TERRORISM IS NOT RANDOM NOR CHAOTIC

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Abstract:
Amid the multiplications of terrorist attacks in several areas of the Globe, it is important to understand the processes and conditions that lead to such events. Although they might seem random, we must take into account the Aristotle's concept according to which "the whole is greater than the sum of its parts". In complex adaptive systems, a relatively small number of players react to a set of changeable, dynamic, situational factors. Furthermore, they are not repeated in any known pattern and cannot be malleable in a predictive analysis.
Analyzing terrorist networks as complex systems, this paper examines the general framework looking to understand their interlocking elements.

Key words: complex adaptive systems, terrorism, random, dynamic, networks

1.Introduction

The world we live in has to deal with uncertainty, rapid developments and transformations manifested both at the individual level, but especially at the societal/ organizational level. Thus, the security environment is not an exception. The amplification of non-state actors, manifestations of segregation and the rise of religious fanaticism make us witness, ever more, at the division of the world. As outlined by Robert Cooper [1], „today, first we have a pre-modern world characterized by pre-state and post-imperial chaos".

The international environment is a complex adaptive system, in which small changes in initial conditions and subsequent interventions of any size can lead to effects disproportionately high, or „black swans" as Nassim Nicholas Taleb called them [2], which have three major attributes: rarity, extreme impact and retrospective predictability.

A complex adaptive system occurs in nature when the environment is unstable, but not completely chaotic. Stable environments lead to equilibrium systems, which most likely will not adapt to major changes. In chaotic environments, the systems cannot find productive patterns.

Chaos refers to a deterministic phenomenon (not random) characterized by special properties that make the predictability of its appearance difficult. Erratic behavior is one that, although does not occur randomly, appears as a series of random occurrences. Chaotic dynamics are usually, but not always, the prerogative of nonlinear systems, but not all systems generate nonlinear chaotic behavior.

According to researchers Judith E. Inner and David E. Booher [3], „at the edge of chaos - a good analogy with current social transformations - innovative and dramatic changes may occur in work patterns and systems can move to higher levels of performance".

2. Terrorism and Complexity Theory

2.1 The whole is greater than the sum of its parts

Complex systems are often characterized as having extreme sensitivity to initial conditions and emergent behavior which are not easily predictable or completely decisive.

A reductionist approach is often an incomplete description of a phenomenon. This recognition, that the collective behavior of the whole system cannot simply be inferred from understanding the behavior of individual components has led to many new concepts and mathematical tools applied in many scientific and social problems and can be described appropriate only in terms of complexity and complex systems.

Terrorist networks have emerged as a change agent in the strategic system of national states, so that traditional military strategies, based on linearity and the nation state frameworks and determining centers of gravity and decisive points, are not sufficient to address the complex problems we face when it comes to these networks, requiring the importation of new concepts that facilitate understanding of the mechanisms of self-organization and their resilience. Decentralized networks tend to be more resilient and have a greater capacity to recover from external shocks or some parts.

In complex systems, a large number of relatively small actors react to a set of shifting, dynamic situational factors, so they are not necessarily repeated in any known/ established pattern and cannot be malleable in a predictive analysis. These characteristics describe many transnational targets such as terrorists - small groups forming and reforming, seeking vulnerabilities, constantly adapting and interacting in ways that may be new.

As Treverton highlights, terrorism is predominantly a phenomenon of group psychology, where a social system of sympathizers and supporters exerts multiple influences on individual behavior; self-organizing terrorist groups form primarily throught social networks; as such their structure is largely a function of those social ties and descentralized terrorist networks facilitate resiliency in operations, diffusion of idealogy and innovation, and distribution of resources and information.[4].
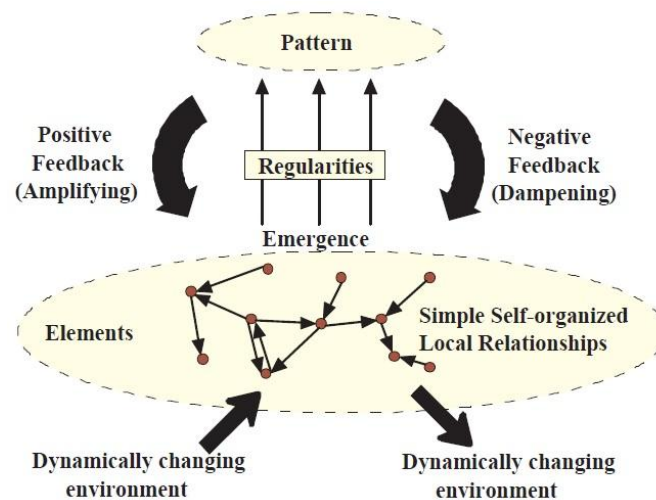

Fig. 1. Complex adaptive system [5]

2.2. Ideology as an attractor

Essential element in defining complexity, the attractor is a certain state in which the system attempts to reach some kind of equilibrium. Translated for military sciences, Micheal Current considers that „given two ethnic groups in the same system, attractors can be defined as observable situations of conflict or cooperation between the two entities." [6]

The concept of attractor is similar to the notion of balance, representing a state or a reliable model of changes (e.g. periodic oscillation) to which a dynamic system evolves over time and returns after being disrupted. Thus, a person or a group can meet a wide range of ideas and teach alternative action scenarios, but over time will be accepted as relevant and credible only those ideas and actions that are consistent with a destructive conflict. Briefly, attractors unite mental and behavioral experiences in a narrow but consistent range of malignancies. [7]

Considering terrorist networks, attractor can be observed in the process of radicalization and conversion to Islam, especially among adherents from traditionally Christian areas in Europe and beyond. Latest terrorist attacks in Europe are the product of European citizens who had traveled through Syria and Yemen.

Each radicalized individual becomes a new agent in search of other entities that share the same value judgments and which are motivated by the need to join other agents, forming interdependent relationships in order to mutual achieve their individual needs. Thus, those complex systems propagates naturally without an absolute leader to orchestrate new networks.

Radical Islamic terrorism in its totality is a complex system with very many links between different agents that extends beyond its affiliates. The main factor that unites them is not a centralized hierarchy leading terrorist operations worldwide (although there is a degree of hierarchy within groups of agents to facilitate organizational activities), but rather a loose affiliation based on their ideology and common political goals. [8]

The system is formed as a result of a joint commitment by radical Islamic theology and the objective of establishing Sharia, rather than as a result of strong central control exercised by a single entity. This does not mean that terrorist groups do not have a management or people they control, but that the destructive command and control is not likely to last very long and that any actions to cause feedback and control system should be focused to a larger audience.

Networks offer terrorist organizations a number of operational and organizational advantages. They help in gathering information, coordinating and executing the tasks by providing a wide range of nodes to perform these functions. Also, the dispersed nature of an organization's network increases the flexibility and responsiveness. [9]

The complexity of the network and using several fronts and names allows agents (terrorists, terrorist groups, sponsors, individuals and non-governmental organizations) to undertake or support radical Islamic terrorism while maintaining their anonymity. [10] In summary, radical Islamic ideology has all the hallmarks of a highly dispersed control mechanism of complex adaptive systems.

3. Conclusion

Complex systems are more than the sum of their parts. A reductionist approach is often an incomplete description of a phenomenon.

Nonlinear theories are not easily mastered and do not offer simple solutions. Moreover, their value lies more in what they cannot tell us rather than what they can. Using complexity theory will not tell us exactly where nor when will break a new conflict or will be a new terrorist attack, but it will tell us to what extent is this possible and how the system will evolve so preventive measures can be taken.

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As the title says, terrorism is not random nor chaotic, but complex. Taking this into account, we must address to the whole system and the way its parts react on countermeasures rather than to engage our efforts in understanding why a terrorist attack took place.

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