Variety Dynamics for taking control of complex Defense and Security contexts

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Variety Dynamics is a new mathematically based approach for taking control of highly complex and hyper-complex Defense and Security situations including in terrorism, asymmetric warfare, information warfare, intelligence, and the cyber-physical realms.

The primary focus of Variety Dynamics is to change the ownerships, dynamics and trajectory of control in highly and hyper complex situations. It is especially well suited to successful decision making in situations for which conventional systems assumptions and causal modelling do not apply or are too difficult or too slow to apply.

Unlike almost all other mathematical or strategic approaches to decision support for Defense and Security it does not require or use information about causal relationships. it addresses strategic decision-making and management of control of complex coercive situations in a different way.

The different approach of Variety Dynamics means its influences are intrinsically covert and due to the 2 Feedback Loop Axiom are typically invisible to other parties.

Variety Dynamics also addresses key problems in control of hyper-complex non-linear multi-feedback loop control systems and provides a theoretical foundation for more computationally efficient approaches to AI modelling.

Our work on Variety Dynamics has been developed and tested over the last 20 years. Aspects of Variety Dynamics have been presented in variety of conferences venues including the recent International Systems Sciences Conference in Johannesburg. A paper on Variety Dynamics is in preparation for the Journal of Information Warfare and a book is under discussion with Routledge.

The presentation will describe the basics of Variety Dynamics and provide a sample of practical examples and outline the over 45 axioms for effective decision making to obtain control of highly complex and hyper-complex situations typical of Defense and Security.