

Comments and closing

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Good afternoon, Everyone.

Thank you for the opportunity to recap and make a few closing remarks after what these most insightful presentations. A sincere thank you to the organizer and speakers.

Dr Morné Mostert of Stellenbosch University focused on the notion of strategic foresight and options for alternative futures; saying the future is not what it used to be. The current future is not very attractive, and we need to learn about learning about the future. Looking at the future, changes the future and presenting entrapment of the future created by your competitor. Hence, new approaches to the future are essential to envisage and realise multiple futures. However, decisions about the future are always made in the present. So, how does one make a meaningful decision? This depends on the objective you aim to achieve and the future you want (i.e. a normative future). Decisions based on the past are in order to a certain degree but must be mindful of alternative future variables and thus conduct exploratory future analysis; a truly daunting undertaking but crucial for military futures and global security due to, amongst other factors, their histories, values, cultures, organization, budgets and mental models.

Mental models shape decisions. It is not necessarily the truth, but it determines perception, action, and an understanding of the present and futures; resulting in considerable risk and little room to move. Current military designs and decision-making are mostly counterintuitive to the future and requires a more considered and imaginative and curious intellectual approach to and in terms of the future. Ideally, a design *with* the future should be considered and implemented.

Quoting Winston Churchill, Prof Mostert concluded with a reference to the importance of the mind, and ideas; major determinants of the future.

Prof Ian van der Waag, also of Stellenbosch University, focused on change and innovation in a history in the South African context that have influenced the South African military's lethality, deployability, versatility and agility. Directing his presentation to militaries' failure to change and innovation, Prof van der Waag provided the example of France during WWII. He also alluded to the strategic effect of scientific innovations such as radar and its impact on war.

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An insightful historical outline of changes in and the transformation of the South African military and its operational deployments followed.

Returning to thinking about change in militaries, Prof van der Waag alluded to factors affecting military responsiveness: awareness of new threats, the length of conflicts and military action. Military culture is an essential aspect of change and innovation as this is the factor that determines it, and *vice versa*.

Military knowledge production is another aspect raised by Prof van der Waag. How and what do militaries learn from their past deployments?

What drives military change and innovation? First, military culture and strategic doctrine. Second, technological change. Constraints to change and innovation included external factors such as the peace and anti-military movement after WWII, budgetary allocations and loss of innovators during peace time to industry.

In conclusion, Prof van der Waag referred to the utility to look at the past and indeed learn from it to face an uncertain future. One lesson is the importance of innovation. Second, the generation of new ideas and new thinking. A third lesson is sufficient budgetary allocations enabling innovation and, finally, how military leadership should initiate and drive innovation.

The third speaker, Prof Francois Vreÿ (Stellenbosch University), set the scene for a military's future orientated rationale and response; focusing on the significance of politics, political leaders and military decision-makers to face future defence dilemmas. Military failure and defeat often coincide with political collapse.

Prof Vreÿ cited Russia's experience in Chechnya as an example of military miscalculation after the end of the Cold War; resulting in Russia's reorientation and implementation of its future military preparedness and operation that paved the way for its incursions into the Crimea and Syria.

Prof Vreÿ explained that traditional threats are seemingly becoming more deprioritized but remains an imperative. Increased complex environments challenge military futures and neglect occurs at a military's peril. An awareness of alternative military futures is obligatory; as is innovative thinking such as considering collaboration with so-called enemies.

Mediating influence in military futures requires, amongst others, sufficient budgetary allocation, situational awareness, and disruptive risk scenarios. Technological change is not the only variable of military futures. New ideas pertaining to war and success in war, and their meaning are too. Emerging threats should be identified to create a futures pathway.

In conclusion, Prof Vreÿ reiterated the importance of public trust in the military to create credible futures. Military knowledge production scientists should be nurtured and utilized alongside decision making to prevent destructive military futures.

Dr Moses Khanyile (Stellenbosch University) introduced the South African defence industry and its complex relationship with government. Commencing with an overview of the South African defence industry, Dr Khanyile outlined its structure, suppliers, service providers, players, stakeholders and consumers.

Suppliers are dependent on the demands of domestic and international customers. Suppliers are also dependent on the government's regulatory framework governing defence industry exports. Industry-government interfacing typically occurs via R & D, suppliers, and the Defence Industry Manufacturing Council, amongst others. Budgetary cuts have severely affected the operations of the SANDF and hence also the South African defence industry. This disconnect between government and the industry is intractable and requires immediate remedial attention. Moreover, state-owned defence industrial actors such as Denel and Armscor are in a poor financial state, debt-ridden and poorly governed; resulting, amongst others, South Africa defence technology expertise and market leadership shrinking compared to its international competitors. This adds to the financial and scientific unsustainability of the South African defence industry and the country's military increased operational and technical backwardness and unpreparedness.

Dr Khanyile ended with several provocative questions about the future of the South African defence industry as an uncertain future lies ahead of it.

Please allow me to close with a few remarks.

The global pandemic and the truly amazing ability of the Covid-19 virus to mutate are just two examples of the challenges associated with rapid change and the new superlative super *Über* complexity.² Deep uncertainty, and incremental or total disruption have taken on new dimensions and meaning with major implications for the soldier, the state, the battle arena, civilian populations, the environment and the military industrial complex. In short, the uncertainty of the future may be the only certainty that we face.

The idea of a Fourth Military Future (Military 4.0) akin to the Fourth Industrial Revolution (4IR) is already an outdated concept as some states, as evident in their publicly available national security strategies, are already considering and adapting to the Fifth and even Sixth Military Future (Military 5.0 and 6.0) as the post 4IR world unfolds. Even this notion is already aging.

Future military engagements and battles will occur across a multiplicity of dimensions, most notably, for example, the physical environment, space, underground, cyberspace, the meta-sphere, biological, sonic, and in the realm of artificial intelligence.

Military futures - Yes, plural: Futures – are multi-dimensional and will occur across more than the conventional Four Dimensions (4D): width, depth, height, time. Besides these, at least eight more dimensions are increasingly recognised: consciousness (human mind), energy, virtuality, immersion, simulation, effect, affect, so-called "spacetime" and infinity. To this, I add a *new* dimension, *i.e.* a post-future dimension.

Thus, we have effectively reached 14D: the 14^h dimension. Military Futures 14.0 is thus already here.

Multi-dimensionality involves mega-complexity and deeper uncertainty requiring more material and immaterial resources.

² <https://www.bbc.com/news/blogs-magazine-monitor-33920931>

The most unpredictable but the most valuable resource remains the human mind; an aspect that is increasingly drawing attention as evident in the recent Stockholm International Security Conference and conference of The Hague Programme on Cyber Norms.³

The soldier, the theatre and the enemy are adapting and changing; and will even more.⁴

It sounds like esoteric abracadabra and mumble jumble or science fiction, but certain facts remain:

Fact: Globalisation has not eroded state sovereignty.

Fact: Globalisation has entrenched state sovereignty and state's ontological insecurity even more as, for example, state-led cyberwarfare shows.

Fact: Territorial state sovereignty has been enhanced by state awareness and response to the 14 dimensions (14D) that I have mentioned.

Fact: There will be no more far-away wars. All wars will become local wars due to their global disruption.

Fact: Our thinking of the future and even the dimension of a *post-future* must change.

But.

There is always a but, especially on the battlefield.

The more things change, the more they stay the same.

Apocalyptic and Doomsday military futures and scenarios remind us that primitive warfare in the real sense of the word should not be ignored. Basic survival depends on water, clean air, food and shelter.

Abraham Maslow 101 must meet 14D military future planning.

Traditional and conventional militaries (state and non-state) and their doctrines are adapting in innovative ways as an M23 soldier with a cell phone in a far-away jungle and a teen behind a screen present new battle frontiers.

High tech militaries should not forget about the impact of low tech and no tech.

Thus, asymmetric warfare and its mutations should also not be ignored.

So, what is the future of influencing military futures?

Deep uncertainty, rapid and incremental disruption and threats will, like the Corona virus, continue to mutate. The military, in my view, should always err on the side of Doomsday and Apocalyptic Futures.

³ See <https://www.sipri.org/events/2021/SSC21-conference-programme> and <https://www.thehaguecybernorns.nl/>

⁴ <https://www.iai.it/en/pubblicazioni/next-generation-soldier-executive-summary>

Worst Case Scenario 14.0 should drive planning, preparing, deployment, operations, withdrawal, victory and losing a war.

A Futures Arms of Service or Futures Command could amplify these aspects.⁵

Discipline, precision, information, and automation, capacity, posture, agility and combat readiness are paramount and requires astute military leadership and decision-making; aspects that remain critical.⁶

Old school.

But is has prepared militaries and prevented and won many a war.

Military futures typically involve and engage an unknown enemy. They may be shadows of state pathology or ideas whose time has come.

We must always remember that the future is always *already* present.

Finally, South Africa must wake up to the fact that the present deteriorated state of the South African military is a national security threat and will remain so in future if left unattended.

In the paraphrased words of American statesman Benjamin Franklin, "Failing to prepare, is preparing to fail".⁷

South Africa is currently preparing to fail dismally in future.

Thank you very much for your attention.

⁵ <https://www.army.mil/futures>

⁶ https://www.rand.org/pubs/research_reports/RR2849z1.html

⁷ <https://www.forbes.com/quotes/1107/>