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**Title: National information security system in the era of total information warfare from
the perspective of sociocybernetics**

Abstract

In the current era of the information revolution, national information security system plays a fundamental role in a wider national security system. This is mainly because it guarantees stability and development of all strategic sectors of contemporary democratic states.

According to the Author's hypothesis in her doctoral thesis (currently being carried out), this guarantee strongly derives from right decisions of society taken as part of its cognitive and decision-making processes, so called informational processes identified by an outstanding Polish cyberneticist Marian Mazur. Those processes are a key target of the enemy who aims to disrupt them, destruct, or take over, so that they no longer serve the self-interests of society, but of the enemy.

To attack informational processes, the enemy no longer uses traditional informational attacks such as social engineering influencing psyche of individuals, but coordinated informational attacks designed to destroy the mechanisms behind the right informational processes of the society which he attacks. Those mechanisms have been described by Józef Kossecki, a student of Mazur, in his sociocybernetic theory of information. Applying Kossecki's approach, the right informational processes occur when they are in line with a self-control system dominating in society and determined by its criteria of truth and falsity when it analyses and interprets the outside world. In other words, when they are in line with its civilisational orientation. Kossecki listed six systems of society self-control, including cognitive, ideological, ethical, legal, economic, and vital. When attacking a society, the enemy uses information which is contradictory to the system of self-control of the attacked society, and by this means destroys its right informational processes once the society accepts the hostile system of self-control.

The right informational processes should ensure sovereignty of a society. This leads to a question of how they should be designed so that they serve that purpose. The answer would form a basis for an information security system which would effectively protect society from hostile attacks. According to the Author, Mazur's concept of autonomous systems makes a highly diagnostic theoretical model that serves this purpose. Mazur defined an autonomous system as a system: (i) able to control itself, and (ii) able to preserve its ability to control itself. Those abilities require specific structure. First ability requires organs for reception and accumulation of both energy and information, the second – an organ maintaining functional equilibrium of energetical and informational processes (homeostasis). In this light, applying Kossecki's sociocybernetic information theory mentioned above – the functional equilibrium of society can only be maintained if its informational processes rely on the truth/falsity criteria which are typical to this specific society. Adding Mazur's autonomous systems approach – the functional equilibrium of society can only be maintained if the structure of a society mirrors the structure of a Mazurian autonomous system.

One could say that the Mazurian autonomy and Kossecki's truth and falsity criteria when applied to a national information security system make a sine qua non of national sovereignty based on the right informational processes which guarantee the right decision-making of society. The socio-cybernetic approach based on concepts of Mazur and Kossecki provide for an interesting basis to design effective national information security system. The Author has been exploring those concepts in more depth in her doctoral thesis which will hopefully result with some vital answers to the challenge of 21st century information warfare, called by Kossecki the “total information warfare” due to its unprecedented size and scale.

Keywords: national information security system, information warfare, sociocybernetics, sociocybernetic information theory, autonomous system theory.