



INTELLIGENCE AND FATE: THE ROLE OF FATE AS AN AID TO INTELLIGENCE

Date: November 16, 2023

Disclaimer: This briefing note contains the encapsulation of views presented by the speaker and does not exclusively represent the views of the Canadian Association for Security and Intelligence Studies.

KEY EVENTS

On November 16, 2023, Dr. Gitanjali Adlakha-Hutcheon presented *Intelligence and FATE: The Role of FATE as an Aid to Intelligence* at this year's West Coast Security Conference. The key points discussed were the increased presence of emerging and disruptive technologies (EDTs) and their possible implications for the future; the FATE method and its applicability to defence and security issues, as a means to facilitate future preparedness.

NATURE OF DISCUSSION

Dr. Adlakha-Hutcheon provided an overview of EDTs in the technology landscape and outlined the role that the FATE method can play in supporting intelligence toward EDTs as they evolve. FATE is applicable to private and/or public entities seeking to systematically to assess emerging technologies within pre-described future scenarios and their impacts on defence and security. The overlay of FATE upon emerging scientific trends with provides a better understanding of how disruptions occur, how they can be anticipated, and how impacts can be mitigated.

BACKGROUND

Dr. Adlakha-Hutcheon outlined the importance of applying intelligence and foresight to emerging science and technology (S&T) trends through horizon scanning and assessing the impact of emerging technologies, the use of qualitative and quantitative methods—such as meta-studies or weak signal analysis—and anticipating future scenarios. A notable S&T trend was the assessment of emerging and disruptive technologies (EDT) and the potential for them to impact military operations. EDTs described by the North Atlantic Treaty Organization (NATO) comprise a wide range from big data and communication technologies, including artificial intelligence (AI), robotics and autonomous systems, energy, and propulsion, and more. Other technologies such as biotechnology and human enhancement, advanced

manufacturing like 3D/4D printing, and novel materials were categorised as emerging by NATO.

Dr. Adlakha-Hutcheon noted the potential scope of increase in threats brought on by EDTs through the convergence of EDTs. For instance, a combination of emerging technologies like Biotechnology, automation, and man-machine teams in a world that is moving from volatility, uncertainty, complexity, and ambiguity (VUCA) to brittleness, anxiety, nonlinearity, and incomprehensibility (BANI). Dr. Adlakha-Hutcheon noted that these challenges require specific attention to developing countermeasures, namely resilience, empathy, adaptivity, and transparency. The addition of the EDT landscape to VUCA and BANI seemingly accelerates the movement of various forms of warfare, including hybrid, soft, and total war. This notion highlights a need to address the future in a systematic manner that responds to questions on technology or scientific concepts from the perspective of a holistic system.

To work toward these ideals, Dr. Adlakha-Hutcheon identified Futures Assessed alongside socio-Technical Evolutions (FATE) a method, in which essentially, a concurrent assessment of socio-technical systems is conducted within future scenarios, independently described.

The FATE method involves scoping out a problem using four steps:

1. Developing a socio-technical system (STS) from a weak signal or an EDT or a combination of the two
2. Application of a future scenario set in time 10 to 15 years in the future
3. Assessing interactions between the future scenario and STS
4. Assessing the impact on defence and security

FATE is designed to be modular. It uses a minimum of two scenarios. The output of this method yields impact mitigation options for a client in the context of at least two scenarios relative to an STS. Tracking an STS through the lens of technological, environmental, military, policy and legal and economics provides a holistic, systems view of how it may evolve across various scenarios, which in turn facilitates developing more options to mitigate impacts. FATE is thus an intelligent way to improve preparedness.

Using the case study of biotechnology Dr. Adlakha-Hutcheon illustrated the need to study the evolution of technologies within the context of technology, economics, the environment, and demographics. She further identified various metrics used within FATE to examine the impacts, namely time to respond, disruption calculus, and regret. Together, these help to tease out what is most relevant and exert the highest impacts. Despite FATE's relevance to

the study of EDTs and their relevance to defence, security, and intelligence, its application is not suitable to address research questions that do not extend far out into the future, questions that lack complexity, or wherein an answer is required immediately.

Dr. Adlakha-Hutcheon stated that FATE is unique and provides a multidisciplinary examination of transitions of technologies (emerging or potentially disruptive) in the form of an STS, an understanding of complex interactions that enable transitions, and improves our understanding of how disruptions may occur and how to prepare for them.

KEY POINTS OF DISCUSSION

- The FATE method provides an anticipatory answer to examinations of transitioning technologies and operates in the context of defence, security and intelligence.
- FATE is intended to facilitate a better understanding of how disruptions may occur, how to plan for them, and how to minimise regret as one of the measures of impact.
- As science and technology continue to evolve, FATE can be used to fill intelligence gaps on EDTs set within futures for better preparedness.

FURTHER READING

Adlakha-Hutcheon, G. (2022). MAD* Beyond Defence: *Methodology for Assessing Disruptions. *The Journal of Intelligence, Conflict, and Warfare*, 5(2), 154–172. <https://doi.org/10.21810/jicw.v5i2.5046>

Adlakha-Hutcheon, G. (2023). The practice of FATE. In Masys, A. (ed) *Safety and Security, Science and Technology: Perspectives from Practice*. Springer. ISBN 978-3-031-21529-2

Adlakha-Hutcheon, G., Masys, A.J. (2022). Understanding the Landscape of Disruption, Ideation and Innovation for Defence and Security. In: Adlakha-Hutcheon, G., Masys, A. (eds) *Disruption, Ideation and Innovation for Defence and Security: Advanced Sciences and Technologies for Security Applications*. Springer. https://doi.org/10.1007/978-3-031-06636-8_1



This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

© (GITANJALI ADLAKHA-HUTCHEON, 2024)

Published by the Journal of Intelligence, Conflict, and Warfare and Simon Fraser University

Available from: <https://jicw.org/>