



INVISIBLE INSECURITY

Date: May 18, 2023

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KEY EVENTS

On May 18, 2023, Dr. Gitanjali Adlakha-Hutcheon, A/Chief Scientist of Central offices and the Centre for Security Science at the Defence Research and Development Canada (DRDC), presented *Invisible Insecurity*. The presentation was followed by a question-and-answer period with questions from the audience and CASIS Vancouver executives. The key points discussed were the multifocal conceptualization and understanding of security, the current and the not quite so visible disruptors of security, and the ways in which these disruptors can be addressed at the individual and collective levels.

NATURE OF DISCUSSION

Dr. Adlakha-Hutcheon outlined the multiple lenses through which security can be understood, stating that the preservation of security requires decision-making and is a shared responsibility. Conversely, disruptors to security trigger decision-making at both the shared and personal level. Dr. Adlakha-Hutcheon discussed the role of games and gamification as well as operational research (OR) methods as ways in which disruptors can be tracked and addressed, respectively, ideally in advance of their occurrence to facilitate plans and preparations to counter them.

BACKGROUND

Presentation

Dr. Adlakha-Hutcheon began by noting the multi-faceted nature of security, pointing to the physical, economic, and social aspects therein. She stated that synonyms to security often include defence, protection, and safeguarding, and that these are essential for generating a sense of well-being in individuals and societies. She contended that the cultivation and preservation of security requires

decision-making, and that this must occur through geographic, social, ethnic, cultural, financial, generational, and diverse-identity lenses. She stated that, amidst new challenges, the centre of gravity in the security field has shifted from state-on-state to a more societal-individual-based focus—though she noted the Russian invasion of Ukraine as a significant exception. Dr. Adlakha-Hutcheon suggested that society has become accustomed to the preservation of security from the perspective of obvious and visible disruptors, and that there must be increased attention paid to discovering subsurface threats. She thus made the case that “Not quite so visible disruptors of security” was a more appropriate title for her presentation than the original title of *Invisible Insecurity*.

Dr. Adlakha-Hutcheon defined disruption as action that seeks to foment disorder and interrupt normal processes or unity, contending that this behaviour triggers multivariate decision-making. She suggested that to best utilize decision-making to counter disruption, there must be an identification of what actions or events disrupt a sense of security at the individual, community, cultural, social, and geographic level, as each informs the other. She stated that security is a shared and personal responsibility, one that requires time to build.

In order to maintain pace and anticipate disruptors, Dr. Adlakha-Hutcheon suggested that subsurface threats must be sought out and analyzed. She noted that the understanding of subsurface threats—in the cyber world borrowed and built on terminology from Biology—highlighting the usefulness of concepts such as contagion, virus, and the principle of least privilege in understanding the depth and layers of disruptors.

Dr. Adlakha-Hutcheon presented the convergence between big and biological data; AI and machine learning; the Metaverse and multiple-identity potential; and the outsourcing of spontaneity to algorithms as the areas gaining the most momentum as subsurface threats or the not quite so visible disruptors of security. She pointed to an increasing reliance on the internet of things (IOT) for interconnectivity as a significant example of the latter, noting its prominence across all facets of society—namely, infrastructure, energy, transportation, healthcare, and wearable technology—and the multitude of data produced that must then be secured.

In discussing the ways in which disruptors can be tracked and addressed, Dr. Adlakha-Hutcheon proposed gaming and gamification; OR methods; and the incentivizing of personal responsibility. She further added that these present significant opportunities, in that they allow for the presence of diverse perspectives in the search for options. She cited the practicality of a couple OR methods that she was instrumental in creating —Methodology for Assessing

Disruptions (MAD) and Futures Assessed alongside socio-Technical Evolutions (FATE). She expanded on the title of the latter in which the use of the lower case for the term ‘socio’ was deliberate and by design. This was to highlight the importance of the often-overlooked or misunderstood social aspects of analysis, characterized by the lowercase representation in the latter model. She stressed the importance of using games and gamification as well as OR methods as a means of incentivizing personal responsibility to foster safety and security.

Question and Answer

In response to the question of what a feminist AI would look like, Dr. Adlakha-Hutcheon contended that AI should be gender-neutral and therefore incorporate data without bias, instead of operating from predominantly the masculine perspective. She suggested that this is changing; however, it takes time to operationalize these changes. She also stated that the resultant algorithms depend on the dataset used.

Dr. Adlakha-Hutcheon spoke on the use of strategic foresight in countering disruption, noting that often among futurists there is a desire to create future scenarios and stop there. Whilst there is no ‘perfect future primer’; building a secure future is a shared and individual responsibility centred on cooperating, connecting, and collaborating to the betterment of society. She suggested that where futurists can fall short is in the cessation of analysis beyond the building of future scenarios. She asserted that there must be action towards making the next future scenario a beneficial one, otherwise the exercise becomes futile. Dr. Adlakha-Hutcheon highlighted the concept of “build back better” and the use of existing narratives such as those developed by the US Department of National Intelligence (DNI) that she seeks to apply OR methods and sets of games in order to help engender a more secure world.

Dr. Adlakha-Hutcheon presented COVID-19 as a major disruptor globally, noting the massive impact on both physical and cyber security. She pointed to the changes in physical activity as a subsurface physical threat, often—and rightfully—overshadowed by the threat of the virus itself. She also pointed to the increased shift to virtual functionality as bringing a host of cyber threats across society. Lastly, she stated that COVID-19 indicates the importance of looking for weak signals of disruptors and preparations in the context of future scenarios for addressing current and future security disruptors, as there was much to suggest that a pandemic would occur and it did, and that societies globally were ill-prepared to address the challenge.

Dr. Adlakha-Hutcheon proposed that there needs to be increased conversations surrounding multiple contingency plans in the face of ongoing disruptions, citing supply chain struggles as a noteworthy example. She pointed to the mineral/resource supply chain as an emerging less than visible disrupter with goods such as lithium batteries that use these critical minerals considered a forever commodity when they are not. She stated that access, current supply, and investment in alternative sources must be explored to mitigate the impact of potential future disruptions.

KEY POINTS OF DISCUSSION

- Security is multi-definitional and multi-dimensional in nature, as seen through geographic, social, ethnic, cultural, financial, generational, and diverse-identity lenses. The cultivation and preservation of security requires decision-making from and at the individual to the collective levels.
- Disruption is action that seeks to foment disorder, interrupts normal processes or unity, and triggers multivariate decision-making. In order to best utilize decision making to counter disruptions to security, there must be an identification of what actions or events disrupt a sense of security at the individual, community, cultural, social, and geographic level.
- To maintain pace and anticipate disruptors, subsurface threats must be sought out and analyzed. The convergence of big and biological data; AI and machine learning; the Metaverse and the individual taking on multiple-identities; and the outsourcing of spontaneity to algorithms are the areas gaining the most momentum as subsurface threats in the current interconnected physical and virtual worlds.
- Gaming and gamification; OR methods; and the incentivizing of personal responsibility represent significant opportunities in the tracking and addressing of disruptors, respectively, in that they enable obtaining diverse perspectives.



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