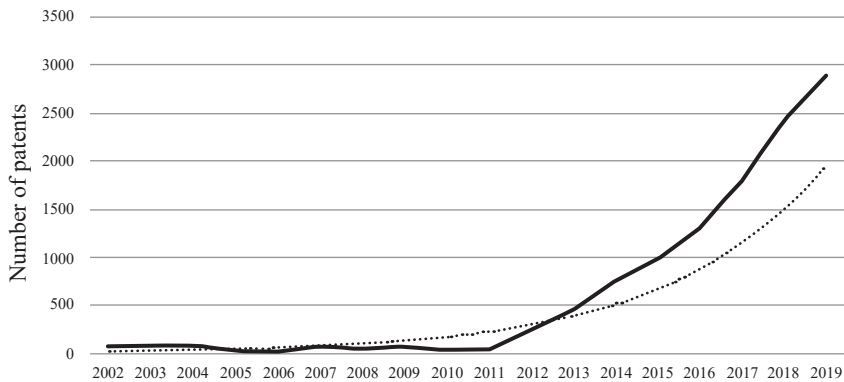


Figure 3: Patents related to AI and big data in the supply chain.

Using patent classification codes, it is possible to determine the technologies most actively patented. A high number of patents for a certain technology generally denotes more interest in that technology and tighter competition among patent holders. Based on Figure 4, systems and methods for data processing (G06Q and G06F) have seen the most patenting activity. Technologies related to the recognition of data (G06K), wireless communication networks (H04W), and the transmission of digital information (H04L) also saw substantial patenting activity. Since supply chains today are governed by the just-in-time philosophy, it is no surprise that technologies related to transportation and storage (B65G), time or attendance registers (G07C), and measuring distance (G01C) are among the most actively patented.

At least two things can be said about the information presented in Figure 4. **First**, digital data will power the next generation of supply chains. This means that future supply chains will be run by algorithms crunching through data to find patterns, create various forms of intelligence, and aid decision-making in the supply chain and beyond.⁵²⁹ In the case of the Digital and Maritime Silk Roads, market and shipping data gathered from member states may one day power China’s AI algorithms that will enhance the country’s production and shipping.⁵³⁰ **Second**, future maritime supply chains will be built on interconnected systems and networks that will facilitate the transmission of digital information. China is already laying the groundwork for such data transmission through the construction of smart ports, fibre optic cables, and data centres along the DSRI.⁵³¹

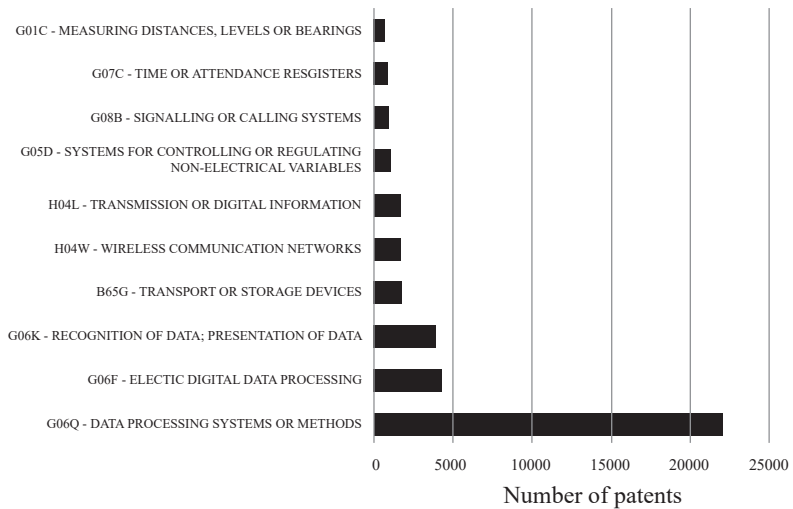


Figure 4: IPC classification of AI and big data patents related to the global supply chain.

Thus far, the data presented provided a macro perspective of patents related to AI and big data in the supply chain. The focus now turns to a micro-perspective where individual exemplary patents will be examined. A micro-level analysis is performed to confirm trends and associations found during a macro-level analysis.⁵³² While the data presented above were for the broader supply chain, the focus here will be on those patents related to the maritime application of AI and big data. These patents were selected based on their relevance to the present discussion, that is, patents that can serve as an entry point to the discussion on Sea power 2.0. Furthermore, since the Digital and Maritime Silk Roads provided the context to study Sea power 2.0, only patents by Chinese applicants were considered. The aim was not to provide an exhaustive exposition of technologies but simply to show, through a few examples, how AI and big data could be used in the maritime supply chain and, by extension, the Digital and Maritime Silk Roads.

Table 1 presents six exemplary patents and a summary of how they apply AI and big data in the maritime supply chain. The first three patents relate to logistics and trade management systems. Among other applications, these patents use AI and big data to track commodity flows through the supply chain and improve logistics arrangements and customs clearance for goods. The fourth and fifth patents related to improving port operations using AI and big data. The fourth patent uses big data to improve the efficiency of ports by running them in a business-like manner. The fifth patent uses AI and cloud computing technology to make the process of receiving and dispatching cargo more efficient. The final patent is for tracking and analysing the trade of bulk commodities. This latter invention uses big data related to maritime transport and ship data to analyse the international trade of bulk commodities and present that information visually.

Table 1: Exemplary Chinese patents related to the maritime supply chain.

Document No.	Assignee/patent title	Brief summary
CN111882275A	Zhejiang Shangqingda Trade big data management method and system based on industrial identification analysis	This patent discloses a trade management platform built on big data. The invention captures data on commodities as they flow through the supply chain and share the data among suppliers of raw materials, producers and manufactures, logistics and transportation services, and distributors to final users.
CN112686754A	Chongqing College of Finance and Economics International trade information management system	This patent discloses an international trade information management system that uses AI to improve logistics arrangements and the customs clearance of goods.
CN108776878A	Hubei Di Tian Mdt Infotech Logistics cloud big data information platform	This patent discloses a logistics information management system based on big data. The invention includes a two-way logistics information management platform that interfaces with users. This invention extracts user data and integrates it with other data to facilitate the shipment of goods.
CN112070426A	Jiangsu Hongtai Logistics Wharf business-based big data intelligent management system	The invention disclosed in this patent is an intelligent port management system based on big data. The invention comprises a logistics business module, a processing operation module, a financial module, and a file management module. Combined, these modules run a port like a business and aim to make port operations more efficient.
CN111626576A	Shanghai Box Cloud Logistics Technology Cloud-centralised transportation mode	This patent is intended for a cloud-based cargo collection and transportation system. It aims to make port operations more efficient by using cloud computing for storing and processing information related to cargo and AI technology for cargo inspection.
CN109948968A	Chuanbo Data Tech Shanghai Co. Ltd A bulk commodity trade logistics tracking analysis method	This invention can be used for tracking and analysing the trade of bulk commodities. An intelligent analysis method, which uses ship data and maritime transport big data, tracks the international transportation of bulk cargo and presents that information in a visual mode.

The exemplary patents presented above only show a glimpse of what would be possible through the successful integration of the Digital and Maritime Silk Roads. Some of these inventions aim to achieve data integration between suppliers of raw materials, producers, logistics services, and global markets through AI and big data. On the other hand, some inventions aim to transform the traditional labour-intensive seaport, a crucial interface between land and sea, into a more efficient and globally competitive facility. Given the exclusionary nature of patents, where the patent holder excludes others from key technologies, it is easy to see how patents play into the power dynamic among states. While building the Digital and Maritimes Silk Roads, China is simultaneously laying the technological foundation to grow its dominance in global trade, as seen in the patents. In other words, China is on the march to becoming a sea power of the first order.⁵³³

Towards Sea Power 2.0

This section discusses the notion of Sea power 2.0, which is grounded in the work of Alfred Thayer Mahan – a nineteenth-century American navy captain and naval theorist who coined the term ‘sea power’. While relying on nineteenth-century ideas to explain a twenty-first-century phenomenon may seem at odds, Mahan remains a central figure among students of naval history and naval strategy.⁵³⁴ As Holmes points out, although Mahan’s writing about naval warfare may be outdated, his “meditations on the logic of sea power – a logic founded on commerce, bases, and ships, and on commercial, political, and military access to important theatres – appear everlasting”.⁵³⁵ Mahan’s work continues to influence naval thinkers around the world. He is also widely read among Chinese naval thinkers as China looks to become a sea power nation.⁵³⁶

It is worth considering America’s economic conditions that led Mahan to propose his theory of sea power. Towards the end of the nineteenth century, American capitalism was in a state of crisis. Like China today, America had a huge industrial overcapacity that required expanded markets for its manufactured goods. Recognising the limits of its domestic market, Mahan called on America to expand overseas in search of foreign markets.⁵³⁷ David Harvey, a Marxist geographer, refers to this strategy of resolving the capitalist crisis of over-accumulation by expanding spatially as the ‘spatial fix’.⁵³⁸ Mahan provides his theory of sea power in his influential book titled *The influence of sea power upon history: 1660–1783*.⁵³⁹ This section does not provide a comprehensive reappraisal of Mahan’s sea power theory but simply points out those principles relevant to the discussion on Sea power 2.0.

Mahan believed that the propensity to trade and the production of something to trade with is the national characteristic most vital for developing sea power. For Mahan, the industrial capability of a country is, therefore, an important determinant of its ability to become a sea power. Another important ability of a sea power nation, according to Mahan, is the ability to establish colonies or markets to absorb manufactured commodities from a mother country. Such colonies were established by either friendly or forceful means. However, regardless of how these colonies were founded, Mahan argued:

[I]n both cases the mother-country had won a foothold in a foreign land, seeking a new outlet for what it had to sell, a new sphere for its shipping, more employment for its people, more comfort and wealth for itself.⁵⁴⁰

Between these two – production and colonies – Mahan wrote, “shipping is the inevitable link”.⁵⁴¹ Figure 5 is a representation of Mahan’s sea power model.



Figure 5. Mahan’s sea power model.

Another important aspect of Mahan’s concept of sea power is the need for foreign bases along one’s trade routes. Such bases were established not so much for trade but primarily for defence and war. The character of these foreign facilities was either commercial or military or both. For Mahan, sea power ultimately boiled down to decisive battle at sea. He wrote extensively about the history of naval warfare, to which he dedicated a great part of his influential book. Despite Mahan’s naval-centric conception of sea power, he recognised that power at sea “embraces in its broad sweep all that tends to make a people great upon the sea or by the sea”.⁵⁴² Relevant to the discussion here is Mahan’s concept of ‘staying power’ – that which indirectly contributes to maritime greatness. An example that Mahan refers to is “a large number of people engaged in the various handicrafts which facilitate the making and repairing of naval material or following other callings more or less closely connected with the water and with craft of all kinds”.⁵⁴³

The MSRI, as it is currently unfolding, seems to align very much with Mahan’s sea power model, although with some notable differences. Some observers have even argued that China’s pursuit of sea power is Mahanian but with “Chinese characteristics”.⁵⁴⁴ What then are the Mahanian features of the MSRI? **First**, the MSRI was introduced to take advantage of China’s industrial productivity. Being the world’s manufacturing and trade powerhouse, China more than meets the first requirement of being a sea power – the tendency to trade and the production of something with which to trade. The MSRI has also been considered China’s spatial fix to resolve its issue of over-accumulation.⁵⁴⁵ China is, after all, in the same situation today as America was towards the end of the nineteenth century when it felt the need to become a sea power. Therefore, it can be said that, with the MSRI, China is pursuing a strategic alliance between its productive sector, shipping industry and overseas markets.

Second, China’s need for ports along the MSRI aligns with Mahan’s principle of establishing foreign facilities for strategic defence.⁵⁴⁶ Some analysts believe that, with the MSRI, China is pursuing dual logistics and military bases along the Indian Ocean. The first overseas naval base of the People’s Liberation Army (PLA) Navy in Djibouti is often a case in point.⁵⁴⁷ China’s decision to establish a military facility in Djibouti came as a surprise since China has long been opposed to setting up military bases abroad.⁵⁴⁸

Third, due to the extreme sensitiveness of maritime trade, the success of the MSRI

will depend on a blue water navy capable of protecting China's sea commerce in far-flung oceans.⁵⁴⁹ This strategic link between sea commerce and the navy is one of the seemingly 'everlasting' principles of Mahanian sea power. Based on the three principles above, it is safe to say that with the MSRI, China is pursuing sea power with some Mahanian characteristics.

There are two issues worth clarifying in the present discussion on Sea power 2.0. The first is how Mahan saw the colony in his time in relation to how we might see it today. Being a proponent of imperial expansion, Mahan saw colonies as either markets for American manufactured goods, reservoirs for natural resources, or both. For Mahan, imperialism thus had both a market logic and an extractive logic. In today's digital age where data drive capitalism, critical data scholars and those studying new forms of colonialism have suggested we rethink the colony.⁵⁵⁰ Couldry and Mejias, for instance, argue that we might think of the extraction of big data from the Global South by the Global North for capital production as "data colonialism".⁵⁵¹ For Couldry and Mejias, data colonialism is a new form of colonialism distinctive to the twenty-first century but maintains its predatory extractive practices of historical colonialism. According to these authors, there are at least two poles of data colonialism, namely the United States and China, which operate internally and externally.

China's growing access to data along the BRI has raised suspicions of what Gravett refers to as "digital colonialism".⁵⁵² In the present discussion on Sea power 2.0, the concept of the colony will be maintained to highlight its role as both a market and a site of data extraction. However, this does not suggest that all BRI states are perceived in this manner, as that would have to be determined on a case-by-case basis. What is crucial is to understand the role of the colony in the Sea power 2.0 model.

The second issue is how production, shipping and colonies relate to one another. In Mahan's days, these were certainly not as connected given the state of technology at the time. Today, however, production, shipping and colonies are becoming intricately connected through Industry 4.0 technologies enabled by big data. Going back to the exemplary patents provided in the previous section, inventions – such as the trade big data management platform – embody the desired interconnectedness between production, shipping and colonies through the continuous flow of data. At the same time, inventions – such as the intelligent port management system and the cloud-based cargo collection and transportation system – embody visions of unbounded trade using AI and big data. It is precisely this growing interconnection between production, shipping and colonies that is giving rise to Sea power 2.0. In the Sea power 2.0 model (see Figure 6), 'the cloud' represents a new 'spatial' domain that supports the storage and computation capabilities of big data flowing to and from production, shipping, and colonies. In this model, the data colony would be one whose data are extracted and utilised to inform the production processes, shipping, and market intelligence of a sea power state.

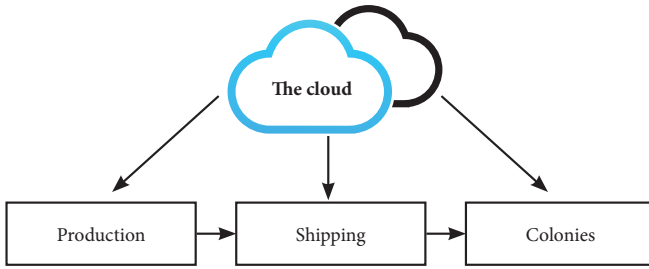


Figure 6. Author's adaptation of Mahan's sea power model.

How then might the intersection between the Maritime and Digital Silk Roads further illustrate how Sea power 2.0 operates? The operations of Sea power 2.0 may be understood from two perspectives – commercial and military. From a commercial perspective, big data is extracted from BRI member states and utilised by China to inform its production, shipping, and quest for overseas markets. Big data flowing to China would include various kinds of market data and shipping data, which China could use to its advantage.⁵⁵³ Examples of market data include data extracted from e-commerce platforms and mobile payments, which would allow Chinese firms to discern the spending habits of their foreign customers and dominate future products.⁵⁵⁴ Shipping data would include but are not limited to data centralised at smart ports and data on global commodity flows, both of which will offer China great command over global trade.⁵⁵⁵

In the Sea power 2.0 model, power is embedded in data relations between data owners and producers. Those who own data utilise it as a strategic resource for capital production through maritime commerce and related sectors. Although China's partner states stand to benefit from the construction of information and communications technology (ICT), the risk is that Chinese firms will use their market data advantage enabled by cloud-based servers and e-commerce to dominate BRI markets and potentially undermine the growth of local tech firms.⁵⁵⁶ At the national level, control over digital data is also becoming an important determinant of the ability to compete in global value chains.⁵⁵⁷ Access to data along the BRI could thus put China in an advantageous position in national economic competitiveness.⁵⁵⁸

Sea power 2.0 may also be understood from a military perspective. Although by no means the only one, a crucial issue relates to the strategic military advantage that might be gained from seeing the MSRI as a 'big data Initiative'. Might big data gathered from the MSRI function as a form of 'staying power' to achieve commercial and military superiority at sea? China's dual-use model – which blurs the lines between civilian and military facilities and resources⁵⁵⁹ – makes it entirely possible that big data from the MSRI might be used to support decisions involving the PLA Navy. Russel and Berger point out that big data harvested from the BRI can be used to support the capabilities of the PLA in what the military refers to as C4ISR – Command, Control, Communications, Computers (C4), Intelligence, Surveillance and Reconnaissance (ISR).⁵⁶⁰

The dual civilian-military model also applies to AI. According to China's national AI development plan, China aims to strike a strategic alliance between civilian and military development and the use of AI.⁵⁶¹ According to China's AI development plan, this alliance would allow China to use AI to build both its economy and its defence capabilities. From a Mahanian perspective, this new data and AI-enabled link between sea commerce and naval power is the crux of what the current author refers to as Sea power 2.0. While the article has dedicated significant space discussing the commercial side of Sea power 2.0, the naval side equally matters. Herein lies potential for future research on the naval dimension of Sea power 2.0.

Conclusion

The study reported in this article pursued the following research question: what kind of power is baked into the intersection between the Digital and Maritime Silk Roads in the area of AI and big data? The author argued that what emerges from this intersection may be referred to as Sea power 2.0, that is, the use of novel technologies, particularly those of Industry 4.0, to achieve commercial success at sea, which can be translated into strategic military advantage. To support this argument, the article first framed the MSRI within the larger global supply chain. Focusing specifically on AI and big data, a patent landscape was conducted to show how these technologies are transforming the global supply chain more generally and the maritime supply chain in particular. The patent landscape revealed, among other results, the growing interconnectedness between producers, shipping, and markets through AI and big data. The exemplary patents presented also revealed that China hopes to use AI and big data to grow its dominance in global trade. These results served as an entry point to the theorisation of Sea power 2.0.

The article discussed two perspectives to see how Sea power 2.0 operates. The first relates to the extraction of market and shipping big data to support the growth of maritime commerce. Using the Digital and Maritime Silk Roads as context, it was argued that, through their integration, China would gain greater access to market and shipping data of partner states. Such data would allow Chinese enterprises to discern their foreign markets more accurately; thus, enabling them to dominate BRI markets. In this data-mediated relationship among states, power is embedded in the data relations among them where the data haves stand to benefit more, or even at the expense of the data have nots.

The second perspective to observe Sea power 2.0 in operation is through a military lens. In the context of the PLA Navy, big data gathered along the MSRI may be used to support military decisions. It was argued that this data-enabled link between maritime commerce and naval power constitutes the essence of Sea power 2.0. Furthermore, China hopes to utilise AI for both economic growth and defence construction. As some have pointed out, China is on track to become an AI superpower. There is indeed much that remains unsaid about the concept of Sea power 2.0. Future research could consider showing in greater detail how Sea power 2.0 operates. Studies focusing on how Sea power 2.0 benefits are derived and how it can be resisted would also contribute to testing the value of the concept.

ENDNOTES

- ⁴⁶⁵ Lungani Nelson Hlongwa is a PhD candidate at the Institute for Social Research and Cultural Studies at National Yang Ming Chiao Tung University in Taiwan. He obtained his MSc degree in technology management from Chung Hua University (Taiwan) with a specialisation in patent analytics. He is also a former student of the Faculty of Military Science of Stellenbosch University where he obtained his Bachelor of Military Science degree. The author is grateful to the CHCI-Global Humanities Institute for supporting this research and to the reviewers at *Scientia Militaria* for their insightful comments, which improved the manuscript. The author can be contacted at lungani.srscs08g@nctu.edu.tw
- ⁴⁶⁶ P Cai. "Understanding China's Belt and Road Initiative". Lowy Institute, 22 March 2017. <<https://www.loyyinstitute.org/publications/understanding-belt-androad-initiative>> Accessed on 12 July 2021.
- ⁴⁶⁷ MK Khan, IA Sandano, CB Pratt & T Farid. "China's Belt and Road Initiative: A global model for an evolving approach to sustainable regional development". *Sustainability* 10/11. 2018. 4234.
- ⁴⁶⁸ Cai *op. cit.*
- ⁴⁶⁹ C Cheney. "China's Digital Silk Road: Strategic technological competition and exporting political illiberalism". Pacific Forum, July 2019. <https://pacforum.org/wp-content/uploads/2019/08/issuesinsights_Vol19-WP8FINAL.pdf> Accessed on 12 July 2021.
- ⁴⁷⁰ CR Mohan & CJ Hao. "China's digital expansion and India". ISAS Working Paper, 8 October 2019. <<https://www.isas.nus.edu.sg/wp-content/uploads/2019/10/ISAS-Working-Paper-No.-320.pdf>> Accessed on 12 July 2021.
- ⁴⁷¹ I Lazanyuk & S Revinova. "Digital Silk Road as an integration project: Opportunities for Russia". Paper presented at the 2nd International Scientific and Practical Conference "Modern Management Trends and the Digital Economy: From Regional Development to Global Economic Growth", Yekaterinburg, 16–17 April 2020.
- ⁴⁷² J Kurlantzick. "China's Digital Silk Road Initiative: A boon for developing countries or a danger to freedom?" *The Diplomat*. 17 December 2020. <<https://thediplomat.com/2020/12/chinas-digital-silk-road-initiative-a-boon-for-developing-countries-or-a-danger-to-freedom/>> Accessed on 12 July 2021.
- ⁴⁷³ R Ghiasy & R Krishnamurthy. "China's Digital Silk Road and the global digital order". *The Diplomat*. 13 April 2021. <<https://thediplomat.com/2021/04/chinas-digital-silk-road-and-the-global-digital-order/>> Accessed on 12 July 2021.
- ⁴⁷⁴ Cheney *op. cit.*
- ⁴⁷⁵ M Abdirad & K Krishnan. "Industry 4.0 in logistics and supply chain management: A systematic literature review". *Engineering Management Journal* 33/3. 2021. 187-201.
- ⁴⁷⁶ *Ibid*
- ⁴⁷⁷ AT Mahan. "The influence of sea power upon history, 1660–1783". The Project Gutenberg eBook. 26 September 2004. <<http://www.gutenberg.org/files/13529/13529-h/13529-h.htm>> Accessed on 12 July 2021.
- ⁴⁷⁸ Z Koboević, Z Kurtela & S Vujičić. "The Maritime Silk Road and China's Belt and Road Initiative". *NAŠE MORE: znanstveni časopis za more i pomorstvo* 65/2. 2018. 113–122.
- ⁴⁷⁹ JMF Blanchard & C Flint. "The geopolitics of China's Maritime Silk Road Initiative". *Geopolitics* 22/2. 2017. 223–245.
- ⁴⁸⁰ See link for more information on the BRI Forum: http://english.www.gov.cn/news/video/2017/05/12/content_281475653319187.htm

- ⁴⁸¹ J Xi. “Work together to build the Silk Road Economic Belt and the twenty-first century Maritime Silk Road”. *Xinhua*. 16 May 2017. <http://www.xinhuanet.com/english/2017-05/16/c_136287878.htm> Accessed on 12 July 2021.
- ⁴⁸² TS Eder. “Mapping the Belt and Road Initiative: This is where we stand”. Mercator Institute for China Studies, 7 June 2018. <<https://merics.org/en/tracker/mapping-belt-and-road-initiative-where-we-stand>> Accessed on 25 August 2021.
- ⁴⁸³ H Shang. *The Belt and Road Initiative: Key concepts*. Singapore: Springer Singapore, 2019.
- ⁴⁸⁴ F Kaczmarek. “African dimension of the Belt and Road Initiative”. *Przegląd Strategiczny* 9/12. 2019. 145–160.
- ⁴⁸⁵ Kobojević *et al. op. cit.*
- ⁴⁸⁶ *Ibid.*
- ⁴⁸⁷ Khan *et al. op. cit.*
- ⁴⁸⁸ *Ibid.*
- ⁴⁸⁹ M Clarke. “The Belt and Road Initiative: China’s new grand strategy?” *Asia Policy* 24/1. 2017. 71–79.
- ⁴⁹⁰ Kobojević *et al. op. cit.*
- ⁴⁹¹ X Wu & Y Ji. “The military drivers of China’s Belt and Road endeavor”. *China Review* 20/4. 2020. 223–244.
- ⁴⁹² *Ibid.*
- ⁴⁹³ W Liu, Y Zhang & W Xiong. “Financing the Belt and Road Initiative”. *Eurasian Geography and Economics* 61/2. 2020. 137–145.
- ⁴⁹⁴ B Chellaney. “China’s debt-trap diplomacy”. Project Syndicate, 23 January 2017. <<https://www.project-syndicate.org/commentary/china-one-belt-one-road-loans-debt-by-brahma-chellaney-2017-01?barrier=accesspaylog>> Accessed on 12 July 2021.
- ⁴⁹⁵ *Ibid.*
- ⁴⁹⁶ B Neilson. “Precarious in Piraeus: On the making of labour insecurity in a port concession”. *Globalizations* 16/4. 2019. 559–574.
- ⁴⁹⁷ A Brinză. “How a Greek port became a Chinese ‘dragon head’”. *The Diplomat*. 25 April 2016. <<https://thediplomat.com/2016/04/how-a-greek-port-became-a-chinese-dragon-head/>> Accessed on 12 July 2021.
- ⁴⁹⁸ JE Hillman. “Influence and infrastructure: The strategic stakes of foreign projects”. Center for Strategic and International Studies, 22 January 2019. <https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190123_Hillman_InfluenceandInfrastructure_WEB_v3.pdf> Accessed on 12 July 2021.
- ⁴⁹⁹ *Ibid.*
- ⁵⁰⁰ *Ibid.*
- ⁵⁰¹ *Ibid.*
- ⁵⁰² E Hamoudy. “Analyzing 6Vs of Big Data using System Dynamics”. *Journal of Kerbala University* 7/4. 2011. 75–83.
- ⁵⁰³ *Ibid.*
- ⁵⁰⁴ C Ogreaan. “Relevance of big data for business and management: Exploratory insights (Part I)”. *Studies in Business and Economics* 13/2. 2018. 153–163.
- ⁵⁰⁵ M Mirović, M Miličević I & Obradović. “Big data in the maritime industry”. *NAŠE MORE: znanstveni časopis za more i pomorstvo* 65/1. 2018. 56–62.
- ⁵⁰⁶ *Ibid.*
- ⁵⁰⁷ M Jović, E Tijan, R Marx & B Gebhard. “Big data management in maritime transport”. *Pomorski zbornik* 57/1. 2019. 123–141.
- ⁵⁰⁸ ZH Munim, M Dushenko, VJ Jimenez, MH Shakil & M Imset. “Big data and artificial intelligence in the maritime industry: A bibliometric review and future research directions”. *Maritime Policy & Management* 47/5. 2020. 577–597.
- ⁵⁰⁹ *Ibid.*

- ⁵¹⁰ MD Lytras, KT Chui & RW Liu. “Moving Towards Intelligent Transportation via Artificial Intelligence and Internet-of-Things”. *Sensors* 20/23. 2020. 1-4.
- ⁵¹¹ A Liu & P Guan. “Big data technology application under belt and road initiative”. Paper presented at the 2017 Second Russia and Pacific Conference on Computer Technology and Applications, Vladivostok, Russian Island, 25–29 September 2017.
- ⁵¹² Xi *op. cit.*
- ⁵¹³ The report, which is in Mandarin, may be found at this link: <https://www.yidaiyilu.gov.cn/wcm.files/upload/CMSydyllgw/201703/201703241243039.pdf>
- ⁵¹⁴ J Hemmings. “Reconstructing order: The geopolitical risks in China’s Digital Silk Road”. *Asia Policy* 27/1. 2020. 5–21.
- ⁵¹⁵ A Trippe. “Guidelines for preparing patent landscape reports”. World Intellectual Property Organization, 2015. <https://www.wipo.int/edocs/pubdocs/en/wipo_pub_946.pdf> Accessed on 12 July 2021.
- ⁵¹⁶ *Ibid.*
- ⁵¹⁷ *Ibid.*
- ⁵¹⁸ *Ibid.*
- ⁵¹⁹ H Dou, V Leveillé, S Manullang & JM Dou Jr. “Patent analysis for competitive technical intelligence and innovative thinking”. *Data Science Journal* 4. 2005. 209–236.
- ⁵²⁰ A Shapiro. “‘Embodiments of the invention’: Patents and urban diagrammatics in the smart city”. *Convergence* 26/4. 2020. 751–774.
- ⁵²¹ *Ibid.*
- ⁵²² A Delfanti & B Frey. “Humanly extended automation or the future of work seen through Amazon patents”. *Science, Technology, & Human Values* 46/3. 2021. 655–682.
- ⁵²³ PatentCloud is a patent search and analysis software and may be accessed through this link: <https://app.patentcloud.com/>
- ⁵²⁴ Keywords and patent classification codes used to search for patents: ((ICL/(G06Q10/08))OR(ICL/(G06Q50/28)))AND((ICL/(G06F or 15/18))OR(TAC/(G06F or 19/24))OR(TAC/(G06F or 30/27))OR(TAC/(G06N or 20/00))OR(TAC/("big data" or 大数据))OR(TAC/("artificial intelligence" or 人工智能))).
- ⁵²⁵ See this link for more information on WIPO patent filing: https://www.wipo.int/pressroom/en/articles/2020/article_0005.html
- ⁵²⁶ *Ibid.*
- ⁵²⁷ K Lee. *AI superpowers: China, Silicon Valley, and the new world order*. Wilmington, MA: Houghton Mifflin Harcourt, Mariner Books, 2018.
- ⁵²⁸ Trippe *op. cit.*
- ⁵²⁹ M Seyedan & F Mafakheri. “Predictive big data analytics for supply chain demand forecasting: methods, applications, and research opportunities”. *Journal of Big Data* 7/1. 2020. 1-22.
- ⁵³⁰ Hemmings *op. cit.*
- ⁵³¹ A Wheeler. “China’s Digital Silk Road (DSR): The new frontier in the digital arms race”. *Silk Road Briefing*. 19 February 2020. < <https://www.silkroadbriefing.com/news/2020/02/19/chinas-digital-silk-road-dsr-new-frontier-digital-arms-race/> > Accessed on 2 November 2021.
- ⁵³² Hemmings *op. cit.*
- ⁵³³ JJ Nohara. “Sea power as a dominant paradigm: The rise of China’s new strategic identity”. *Journal of Contemporary East Asia Studies* 6/2. 2017. 210–232.
- ⁵³⁴ B Armstrong. *Twenty-first century Mahan: Sound military conclusions for the modern era*. Annapolis, MD: Naval Institute Press, 2013.
- ⁵³⁵ JR Holmes. “China’s naval strategy: Mahanian ends through Maoist means”. *The Diplomat*. 21 June 2013. <<https://thediplomat.com/2013/06/chinas-naval-strategy-mahanian-ends-through-maoist-means/>> Accessed on 12 July 2021.

- ⁵³⁶ W Zhang & S Ahmed. "A general review of the history of China's seapower theory development". *Naval War College Review* 68/4. 2015. 80–93.
- ⁵³⁷ Mahan *op. cit.*
- ⁵³⁸ D Harvey. "Globalization and the 'spatial fix'". *Geographische revue: Zeitschrift für Literatur und Diskussion* 3/2. 2001. 23–30.
- ⁵³⁹ Mahan *op. cit.*
- ⁵⁴⁰ *Ibid.*, p. 195.
- ⁵⁴¹ *Ibid.*, p. 221.
- ⁵⁴² *Ibid.*, p. 117.
- ⁵⁴³ *Ibid.*, pp. 246–247.
- ⁵⁴⁴ Z Keck. "Alfred Thayer Mahan with Chinese characteristics". *The Diplomat*. 1 August 2013. <<https://thediplomat.com/2013/08/alfred-thayer-mahan-with-chinese-characteristics/>> Accessed on 12 July 2021.
- ⁵⁴⁵ P Carmody, I Taylor & T Zajontz. "China's spatial fix and 'debt diplomacy' in Africa: Constraining belt or road to economic transformation?" *Canadian Journal of African Studies/Revue canadienne des études africaines*. 2021. 1–21.
- ⁵⁴⁶ See this link for US congress members drawing parallels between the MSRI and Mahan's sea power theory: <https://www.congress.gov/116/chrg/CHRG-116hhr41367/CHRG-116hhr41367.pdf>
- ⁵⁴⁷ J Drun. "China's maritime ambitions: A sinister string of pearls or a benevolent Silk Road (or both)?" Center for Advanced China Research, 6 December 2017. <<https://www.ccpwatch.org/single-post/2017/12/05/china-s-maritime-ambitions-a-sinister-string-of-pearls-or-a-benevolent-silk-road-or-both>> Accessed on 12 July 2021.
- ⁵⁴⁸ JP Cabestan. "China's military base in Djibouti: A microcosm of China's growing competition with the United States and new bipolarity". *Journal of Contemporary China* 29/125. 2020. 731-747.
- ⁵⁴⁹ Wu & Ji *op. cit.*
- ⁵⁵⁰ JO Thatcher, D O'Sullivan & D Mahmoudi. "Data colonialism through accumulation by dispossession: New metaphors for daily data". *Environment and Planning D: Society and Space* 34/6. 2016. 990–1006.
- ⁵⁵¹ N Coudry & UA Mejias. "Data colonialism: Rethinking big data's relation to the contemporary subject". *Television & New Media* 20/4. 2019. 336–349.
- ⁵⁵² WH Gravett. "Digital coloniser? China and artificial intelligence in Africa". *Survival* 62/6. 2020. 153–178.
- ⁵⁵³ Hemmings *op. cit.*
- ⁵⁵⁴ *Ibid.*
- ⁵⁵⁵ *Ibid.*
- ⁵⁵⁶ *Ibid.*
- ⁵⁵⁷ TH El Kadi. "The promise and peril of the digital silk road". Chatham House: The Royal Institute of International Affairs, 6 June, 2019. <<https://www.chathamhouse.org/2019/06/promise-and-peril-digital-silk-road>> Accessed on 2 November 2021.
- ⁵⁵⁸ *Ibid.*
- ⁵⁵⁹ M Nouwens & H Legarda. "China's pursuit of advanced dual-use technologies". International Institute for Strategic Studies (IISS), 18 December 2018. <<https://www.iiss.org/blogs/research-paper/2018/12/emerging-technology-dominance>> Accessed on 2 November 2021.
- ⁵⁶⁰ DR Russel & BH Berger. "Weaponizing the Belt and Road Initiative". Asia Society Policy Institute, September 2020. <https://asiasociety.org/sites/default/files/2020-09/Weaponizing%20the%20Belt%20and%20Road%20Initiative_0.pdf> Accessed on 12 July 2021.
- ⁵⁶¹ See this link for China's AI development plan: <https://fia.org/wp-content/uploads/2017/07/A-New-Generation-of-Artificial-Intelligence-Development-Plan-1.pdf>

SCIENTIA MILITARIA

South African Journal of Military Studies



Book Review

In Kill Zone: Surviving as a private military contractor in Iraq

Neil Reynolds

Jeppestown, Johannesburg: Jonathan Ball Publishers

2018, 245 pages

ISBN: 978-1-86842-856-4

Have you ever turned down a job offer that pays US\$25 000 (ZAR201 500)⁵⁶² per month? Neil Reynolds has! Have you ever been offered work that not only pays US\$9 000 (ZAR72 540)⁵⁶³ per month, but also guarantees you the opportunity to work and travel abroad? This is what Neil Reynolds was offering entry-level employees should they decide to come and work with him. The only catch, you had to be working as a personal security detail (PSD) to an anonymous very important person (VIP), also known as ‘the client’, in one of the world’s most dangerous places, Iraq after the 2003 American-led coalition invasion of the country. If you have ever considered such a career choice or are simply curious what such employment might entail, then this book by Neil Reynolds is a must have for you.

In July 2003, Mauritz le Roux, a founder member of Safenet Security Services (SSS) was looking to expand his business. The coalition invasion of Iraq provided just such an opportunity. Despite not having any personal or private experience within the PSD environment – Mauritz had served as an engineer officer in the South African Defence Force (SADF) before resigning to join Executive Outcomes for their Angolan contract in 1993 – Mauritz felt that Iraq offered an opportunity he just could not ignore. Teaming up with John Walbridge – a graduate of the Citadel and the US 5th Special Forces Group before transitioning to work in Africa for the CIA, Walbridge now owned Overseas Security & Strategic Information (OSSI) Inc., which he had founded in 2000, the two men decided to form OSSI-Safenet and chance their hand in Iraq.

As a first step, OSSI-Safenet needed to recruit a team that could go to Iraq and set up a base of operations and hopefully catch some clients in the not too distant future as well. The first to be appointed was Neil Reynolds, a veteran of the Bush War who had cut his teeth working in the Reconnaissance Wing of 31 (Bushman) Battalion at Omega, and who had shortly before decided to not renew his contract in terms of in-house security for International Trading and Mining, an Angolan diamond mining company. Reynolds was asked to become OSSI-Safenet’s Iraq country manager. To assist Reynolds, OSSI-Safenet also recruited Rieme de Jager and Snoeks Nieuwoudt, two ex-senior non-commissioned officers of the South African Reconnaissance Regiments and Eddie Visser, a well-experienced paramedic.

What follows is Reynold's rip-roaring tale of high adventure within Iraq. Leaving South Africa, the team – including Mauritz – passes through Turkey into Kurdistan (the northern part of Iraq) heading for the town of Sulaymaniyah. Here they meet up with another South African, Casper Oosthuizen, a former member of the Police Special Task Force, who assists them by introducing the team to the Kurdistan Black Market for Weapons. Anything and everything from rocket launchers to machineguns to hand grenades are on open display and for sale. Their purchases made the team then move down to the Iraqi capital of Baghdad.

In 2003, Iraq is a divided city. On the one hand, there are those who live and work in the Green Zone – the heavily fortified and strictly controlled area around Saddam Hussein's old palace, which now accommodates the US Embassy – and, on the other, those who survive in the Red Zone, i.e. the rest of the city where nobody is in control. Not having any US credentials, the team sets up in the Red Zone and gets to learn the city and find some clients.

Through tenacity, hard work, common sense and a small bit of luck, OSSI-Safenet is able to carve a niche market for itself in the cut-throat PSD scene within Baghdad. While the majority of PSD companies (such as the now infamous Blackwater International) follow a hard approach – transporting their clients in armoured vehicles, with their members openly armed and overtly aggressive – Reynolds, drawing from his Bush War experience with 31 Battalion, opts for a soft approach. Travelling in unarmoured pickups and minibuses disguised as taxis, with the members (and clients) all dressed in local attire as cover, Reynolds and the team become the principal agent and masters of this indirect approach.

While successful in avoiding most hostile contact with the Sunni insurgents, including their improvised explosive devices (IEDs), because the insurgents think they are locals, they are not without danger and do get involved in firefights from time to time when their cover is blown. The book ends as it began with the terrible tale of the Baghdad Four. Four employees of SSS, Andre Durant (38), Johann Enslin (48), Hardus Greeff (43) and Callie Scheepers (48), were kidnapped in 2006 while on a mission and later murdered when they were stopped at what they believed was an authentic police checkpoint but which in reality was a fake checkpoint set up by the insurgents in cahoots with corrupt local police officials.

A year later, the OSSI-Safenet alliance disintegrated due to the intense rivalry between Le Roux and Walbridge, with Reynolds eventually going to work for Walbridge's OSSI as its country manager in Iraq, later transferring to Afghanistan, Haiti and Libya before retiring in 2013 and returning home to South Africa.

This is an often humorous, fast-paced, well-written book that provides its readers with a rare glimpse behind the curtains into the little known and often secretive world of PSD, in the years following the collapse of Saddam Hussein's regime in Iraq.

Jean-Pierre Scherman

Stellenbosch University

ENDNOTES

⁵⁶² Based on the US dollar to South African exchange rate of ZAR8.06 to US\$1.00 as on 1 June 2003. The US dollar to South African rand spot exchange rates for 2003 from the Bank of England: <https://www.poundsterlinglive.com/bank-of-england-spot/historical-spot-exchange-rates/usd/USD-to-ZAR-2003>.

⁵⁶³ Based on the US dollar to South African exchange rate of ZAR8.06 to US\$1.00 as on 1 June 2003. The US dollar to South African rand spot exchange rates for 2003 from the Bank of England: <https://www.poundsterlinglive.com/bank-of-england-spot/historical-spot-exchange-rates/usd/USD-to-ZAR-2003>.

SCIENTIA MILITARIA

South African Journal of Military Studies



Book review

Eerste Daar

WS van der Waals

Pretoria: Protea Boekhuis

2021, 256 pages (excluding 24 pages of photographs)

ISBN 978-1-4853-1167-6

In the introduction to his book, Van der Waals claims that the book is largely based on a manuscript that he wrote for his children about 15 years ago, and he acknowledges that it is not an academic work.⁵⁶⁴ With this disclaimer of sorts, Van der Waals firmly places his book in the memoir segment of recent South African military historiography. While this is true – the book certainly reads like a memoir – Van der Waals manages to incorporate much more than just personal reflections and recollections in his work. Perhaps due to his academic background, his narrative is lifted above the proliferation of recent memoirs by South African Defence Force (SADF) soldiers by occasional analyses and opinions interspersed throughout the book.

Eerste daar follows a largely chronological approach, like most biographies. Chapter 1 traces with Van der Waals's early life in the Netherlands, and includes incidents from his childhood and early school years as well as the family's emigration to South Africa. Van der Waals highlights incidents in these, his formative years, that would shape his thoughts and principles later in his life. The following three chapters deal with different phases of the author's military career, and span more or less a decade each.

The second chapter of *Eerste daar* deals with Van der Waals's early military career and roughly spans the 1960s. It is different from many biographies as the focus does not necessarily fall on the author's experiences during this phase, but rather highlights the decisions that he had to make, and the influence that they would have on his later life. In doing so, the chapter provides an interesting perspective on the career paths and prospects open to soldiers in South Africa in the early 1960s. Naturally, the chapter includes the author's involvement in Operation Blouwildebees, the SADF–South African Police (SAP) airborne assault on Ongulumbashe in 1966. In a trend that continues throughout the book, Van der Waals is quite humble about his role in the operation, perhaps even too much so. The reader occasionally gets the impression that events are glossed over because Van der Waals does not wish to appear too boastful. This is reflected in the brief way in which the author's stints in Angola and Rhodesia (now Zimbabwe) are discussed and continues in his description of how he, as a junior officer, implemented the principle of "mission command" or decentralised command (likened to the German *Auftragstaktik* of World War Two by the author).⁵⁶⁵ The chapter concludes with Van der Waals's studies up to the MA level.

Chapter 3 roughly covers the 1970s, and includes a brief recap of the socio-political situation in Angola and Portugal, as a prelude to Angolan independence in 1975. This overview is broad enough to give an uninformed reader some background, but not so exhaustive that it detracts from the biographical nature of the book. The chapter includes Van der Waals's essentially diplomatic role in Angola prior to that country's independence, and provides an interesting perspective of a peacetime soldier (despite Operation Blouwildebees in 1966, the SADF was largely a peacetime force in the early 1970s) in a warzone (Portugal was, to all intents and purposes, at war with Angolan liberation movements at the time). Naturally, the chapter includes references to Operation Savannah, the SADF's first official operation in Angola. Van der Waals focuses on his own involvement in the operation, which was to act as liaison between UNITA (Jonas Savimbi's liberation movement) and the SADF, and provided training to UNITA soldiers. Van der Waals blends tactical and operational recollections of the operation quite well. Military strategists might find his narrative slightly frustrating, but the average reader should have no problem following it. After Operation Savannah, Van der Waals was transferred to Army Headquarters as SO1 Operations (civil affairs), turning him into something of a public relations officer. This section of the book focuses on how the author approached civil affairs as more than the 'plough and plant' norm of the time, and also reflects on lessons that he learnt in Rhodesia (now Zimbabwe) and Taiwan.

In Chapter 4, which covers the 1980s with a few years on either side, it is narrated how Van der Waals's career became increasingly diplomatic. The chapter recalls his service as military attaché in Paraguay and – temporarily – in Chile. This part of the book contains an interesting, though very brief, South American perspective on the Falklands War. After his service in South America, Van der Waals was transferred to Military Intelligence (MI) back in South Africa, where he focused mostly on internal threats to the government. In this section, he discusses many well-known incidents from the 1980s and provides an overview of the role that MI played in opposing unrest within the borders of South Africa. Although it did not fall under his purview, Van der Waals also briefly provides his take on the controversial issue of Cuito Cuanavale. In the late 1980s, Van der Waals was transferred to the office of the Chief of Staff: Operations as Director: Operations. This coincided with a decline in SADF involvement in Namibia and Angola and, in contrast with the preceding 15 odd years, operations became internally focused. As such, the author essentially continued the work that he had begun at MI, although from a different position. The chapter concludes with the author's final military appointment, as the SADF's Director of Foreign Relations. This section of the book highlights Van der Waals's role in establishing military-diplomatic relations with countries that had formerly opposed the SADF, such as Swaziland and the newly independent Namibia. Van der Waals ends his recollection of his military career on an unusual note: contrary to many senior SADF personnel at the time, he contends that he resigned from the SADF in 1992 because of discontent with the SADF and not out of fear for his future in the soon-to-be-formed South African National Defence Force (SANDF).

The final chapter of *Eerste daar* details the author's post-military career. To the purely military-orientated reader, this chapter does not contain as much of interest as previous

chapters. It describes the author's role as Executive Director of Community Safety, a civil position in his local municipality. In this position, he was involved in the security arrangements for the first democratic elections in South Africa in 1994 and the subsequent inauguration of President Mandela. The chapter highlights this as well as several other high-profile events in which Van der Waals took part, mostly in a planning capacity. As in previous chapters, the author assumes quite a large degree of prior knowledge by the reader; for example, he never actually explains what an executive director of community safety does or what the extent of his responsibilities was. It is doubtful that many readers will have both the military background knowledge to understand the first few chapters completely and the civil background to understand the last.

Eerste daar has much counting in its favour. Although it is unashamedly an autobiography and, as such, falls in the memoir genre of historiography, Van der Waals – possibly due to his background as an academic and author – adds more to the corpus of knowledge than many other memoirs. This is mostly achieved by providing context of events and briefly analysing many socio-political situations and commenting on these. Where Van der Waals does choose to add personal anecdotes, they are invariably entertaining. Examples of this include interaction with American diplomats in Luanda,⁵⁶⁶ challenges with translating lectures from Chinese into Taiwanese,⁵⁶⁷ the author's return to Luanda in 1992,⁵⁶⁸ and his encounter with Willem Ratte in the build-up to the 1994 elections.⁵⁶⁹ Additionally, and to his credit, Van der Waals is very transparent in his opinions of various politicians and SADF officers. Naturally, this had an influence on the way in which he writes about them, but the reader is well aware of his bias and able to evaluate Van der Waals's comments accordingly. Notably, he has little time for the former Chief of the SADF, Jannie Geldenhuys, and is often critical of his actions. By contrast, he seems to have respected two other Chiefs, Magnus Malan and Constand Viljoen. The book contains several informative maps, most notably two⁵⁷⁰ that indicate the changing geopolitical situation in Angola in the lead-up to independence.

Van der Waals's personal writing style occasionally leads to some confusion. An example of this can be found in his discussion of Operation Savannah, where someone called "Eddie" is both in Rundu and to the north of Nova Lisboa at the same time.⁵⁷¹ He obviously refers to different Eddies, but the narrative is confusing nonetheless. This is, of course, not uncommon in memoirs. Van der Waals also highlights the inherent differences and tension between different genres of military history when he refutes historian FJ du Toit Spies's record of a certain event during Operation Savannah, and claims that his own recollection is more accurate.⁵⁷² Unfortunately, *Eerste daar* is only available in Afrikaans and, at this point, the publisher has no plans for a translation. In an era where research and scholarship increasingly tends to be "open", publishing a book only in Afrikaans – and quite high-level Afrikaans, at that – leans away from being "open". Of course, as Van der Waals's first language (technically, it would be Dutch, but by his own account, his Afrikaans soon surpassed his Dutch), his account is probably more fluid and fluent than any translation, and a translation would be subject to all the normal caveats that accompany translations. Nonetheless, his contribution would reach a much wider audience if it were translated. Judging by the history of his first book,⁵⁷³ there is a possibility that a translated version might still appear.

On the whole, *Eerste daar* is an entertaining read and well worth owning. It does not fall comfortably in the military history camp, with something of a political, or at least diplomatic, undertone throughout. As such, it probably contributes and appeals to a broader field of readers and study.

Will Gordon

University of Zululand

ENDNOTES

⁵⁶⁴ WS van der Waals. *Eerste daar*. Pretoria: Protea, 2021, 11.

⁵⁶⁵ *Ibid.*, p. 52.

⁵⁶⁶ *Ibid.*, p. 77.

⁵⁶⁷ *Ibid.*, p. 131.

⁵⁶⁸ *Ibid.*, p. 185.

⁵⁶⁹ *Ibid.*, p. 212.

⁵⁷⁰ *Ibid.*, pp. 67, 86.

⁵⁷¹ *Ibid.*, p. 106.

⁵⁷² *Ibid.*, p. 102.

⁵⁷³ WS van der Waals. *Portugal's war in Angola 1961–1974*. Pretoria: Protea, 2011.

SCIENTIA MILITARIA

South African Journal of Military Studies



Book Review

Kansvatter: Die rustelose lewe van Ben Viljoen

Carel van der Merwe

Pretoria: Protea

2019, 520 pages

ISBN: 978-1-4853-1056-3

To write a biography is a daunting task but if done correctly and fairly, it can be a magnificent piece of historical literature. A biography, and especially an autobiography, is a literary genre that can assist any historian to see past events directly through the eyes of the person about whose life is being written. Some historical figures can boast a long list of biographies due to their popularity during their lifetime or shortly after it. Others are either merely mentioned briefly in other publications or their biographies are limited due to a variety of external factors. When it comes to Benjamin Johannes (or is it Barend Johannes?) Viljoen, his life story is finally explained thoroughly for the first time by the Stellenbosch historian, Dr Carel van der Merwe.

Carel van der Merwe (henceforth Van der Merwe) is a qualified chartered accountant with an impressive curriculum vitae when it comes to his experiences in the financial sector. His interest however is not limited to financial issues. He is also an award-winning novelist, with a master's degree in Creative Writing from the University of Middlesex, and he proved his expertise in historical research when his book about Eugene N Marais's time in London, *Donker stroom*, was published. He then enrolled for a PhD in History at Stellenbosch University, completing his thesis about the life of General Ben Viljoen. He graduated in 2018 and soon after he reworked his PhD thesis into the book *Kansvatter: die rustelose lewe van Ben Viljoen* (henceforth *Kansvatter*). He was awarded the kykNET-Rapport prize for the best non-fiction publication in 2020, and the book has received good reviews from different historians and book reviewers.⁵⁷⁴ This reviewer shares their enthusiasm about the book.

Kansvatter is presently only available in Afrikaans and it is this reviewer's fondest wish that this book be translated into English. The reason for this wish is described below. Firstly, the striking title should receive some attention. The reviewer is of the opinion that the best English translation for the Afrikaans word *Kansvatter* is 'opportunist'. The word 'opportunist' can be used in a negative or a positive sense depending on the motive of the person who calls someone an opportunist. Keep this idea in mind as you read the book. Undoubtedly Viljoen was an opportunist. Coming from humble beginnings in the Eastern Cape, working daily with his family on their farm to be able to survive the tumultuous nineteenth-century Tembuland, his desire for greater things came with his interest in the life and times of the French emperor, Napoleon I. Despite his limited schooling, Viljoen was – like Bonaparte – a strategist and a tactician, and there are many examples in this book to endorse these claims.

As he approached adolescence, the restlessness of his life did not stop. Trying like so many other Afrikaners of the time to find their fortunes on the Witwatersrand in search of gold or profiting from the miners, Viljoen would soon realise the true harshness and unfairness of life when, in his early twenties, he was financially ruined. His auctioneering business was a miserable failure but he did not allow his overzealousness as an unsuccessful auctioneer to throw him into the dark pit of depression. With wisdom acquired from his failures and like a true opportunist seeking a new venture, he soon started to build a career as a bilingual policeman in the ZAR who could influence and calm down any public confrontation in Krugersdorp, itself a rough town during the 1880s and 1890s.⁵⁷⁵ The life of a policeman, who earned very little, was soon a boring enterprise for the energetic and intellectual Viljoen. He tried his hand at publishing a newspaper and, despite making enemies among his peers, he soon realised that politics was actually the sphere in which he wanted to operate.

He would never leave the realm of politics. After being voted in as member of the Second Volksraad (national council) of the ZAR, he was soon seen as an opportunist by his peers. He initially criticised the decisions made by the Kruger faction in the ZAR but when he was rubbing shoulders with his fellow *Volksraadslede* (Members of the Volksraad) he decided to change his opinion and publish his commentary on British designs against the ZAR. Van der Merwe eloquently states in his book that Alfred Milner took notice of Viljoen's writings and never forgot it. Like his hero, Napoleon, Viljoen was considered *persona non grata* by the British Empire, the largest Western Empire of the time.

Van der Merwe delivers a meticulously planned and carefully categorised account of Viljoen's life. Each chapter gives the impression of an episode in a mini-series, and each one ends with a climax, which compels the reader to turn the page and start with the next chapter. What astounded the reviewer was how much effort Van der Merwe put in to acquire the information for this book. His *modus operandi* should certainly be seen as a 'gold standard' for biographical research. From travelling to the cave where Viljoen was born and even travelling to the United States of America to meet the direct descendants of Viljoen proved that a biography cannot only be written from the comfort of an armchair while surfing the web or reading photographed archival material. The answers are out there and they must be searched for – not only within the files of archives but also among the memories of family and friends. Even historical artefacts and natural formations, lying exposed on the historical landscape, might contain answers that will enrich biographical research.

Van der Merwe, of course, had additional resources at his disposal for specific periods of Viljoen's life. During the South African War of 1899–1902, Viljoen served as a Boer general who led his Commando in different battles and skirmishes across the eastern parts of the former Transvaal. When he was captured, his time as a prisoner of war (PoW) was short-lived. Yet, due to the popularity of the South African War among military historians and history enthusiasts alike, Viljoen's time as a commanding officer delivered a variety of sources for Van der Merwe. This period in his life is so aptly written that the reader's imagination is easily transported to the time when the British

were uncertain whether they could ever truly conquer the Boer forces in the Eastern Transvaal.

For the reviewer, who unashamedly is more interested in twentieth-century history, Viljoen's last 16 years as an immigrant to the United States are of great interest. This part of Viljoen's life has been briefly explained in previous publications by other researchers, such as Brian M du Toit and CJ Scheepers Strydom.⁵⁷⁶ Even though their publications also cover Viljoen's time in the southern states of the United States, Van der Merwe's account of Viljoen as the circus performer in St. Louis, Missouri, and then as the settler and soldier in Mexico and eventually in New Mexico is much more spellbinding due to the array of sources used. It is precisely for this reason that the reviewer is of the opinion that an English translation of *Kansvatter* is a necessity. The historians from the United States and Mexico would surely benefit to know the role played by Ben Viljoen in the histories of their two respective countries. Especially the State of New Mexico should consider and debate the role of a former Boer general in the establishment of their state more than a century ago. Could it also be argued that Viljoen was at the head of the first community of Afrikaner Americans and even Afrikaner Mexicans, a minority group equally interesting as the Afrikaner communities, which were established in Argentina, Tanganyika and Kenya?

Viljoen died in 1917 in New Mexico (NM) and is buried in the Masonic cemetery in La Mesa, NM. His life was one of adventure and ambition, which only required an opportunity to hoist Ben Viljoen into a better life with more opportunities. Yet, he also experienced times of sadness, and Van der Merwe does not ignore the personal pains Viljoen had to endure – nor the list of lovers the flirtatious Viljoen had! Writing about the life of Ben Viljoen was undoubtedly a daunting yet rewarding experience. Van der Merwe wrote a biography, which is, in the opinion of this reviewer, a well-researched, well-written and well-edited book, which is truly enjoyable to read and useful for future research.

Emile Coetzee

North-West University

ENDNOTES

⁵⁷⁴ There is a Wikipedia page dedicated to Van der Merwe and also a LinkedIn profile.

⁵⁷⁵ ZAR stood for the Zuid-Afrikaansche Republiek. It is also known as Transvaal.

⁵⁷⁶ See BM du Toit. *Boer settlers in the Southwest*. El Paso, TX: Texas Western Press, 1995; CJ Scheepers Strydom, D.W. Krüger & G.P.J. Trümpelmann, *Afrikaners in die vreemde*. Cape Town: Tafelberg, 1976.

Book Review

Physical control, transformation and damage in the First World War: War bodies

Simon Harold Walker

London and New York: Bloomsbury Academic

2021, 238 pages

ISBN 978-1-3501-2328-1

Nearly a century after the conclusion of the First World War of 1914–1918, the British military historian Ian FW Beckett expressively stated, “[h]istorians walk with ghosts.”⁵⁷⁷ As an explanation, he descriptively noted, “[t]hey are privileged ... to see what others do not as they tread the deserted banquet-hall of the past, endeavouring to repopulate it with those who have gone before and who might otherwise be forgotten.”⁵⁷⁸

Most readers will agree that any literature on the subject of history is worth reading when historians succeed in transporting their audience along with them through their journey in the past together with the men and women who populated it. With the approaching and passing centenary of the First World War, a plethora of titles has appeared. This period also witnessed a departure from the more traditional ‘drum and trumpet’ and ‘history from above’ approach and a concomitant increase in writing ‘history from below’. As a result, numerous literary pieces have appeared using soldiers’ experiences as a lens on quotidian life on the battle front.⁵⁷⁹ Such developments have opened new avenues for historians to explore, and a fresh set of ‘ghosts’ to ‘walk with’ as they travel through the past. In this process, thousands of previously, almost impersonal, commemoratively engraved, marbled and emboldened names on plaques, monuments and memorials are saved from obscurity.

Accompanying this trend was also the use of various tools of analysis to explore a myriad of experiences from fresh angles. A handful of historians have opted not to disturb soldiers’ immortal souls beyond the veil but instead to revive their mortal corporeal forms in ink and on paper as they were a century ago. These historians therefore view experience from the perspective of men’s bodies. Among this rank and file are individuals such as Joanna Bourke, Ana Carden-Coyne, Emily Mayhew, Jessica Meyer, Leo von Bergen, Paul Cornish, Nicholas J Saunders, Suzannah Biernoff and others. All of them explored some aspect or aspects of the war or thereafter through the perspective of soldiers’ bodies.⁵⁸⁰ This trend has gained ground and comprises books, journal articles and special issues, such as ‘The body at war: wounds, wounding and the wounded’ in the *Journal of War and Culture Studies*.⁵⁸¹ One of the latest additions to this collection of works is Simon H Walker’s book, *Physical control, transformation and damage in the First World War*. The book has its origins in Walker’s PhD dissertation completed

in 2018, which aimed to contribute to contemporary historiography on the body and war where gaps exist.⁵⁸² As he notes, “it is with these studies [by Mayhew, Macdonald and Bourke in particular] in mind that this book has focused more directly with the relationship between men’s bodies and combat”.⁵⁸³ To this end, Walker uses British war bodies that fought in the war as a lens to “understand the experience of transformation, conditioning, destruction and rehabilitation for the British men who served.”⁵⁸⁴ Walker aptly illustrates this aim in the title of his book.

Much like the sources from which it draws, and as Walker sets the parameters, the book focuses on the perspective of British bodies. Like comparative literature, the bodies considered by Walker as ‘British’ are largely left undefined, and little attention is given to placing these bodies within the larger context of the British empire. For example, a short two pages mention Indian soldiers from the imperial periphery and Indian burial culture.⁵⁸⁵ In comparison, Walker mentions the contribution by Canada to the imperial war effort once or twice in a sentence or three.⁵⁸⁶ Similarly, apart from one footnote on South African troops, none of the other participants from the farthest points of the empire is included.⁵⁸⁷ It is therefore assumed that the British bodies under discussion are either British nationals or empire-born men who joined British units. Furthermore, many, if not all, of the experiences of these British bodies on the home front are restricted to Britain. At the same time, the war front is primarily limited to the Western front. Walker mentions other war theatres in the Middle East, Africa, Mesopotamia, Macedonia and Palestine in passing, but nothing more.⁵⁸⁸ Since the body as a tool of analysis has delivered such stimulating research and has proved to be of some interest in recent years, one cannot but desire an analysis that incorporates fresh perspectives from the layered order of the British empire. Alternatively, at least, a study on a different battlefield. This could gradually assist in shifting the greater war story from a monotone to a technicolour narrative. However, these limitations are understandable, as Walker himself writes, “[t] here are hundreds of thousands of individual accounts ... significantly more than a single study can consider.”⁵⁸⁹

For the most part, Walker grounds the bulk of the content of his book in the existing secondary literature, essentially promoting standing arguments and ideas. However, this might also explain the richness of the book. Certain pre-existing ideas, some of which are underdeveloped in other literature, are tweaked, expanded, developed, highlighted and brought to the forefront by Walker. In some cases, Walker uses archival research ranging from oral testimonies to official documentation, private papers, memoirs and diaries to achieve this, adding a layer of uniqueness. The use of primary source material also sees the inclusion of some precious nuggets of bodily experience. One such case is Private Shaw, who tried to modify and enhance his body, particularly his chest width, by exercising with “a ‘chest expander’ and ‘dumb bells’” to meet the physical recruitment requirements.⁵⁹⁰ The book succeeds by Walker combining all of this in one compact volume that logically and effortlessly ensues.

Each chapter in the book focuses on a phase of the war that British bodies experienced, and cascades down to sub-themes adding nuances and diversity. In the first chapter, Walker contextualises his study within current historiography and paints a picture of

the broad strategic landscape. Here he includes the perception of the British public, the state and the military of the body in the early twentieth century and how it changed in the years leading to the First World War. This introductory chapter is followed by a chapter on the recruitment and enlistment process, followed by making bodies ready for war service through training, sport, clothing, diet and other means. The two succeeding chapters discuss the bodily experiences behind the front lines, in combat, on leave, and at different intervals of the evacuation chain and, in some instances, a return to the front. Finally, the last chapter traces soldiers' bodies as they leave the war either through death or by way of demobilisation or as a result of medical discharge.

A central theme that emerges in the book is the increasing amount of scrutiny, control, categorisation, cultural consideration and state-level interference on men's bodies. Such interference increased after the South African War of 1899–1902 until the First World War. After that, it continued as the military and the state demobilised war bodies and remoulded, refitted and re-categorised them into civilian bodies. Even when they transitioned from soldier to patient, their bodies remained controlled in different ways, and their clothing reflected this as 'hospital blues' replaced their uniform.⁵⁹¹ Here Walker also examines the responses of the various bodies throughout these phases. These responses were wide-ranging. Responses could, for instance, include self-inflicted wounds as a means for men to retake control of their own bodies or exchange parts of their bodies for safety behind the frontlines.

Despite its limitations, most readers interested in this area of history or new to it will enjoy reading Walker's first, and hopefully not last, book. Walker excels in carrying his audience with him as he treads through the past with the civilian bodies who enlisted, were then transformed into war bodies and later passed to either the grave or were remoulded into civilian bodies. As Walker reflects in the opening lines, he "did not have a chance to personally know the men" under discussion. However, they "have become an important part of ... [his] life". Through his research and the writing process, Walker realised he "could never fully understand what ... [they] saw, felt and did, but for a brief time ... [he] was honoured to shadow ... [their war bodies] over the top" – an experience that all readers will undoubtedly share.

Anri Delpont

Stellenbosch University

ENDNOTES

- ⁵⁷⁷ IFW Beckett. *The Victorians at war*. London: Hambledon & London, 2003, xiii.
- ⁵⁷⁸ *Ibid.*
- ⁵⁷⁹ *Ibid.*
- ⁵⁸⁰ A Carden-Coyne. *Reconstructing the body: Classicism, modernism, and the First World War*. Oxford: Oxford University Press, 2009; A Carden-Coyne. *The politics of wounds: Military patients and medical power in the First World War*. Oxford: Oxford University Press, 2014; J Bourke. *Dismembering the male: Britain, male bodies and the Great War*. London: Reaktion books, 1996; ER Mayhew. *Wounded: From battlefield to Blighty, 1914–1918*. London: The Bodley Head, 2013; J Meyer. *Men of war: Masculinity and the First World War in Britain*. Hampshire: Palgrave Macmillan, 2008; L von Bergen. *Before my helpless sight: Suffering, dying and military medicine on the Western Front 1914–1918*. Burlington: Ashgate, 2009; P Cornish & NJ Saunders (eds). *Bodies in conflict: Corporeality, materiality and transformation*. London: Routledge, 2014; S Biernoff. *Portraits of violence: War and the aesthetics of disfigurement*. Corporealities: Discourses of Disability. Ann Arbor, MI: University of Michigan Press, 2017.
- ⁵⁸¹ N Cooper & M Hurcombe. “The body at war: Wounds, wounding and the wounded”. *Journal of War and Culture Studies* 1/2. 2008. 119–214.
- ⁵⁸² SH Walker. “‘A different existence altogether’: Constructing, conditioning and controlling the British soldier’s body in the First World War”. Phd dissertation. University of Strathclyde, 2018.
- ⁵⁸³ SH Walker. *Physical control, transformation and damage in the First World War: War bodies*. London: Bloomsbury Academic, 2021, 178.
- ⁵⁸⁴ *Ibid.*, p. 2.
- ⁵⁸⁵ *Ibid.*, pp. 142–143.
- ⁵⁸⁶ *Ibid.*, p. 78.
- ⁵⁸⁷ *Ibid.*, p. 196.
- ⁵⁸⁸ *Ibid.*, pp. 77, 114, 161.
- ⁵⁸⁹ *Ibid.*, p. 17.
- ⁵⁹⁰ *Ibid.*, p. 38.
- ⁵⁹¹ *Ibid.*, p. 22.
-

Book Review

Enemies in the Empire: Civilian internment in the British Empire during the First World War

Stefan Manz and Panikos Panayi

Oxford: Oxford University Press

2020. 360 pages

ISBN: 978-0-19-885015-1

DOI: 10.1093/oso/9780198850151.001.0001

The war came to Potsdam, a small, sleepy hamlet in the Eastern Cape, in September 1914. German immigrants had settled the country districts surrounding the port of East London after the Crimean War.⁵⁹² Others had followed, and the towns of Stutterheim and King William's Town, and the hamlets of Berlin, Hamburg, Breidbach, Frankfort, Kwelega and Potsdam sprang up to support the growing farming community. The small German school at Potsdam, with 44 registered pupils, hosted a concert at the Lutheran Church on 2 September 1914. Arranged by the schoolmaster – the 35-year-old, Mr GAF Johl – the concert unleashed a storm of protest that the community's elders might have anticipated. September 2, was Sedan Day. The service had been conducted in German, German songs were sung, and Schoolmaster Johl gave a presentation in German. Johl and his assistant teacher, the 20-year-old Miss Winkelmann, were South African-born but of German descent. Outraged, local, 'English' farmers reported that they had shown 'magic lantern' slides depicting scenes from the Franco-Prussian War, including images commemorating the German victory at Sedan. The local South African Police investigated; the pictures were of towns and scenery in Germany and of the old vessels that had brought the German immigrants to South Africa. However, there were no battle scenes, and the pictures had no bearing on the Battle of Sedan. Moreover, the police found that the concert – arranged some time before the outbreak of hostilities in Europe – had been held to raise funds for the local church.⁵⁹³

With the 'English' farmers of the district inflamed, the government reacted immediately. The newly appointed Chief Intelligence Officer of the Union, Lt Col Hon. Hugh Wyndham, tracked the German residents of the East London District; if they were 'enemy subjects' they fell under the province of the Commissioner for Enemy Subjects; if British subjects of German origin, then under the Provost Marshal.⁵⁹⁴ An intelligence officer drew up a list of the prominent, German businessmen. Carl Malcomess headed the list; he had been born in East London, of German parents, but was said to express openly strongly anti-British views. His motor car allegedly made frequent trips to German farms and villages along the Komgha Road. Employment or business connected most of the other men on the list to Malcomess. Some were born in South Africa. Some had served in the German army during the Franco-Prussian War, but were now naturalised. Others were 'unnaturalised enemy subjects', although still at large. People disavowed their neighbours. Franz Muller –

a music agent, who was naturalised – was said to sit down deliberately during the playing of ‘God save the King’, something that had again “happened recently”. AO Hoppe, the manager of the Beach Hotel and also a naturalised British subject, was said to be “very anti-British”. Hoppe had served in a German cavalry regiment and “always arranged public German functions at East London, and flew the German flag over his hotel until the outbreak of war.”⁵⁹⁵ This information was passed by a local informant, who stressed that:

A large section of the East London public strongly resent these Germans being allowed to be in their midst and if action can be taken to have, at any rate the unnaturalised ones, interned, it would be appreciated by the British section of the community.⁵⁹⁶

The local divisions were still perceptible in the East London of my youth, and several of the names on the ‘arrest list’ were well known in the city. Several of their children and grandchildren had become city councillors. Herman Malcomess was a multi-term mayor and a parliamentary candidate during the 1980s.

South Africa interned migrants and the children of migrants from Germany and Austria–Hungary during the War. Their lot was largely in the hands of one man: Lieutenant Colonel HW Hamilton-Fowle, the Provost Marshal of the Union, who later became the Commissioner for Enemy Subjects, the Custodian of Enemy Trading, and the controller of the Pietermaritzburg internment camp – the ‘home’ of internees for four years. Some four thousand German males were living in South Africa in 1914. Approximately 2 500 of them were interned. Another 500 were considered too old or too infirm to incarcerate. Then there were the 500, many missionaries among them, whom Hercules Pakenham – the MI5 officer sent to South Africa in 1917 – felt ought to have been interned. That left another 500 whom the authorities considered ‘harmless’. However, Fowle – not satisfied and although facing vehement opposition in and out of Parliament from the Dutch community, with whom the Germans were largely intermarried – continued with the internments. As Pakenham noted in 1917, Fowle quietly “gets a few at intervals”.

There had of course been a considerable German diaspora in the British Empire in the decades and centuries before the outbreak of war in August 1914 – to Britain, particularly, but also in the settlement dominions. They shared their common German heritage, sometimes leading to cultural appropriation by their neighbours, and communicated Pan-German ideas through publication, at German-medium churches and schools, and, as Schoolmaster Johl had probably done, through concerts and performances. Clearly, as Manz and Panayi argue, the mobilisation of religion and education “had turned ethnic contact zones into colonial friction zones”.⁵⁹⁷ The outbreak of the First World War brought matters to a head.

Despite – or perhaps because of – the divisions it caused, the historiography of internment in South Africa during the two world wars is scant. The same pertained for many other countries and, where internment histories were written, the national unit of analysis dominated. As the authors of this book argue, there was “no comprehensive and little interpretive treatment”.⁵⁹⁸ In large part, the South African literature, focusing on the anti-

German feeling on the wider home front, mentions the matter of internment in passing only. There are also appreciably few journal articles.⁵⁹⁹ The reasons for this are multi-faceted: post-war aversion for the wartime divisions the internments had caused; the global nature of internment, which by late 1914 spanned much of the world; and the daunting task facing the historian in terms of the varied and scattered nature of the historical source materials. Writing a monograph, covering the internment experience during the First World War across its global context, would be no ordinary feat, and this makes *Enemies in the empire* such a seminal study.

As the authors note, Britain in particular – and her empire by extension – was the “epicentre of global mass internment and deportation operations” during the First World War.⁶⁰⁰ Men, and sometimes women and children, of nationalities classified as ‘enemy alien’ were registered and suffered a variety of constraints placed on their basic freedoms: on personal movement, expression of opinion, ownership of property, conduct of business. Some of them, suffering the most severe form of ‘alien’ control, were interned across the British Empire for the duration of the war. The number may have reached 50 000: mostly men but including a small proportion of women. Internment policy, formulated largely in London, was disseminated across the Empire: finding interpretation and application from Delhi to Durban. *Enemies in the empire*, the first study to examine internment operations across the British Empire during the First World War from an imperial viewpoint, “argues that the British Empire played a key role in developing civilian internment as a central element of warfare and national security on a global scale”.⁶⁰¹ Of course, civilian internment would find application more extensive and more vigorous in the next war, but Britain firmly laid the foundations during the 1914–1918 conflict.

This handsome volume has its origins in two doctoral theses – focusing on the German communities in Britain during the First World War – submitted by Manz and Panayi between 1985 and 2003. The authors realised that local and national perspectives were too narrow. Internment had to be examined in imperial or global terms. This was how officialdom tasked with internment had thought – something confirmed by the published narratives and the official documentation held in Britain, Germany and elsewhere. This mapped an archival journey that took the authors to repositories in London, Pretoria, New Delhi and elsewhere. In fact, while *Enemies in the empire* may have had its genesis in their doctoral studies, its weight rests on vast amounts of scholarly work done since then. Few stones were left unturned. The result is a book that is magisterial in its approach and scope, and a fine example of the recent shift to study the First World War in global terms.

In this way, Manz and Panayi have added considerably to the ‘imperial turn’ in world war studies with a focus far removed from the clash of arms and the killing of soldiers on the Western Front. Two things pointed them in this direction: the personal narratives published during and after the war, and their growing realisation that the main archival material, in Germany and the Britain, worked at an imperial level. The German officials, when writing about England, meant the British Empire. The documentation in these countries – be it Britain or Germany, or indeed the other European belligerents –

was at an imperial and policy level. For the lower-level material, they had to travel much more widely. As is so often the case in a global study, the research materials lay scattered across the world: from the official records of the National Archives of the United Kingdom and the India Office Records in London, to the national archives of the dominions and colonies of the then British Empire, and the demi-official and private correspondence of key players.

However, there is another exciting development. Individual histories of internment can be lost in a global, holistic approach. The authors argue that case histories of individual men and women prise open oft-hidden themes. For this reason, the book is written at three levels – the strategic, the operational, and the individual – and is presented in three parts. Part I gives the historical and global perspective of internment as a phenomenon; Part II, the application of internment in Britain and two extremities of empire – South Africa and India; and Part III examines life in the Knockaloe, Fort Napier, and Ahmednagar internment camps. In this way, the chapters cascade down, from the policy level to internment on the ground, and the authors connect larger processes to individual case studies. While this division makes absolute sense in the context of this study, there will be historians in Australia and Canada and elsewhere who will question this selection.

Ian van der Waag
Stellenbosch University

ENDNOTES

- ⁵⁹² ELG Schnell. *For men must work: An account of German immigration to the Cape with special reference to the German military settlers of 1857 and the German immigrants of 1858*. Grahamstown: private publication, 1954.
- ⁵⁹³ Sworn statement of W Eldridge, 7 September 1914; Sub-Inspector GH White to District Commandant East London, 10 September 1914; Inspector TC Whelehan, District Commandant No. 13 District SAP, to District Staff Officer No. 3 Military District East London, 10 September 1914; Cpl AJ Cork, SAP, to Inspector TC Whelehan, District Commandant No. 13 District SAP, 12 September 1914, PMK, box 101, file PM 1994 Enemy Subjects East London, Department of Defence (DOD) Archives, Pretoria.
- ⁵⁹⁴ Commissioner for Enemy Subjects to Chief Intelligence Officer, Pretoria, 30 December 1914, PMK, box 101, file PM 1994 Enemy Subjects East London, DOD Archives.
- ⁵⁹⁵ Intelligence Officer, Railway Unit, to Lt Col Hugh Wyndham, 24 December 1914, PMK, box 101, file PM 1994 Enemy Subjects East London, DOD Archives.
- ⁵⁹⁶ *Ibid.*
- ⁵⁹⁷ S Manz & P Panayi. *Enemies in the Empire: Civilian internment in the British Empire during the First World War*. Oxford: Oxford University Press, 2020, pp. 65–66.
- ⁵⁹⁸ *Ibid.*, p. 185.
- ⁵⁹⁹ G Duminy & D Reusch. “Handicrafts, philanthropy and self-help: The Fort Napier Kamp-Industrie during World War 1”. *Natal Museum Journal of Humanities* 5. 1993, pp. 207–224; P Thompson. “The Natal home front in the Great War (1914–1918)”. *Historia* 56/1. 2011, pp. 101–137; P Thompson. “‘Wipe out the Vons!’ The Pietermaritzburg Citizens Vigilance Committee and the sinking of the *Lusitania*, May 1915”. *New Contree* 74. 2015, pp. 90–111; S Manz & T Dederling. “‘Enemy aliens’ in wartime: Civilian internment in South Africa during World War 1”. *South African Historical Journal* 68. 2016; D du Bruyn & A Wessels. “13 May 1915: Bloemfontein’s night of broken glass”. *New Contree* 76. 2016, pp. 148–170.
- ⁶⁰⁰ Manz & Panayi *op. cit.*, p. 3.
- ⁶⁰¹ *Ibid.*, p. 3.
-

SCIENTIA MILITARIA

South African Journal of Military Studies



Book Review

On contested shores: The evolving role of amphibious operations in the history of warfare

Timothy Heck and Brett Friedman

Quantico, Virginia: Marine Corps University Press

2020, 452 pages

ISBN 978-1-7320031-4-9 (Paperback)

The study of amphibious operations has seen a definite resurgence during recent years. The recent wars in Iraq and Afghanistan forced militaries to shift their focus from traditional operations to those of counterinsurgency and counterterrorism. This shift in focus naturally affected the doctrine, organisation and employment of amphibious forces of Western militaries, such as the US Marine Corps and the British Royal Marines – who were both deployed in semi-conventional and counterinsurgency roles in Iraq and Afghanistan for extensive periods. However, after the end of these wars, both the US Marine Corps and the British Royal Marines had to go back to the proverbial drawing board and reassess their traditional roles as amphibious forces. Of interest, is the fact that in 2019, the Commandant of the US Marine Corps, General David H Berger, provided planning guidance in which he argued that the US Marines had to return to the sea, increase their naval integration, and expand their ability to fight not just from the sea but also in terms of sea control from the shore.⁶⁰² With this planning guidance, there was bound to be a drastic shift in the doctrine, organisation and employment of the US Marine Corps in general. While these developments were notable, they did not occur in a vacuum. Several militaries across the globe are currently reapplying their minds to amphibious operations and implementing drastic measures to remedy any potential shortfalls that exist in terms of doctrine, organisation and training. These changes are necessitated owing to the increasing likelihood of future amphibious operations due to an unprecedented population growth evidenced in coastal regions across the globe, the concomitant effects of climate change on existing waterways, rives and oceans, and growing political disputes in regions such as the South China Sea and the Arctic.

During 2020, the Marine Corps University Press published an edited volume by Timothy Heck and Brett Friedman titled *On contested shores: The evolving role of amphibious operations in the history of warfare*. The book comprises 23 key chapters that trace the historical evolution of amphibious operations from the sixteenth century through to the present, and even looks toward the future of amphibious warfare. In doing so, it investigates several lesser-known cases of amphibious operations throughout history, and offers nuanced views on some of the famous campaigns, such as Gallipoli, Tarawa and Normandy. The book also reflects on the historical development of amphibious warfare doctrine.

In general, the chapters are of a very high standard – with only one or two chapters that I felt were somewhat weaker in terms of their discussion, and the link to amphibious operations somewhat tedious. However, this is expected in such a big undertaking as *On contested shores*. To my mind, the chapters by Samuel de Kortz, James McIntyre, Edward Hagerty, Angus Murray, Bruce Gudmundsson, Jeffrey Schultz, Serrate Güvenç and Mesut Uyar, Keith Dickson, Ellen A Ahlness, Brett Friedman and Walker Mills deserve special recognition. From a personal point of view, I found the evolving discussion on the genesis of advanced base operations doctrine particularly interesting, as well as the case studies that deal with various lesser-known amphibious operations throughout history. The book includes an extensive list of selected further readings, as well as a handy index. My only criticism would be that the quality of the maps varies considerably throughout the different chapters. This is perhaps something that might have been addressed somewhat better.

From a South African point of view, *On contested shores* provides much food for thought. Due to insufficient naval and marine capabilities during the period of the world wars, the South African experience of amphibious operations was extremely limited. However, there are two notable exceptions, which have been explored only partly despite the wealth of primary archival material on these events preserved in South Africa and abroad. During the First World War, Union Defence Force troops were involved in limited amphibious operations during the South African invasion of German South-West Africa (modern Namibia) – particularly at Port Nolloth and Lüderitzbucht in 1914.⁶⁰³ Several years later, South African troops once more took part in amphibious operations during the final phase of the Madagascar Campaign during the Second World War. Both these instances of amphibious operations by South African troops were anomalies, with no distinct marine capability or doctrine within the defence force at the time.⁶⁰⁴ In fact, regular infantrymen from the army, with limited, if any, training and experience in amphibious operations, were used in an amphibious role during these deployments. On both occasions, the Royal Navy provided the prerequisite naval lift capability and required support for these operations. Despite these actualities, these case studies provide an interesting lens through which to investigate the South African experience of amphibious operations.

After the end of the Second World War, the South African Corps of Marines was established in 1951, with the initial sole purpose of extended harbour protection. However, by 1955, the unit was summarily closed down. During the so-called ‘Border War’, the marine infantry arm was resuscitated in 1979 with the establishment of 1 Marine Brigade of the South African Navy – envisioned to deploy as a fully-fledged amphibious brigade on operations in southern Angola and Mozambique. However, budget cuts, a greater emphasis on land-based counterinsurgency operations, and an ever-changing geostrategic landscape by the late 1980s, meant that any dreams of extensive amphibious operations by South African marines had to be discarded altogether. As such, the marine capability was once more disbanded in 1991. The history of the South African Corps of Marines is yet to be recorded, particularly in terms of its organisation, doctrine, training and deployments – this refers to a further gap in the historiography.

Arne Söderlund and Douw Steyn's *Iron fist from the sea: Top secret seaborne reconnaissance operations (1978–1988)*,⁶⁰⁵ is in all likelihood the most detailed account dealing with the evolving role of amphibious operations from a South African perspective – albeit from a special forces point of view. The focus of this popular book is largely confined to the Border War era and the deployment of South African seaborne special forces in both multidomain and clandestine operations. In this regard, special forces operators, supported by elements from the South African Navy, succeeded in projecting force along the Atlantic and Indian coastlines of Southern Africa. Söderlund and Steyn's book tracks the doctrinal evolution of the employment of special forces in amphibious operations from a historical point of view, and in doing so addresses a gap in the historiography.

The establishment of the Maritime Reaction Squadron in 2005 reignited the marine infantry arm, and offered the South African Navy a specialised marine-like unit comprising a combat-ready amphibious, diving and small boat capability. The establishment of the Maritime Reaction Squadron occurred against the backdrop of a great need for the South African Navy to contribute to various peacekeeping roles within the African continent and to assist in boarding operations at sea, humanitarian operations and disaster relief. South Africa's renewed focus on an amphibious operations capability, despite its evident limitations, continues to receive little to no attention from historians, theoreticians and practitioners alike.⁶⁰⁶

The evident gaps in the South African historiography related to amphibious operations and doctrinal development deserves to be investigated in detail. Such an opportunity has presented itself with the recent announcement of a follow-up volume of *On contested shores* that is still being compiled. In the second volume, Heck and Friedman endeavour to explore the doctrine, organisation, training, materiel (weapons and equipment), leadership development (education), personnel and facilities needed to theorise, plan for, equip, lead and conduct amphibious operations further. Of particular importance is the fact that Heck and Friedman hope to include a variety of viewpoints, experiences and interpretations of amphibious operations in the second volume – especially from non-American authors. A definite opportunity therefore exists for academics, theorists and practitioners to explore the concept of amphibious operations from a distinct South African perspective.

All in all, *On contested shores* is a riveting read from start to finish and a welcome addition to the historiography on amphibious operations in general. By giving historians, theorists and practitioners the opportunity to consider the coming changes in amphibious operations from a historical point of view, it makes a distinct and valuable contribution to the historiography. *On contested shores* comes highly recommended, and can be considered for inclusion in university course material, particularly modules that deal with military history and strategic studies.

Evert Kleynhans
Stellenbosch University

ENDNOTES

- ⁶⁰² DH Berger. *Commandant's planning guidance: 38th Commandant of the Marine Corps*. Washington, DC: Headquarters Marine Corps, 2019.
- ⁶⁰³ See for instance DB Katz. "Sandfontein: An operational re-examination of the battle, contextualised within General J.C. Smuts' first phase of the German South West African Campaign 1914". *Journal of African Military History* (published online ahead of print 2021). doi: [10.1163/24680966-bja10007](https://doi.org/10.1163/24680966-bja10007)
- ⁶⁰⁴ See for instance DFS Fourie. "Operation Rose: The only amphibious landing by South African forces at war, Madagascar, 1942". *Military History Journal* 2/1. 1971. <<http://samilitaryhistory.org/vol021ce.html> on 23 September 2021> Accessed on 2 November 2021; EP Kleynhans. "A protracted picnic? The wartime experience of Arthur Bintliff in Madagascar, 1942". In IJ van der Waag (ed), *Sights, sounds, memories: South African soldier experiences of the Second World War*. Stellenbosch: SunMedia, 2020, 94–116.
- ⁶⁰⁵ A Söderlund & D Steyn. *Iron fist from the sea: Top secret seaborne recce operations (1978–1988)*. Cape Town: Jonathan Ball, 2018.
- ⁶⁰⁶ See for instance C Manganyi. "Resurrection of the marine capability in the South African Navy: The Maritime Reaction Squadron". *Scientia Militaria* 40/3. 2012. 429–471.
-

SCIENTIA MILITARIA

South African Journal of Military Studies

NOTES TO CONTRIBUTORS

Scientia Militaria is published bi-annually by the Faculty of Military Science (Military Academy), Stellenbosch University. It is an accredited, scholarly journal, which investigates a broad spectrum of matters and issues relating to military affairs, and publishes both discipline-based and inter-disciplinary research. In order to ensure that articles are of a high quality, all submissions are refereed (peer-reviewed) by at least two experts in the field. Refereeing is done with complete anonymity and confidentiality. Articles published in *Scientia Militaria* qualify for a subsidy from the South African Department of Education.

- To speed up the review process, it is recommended that authors submit an electronic copy to the editors. It is also possible to submit manuscripts in printed form.
- The length of papers should be between 8 000–10 000 words, including footnotes, schedules and reference lists.
- A written guarantee that the manuscript has not been submitted to other publications is required.
- All papers must be language-edited by a language practitioner.
- Please see the *General Guidelines for Contributors* for the preferred reference technique. Research containing no references will not be considered.
- Where maps, figures and graphs are presented, they must be professionally produced and ready for photographic reproduction.
- The final decision concerning the publication of papers lies with a subcommittee of the editorial committee. No correspondence will be carried on in this respect.
- Copyright on all published material in *Scientia Militaria* rests with the Faculty of Military Science of Stellenbosch University.
- Authors submitting papers, which originally formed part of dissertations or theses, should consult with their study leaders/promoters prior to submission.
- Opinions expressed in the Journal, or conclusions made, are those of the author(s) alone and do not imply endorsement on the part of the editors.
- The assessment of submissions takes time, and authors are requested not to make enquiries before a period of at least four months has elapsed.

Editorial addresses

Scientia Militaria
Private Bag X2
Saldanha 7395
South Africa

Dr E.P. Kleynhans
kleynhans@sun.ac.za
Tel: +27-22-702-3102
Fax: +27-22-702-3060



**SCIENTIA
MILITARIA**
South African Journal of Military Studies