Parsing future security challenges: ISR as an important system of systems-based agent of & for change

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Abstract

This paper examines how future security challenges can be best parsed or examined, namely done most notably here through the lens of the rapidly growing and increasingly important domain of Intelligence, Surveillance and Reconnaissance (ISR).

Including further-ranging target acquisition and command, control, communications and computers (C4), as well as cyber (C5), considerations - extending ISR into ISTAR and C4ISR/C5ISR enterprises - this paper further evaluates how at its broadest ISR performs the ever-significant role of a federation/system of systems agent of and for change in defence, security and military realms, with its impact even extending to relating to contemporary world politics more widely. These are endeavours expressed both directly to more indirectly on and from powerful bases, with implications for both hard and soft power.

Demonstrating the centrality of ISR when considering future security challenges, as the US Joint Chiefs of Staff's Intelligence, Surveillance and Reconnaissance Joint Forces 2020 White Paper *of September 2014 noted: 'For our current and future forces, [ISR] plays an even greater role, not only in how we maintain situational awareness but in*

how we conduct operations and employ our forces against the adversary.' While argued elsewhere, with suitable caveats in place: 'If the performance of forces is dramatically enhanced by such systems [ISR and other key functions], it follows that degrading them can provide important military advantages…' US Army General Martin Dempsey, Chairman of the Joint Chiefs of Staff, has ultimately declared that, at least in America, and with simultaneous relevance to further afield multi-national and allied realms, such as to the North Atlantic Treaty Organisation (NATO): '[W]e must share a common vision and sacrifice proprietary systems for a more powerful collective capability… Doing so will … ensure our ISR capabilities respond to the challenges of 2020 and beyond.'

Starting with an overview consisting of an answer to the question of 'What is ISR?', this paper continues with a examination of 'Federation/System of Systems (SoS) and ISR', followed by a review of 'ISR Challenges', some insights into 'ISR Future Directions', and finishing with some overall 'Conclusions'. The paper underscores that unsurprisingly 'agility' and 'interoperability' remain strong watchwords, sustained while going forward into rapidly approaching and diversifying, disrupted futures.

In its conclusions, this paper observes that the domain of ISR, together with all of its ever expanding and extended dimensions, remains firmly an agent of and for change (as introduced above), and not only for the United States. Particularly, this is as there are greater movements manifested both structurally and culturally away from merely TPED (tasking, processing, exploitation, and dissemination) activities to more of 'a high-tech intelligence enterprise' enacted at computer-speeds in realtime.

The implications of this shift to more enterprise thinking, closely involving IT-enterprise and areas such as business process management trends, continue to be experienced and encountered by several different stakeholders across many different operational- to battlespaces, ranging from war to peace. These implications require their better understanding, including that understanding being further and constantly advanced both in theory and more practically in the Military Sciences.

Author biography:

Adam D.M. Svendsen, PhD (Warwick, UK) is an intelligence and defence strategist, educator and researcher, and an Associate Consultant at the Copenhagen Institute for Futures Studies (CIFS), Denmark, as well as a co-founder and co-director of the Bridgehead Institute (Research & Consulting).

He has been a Visiting Scholar at the Center for Peace and Security Studies (CPASS), Georgetown University, has held a post-doctoral fellowship based in the Centre for Military Studies (CMS), Department of Political Science, University of Copenhagen, Denmark, and he has worked at Chatham House on the International Security Programme and at IISS, London.

Dividing his time between the UK and Scandinavia, alongside his scholarship he works as a Strategic Intelligence and Risk consultant ('scholar-practitioner'), having trained at European defence and emergency planning colleges, lectured at senior/advanced level at the Royal Danish Defence College (FAK), given guest lectures at the Royal Netherlands Defence Academy, and taught at the University of Nottingham. Over the years, his research and educator work has been pursued across Europe, Scandinavia, North America and Canada.

Together with work cited in testimony to the Foreign Affairs Committee of the UK Parliament (amongst others) and participating in the RUSI Strategic Hub on Organised Crime Research, he has multi-sector award-winning media and communication experience, including authoring several peer-reviewed publications, such as the four books: *Intelligence Cooperation and the War on Terror: Anglo-American Security Relations after 9/11* (London: Routledge/Studies in Intelligence Series, 2010 [Pbk 2012]); *Understanding the Globalization of Intelligence* and *The Professionalization of Intelligence Cooperation: Fashioning Method out of Mayhem*, both (Basingstoke: Palgrave Macmillan, 2012); and *Intelligence Engineering: Operating Beyond the Conventional* (New York: Rowman & Littlefield/Security and Professional Intelligence Education Series - SPIES, 2017). See more via twitter: @intstrategist

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