

REVIEW
of a dissertation for awarding
of the scientific degree "Doctor of Sciences"

Author: Dr. Teodora Kirilova Licheva

Topic: "Transformation of the management cycle in intelligence and counterintelligence through the integration of modern technological solutions"

Professional field: 9.1. "National Security"

Reviewer: Flotilla admiral (Ret.), Prof., Doctor of Military Sciences Boyan
Kirilov Mednikarov

1. General characteristics of the dissertation and assessment of the relevance of the development

The dissertation submitted for review contains 425 pages and consists of an introduction, three chapters, a conclusion, contributions and a bibliography. The main text contains 94 tables and 34 figures. The literature used consists of 514 sources.

The work is devoted to one of the most topical and significant problems in the theory and practice of national security – the transformation of classical management models in intelligence and counterintelligence under the influence of modern technologies. In the era of the Fourth and the incoming Fifth Industrial Revolution, characterized by the exponential development of artificial intelligence, the use of big data, cloud and quantum computing, blockchain and other innovations, security services are facing unprecedented challenges on the one hand, and a new set of

opportunities on the other. The need to rethink the entire management cycle – from information gathering to implementation control – is not just an academic challenge, but an existential question about the effectiveness and adequacy of the security sector.

In this context, **the problem developed in the dissertation is undoubtedly topical and strategically significant.** Dr. Licheva correctly identifies that digital transformation is not just the implementation of individual technological "patches", but requires a comprehensive, systematic and conceptual approach to restructuring management processes.

The assessment of the state of the problem at the time of publication is accurate, thorough and comprehensive. The author demonstrates an impressive knowledge of a huge volume and variety of information, including state-of-the-art scientific publications, strategic documents, reports and specialized analyses from leading world sources in several languages, including Chinese, which in itself is a contributing moment. The review of the authors and theories is critical and purposeful, clearly outlining the existing achievements and identifying the research niche, which the dissertation fills – the lack of a comprehensive study that would link *each* of the new technologies to *each* of the stages of the management cycle in intelligence and counterintelligence.

The methodology of the study was chosen correctly and applied consistently and professionally. The object and the subject of the study are determined correctly. The thesis is *put forward that modern management processes are inevitably related to technological progress and their development is essentially exponential, as is the development of modern technologies.*

The purpose of the study "... to identify trends in the development and improvement of the elements and essence of security management in the transition

from analogue to technological digital control..." has been achieved through correctly selected research tasks.

The author has relied on an integrated methodological framework that skillfully combines general scientific (analysis, synthesis, induction, deduction), specialized (systemic, structural-functional, managerial analysis) and applied approaches (comparative, historical-genetic, scenario and prognostic analysis). This multidisciplinary toolkit is fully adequate to the complex subject of research and allows Dr. Licheva not only to analyze the present, but also to model future states and formulate strategic recommendations.

2. Analytical characteristics of the material and evaluation of contributions

The dissertation is based on **solid, credible and representative empirical and theoretical material**. Impressive is the breadth of sources used, which cover normative and strategic documents at national and supranational level, scientific literature, public reports of security services, technical specifications and analyses from leading technology companies and research centers. Explicitly stating the limitations of research (access mainly to public sources) demonstrates academic maturity and correctness.

The contributions of the dissertation are numerous, clearly formulated and can be systematized in three main directions:

- **Contributions of scientific and theoretical nature (novelty to science):**

- For the first time in the Bulgarian scientific literature, a comprehensive conceptual model has been developed and proposed, which links the stages of industrial revolutions (Industry 4.0, 5.0 and hypothetical 6.0) with relevant security

paradigms (Security 4.0, 5.0, 6.0). This new theoretical framework serves as the basis for the subsequent analysis of management transformation.

➤ An original matrix has been developed for analyzing the impact of each group of modern technologies (big data databases, AI, cloud computing, blockchain, drones, etc.) on the individual elements and stages of the management cycle (information collection, analysis, decision-making, planning, organization, implementation and control) in intelligence and counterintelligence. This systematic approach constitutes an innovative scientific tool.

- **Contributions enriching existing knowledge:**

➤ A thorough and detailed comparative analysis of the traditional and modern, technology-based, management cycle is made, identifying the key transformations, advantages and risks.

➤ The information on the application of a wide range of technologies in the security sector is systematized and enriched, and for each of them a parallel is made between the international experience and the potential for application in the Bulgarian context.

- **Practical contributions:**

➤ Specific scenarios, models and conceptual frameworks for digital security management have been developed, which can serve as a basis for modernizing the practical activities of the Bulgarian security services.

➤ Practical recommendations for the integration of new technologies are formulated, which cover the need for changes in the regulatory framework, organizational structure, budget planning and the development of human resources.

➤ A roadmap (2024-2030) for the digital transformation of Bulgarian security structures has been proposed, which is extremely valuable for strategic planning in the sector.

3. Evaluation of the author's participation

The scale of the research, its complexity, the interdisciplinary nature and the logical coherence of the overall text unequivocally prove **the leading and completely independent role of Dr. Teodora Licheva** in obtaining the presented results and contributions. The structure of the work, the way of presentation, the depth of the analysis and the formulated conclusions and recommendations are consistent and bear the imprint of a single author's intention. purposeful and in-depth independent research work.

4. Assessment of the possibilities for using the results obtained

The results of the dissertation have **extremely high practical and applied value**. They can and should be used in the following directions:

- **In the activities of state institutions:** the State Agency for National Security, the State Intelligence Agency, the services of the Ministry of Interior and the Ministry of Defense can use the developed models and recommendations as a basis for developing their strategies for technological modernization and digital transformation.
- **In strategic planning:** The Council of Ministers and the specialized parliamentary committees may refer to the analysis and conclusions when updating the National Security Strategy and other sectoral policies.
- **In the legislative process:** The work provides arguments for the need to adapt the legal framework governing the activities of the services to the new technological realities.
- **In the educational process:** The dissertation can serve as a fundamental teaching aid in bachelor's, master's and doctoral programs in the specialty "National Security" in Bulgarian universities.

5. Notes on the abstract

The presented abstract correctly, synthesized and accurately reflects the structure, content, main results and scientific contributions of the dissertation. It successfully fulfills its function of introducing the scientific community to the key aspects of research.

6. Critical assessments, observations and recommendations

Like any large-scale and ambitious research, the presented dissertation gives an occasion for reflection and recommendations of a debatable and guiding nature. The huge scope of the dissertation, which is its indisputable merit, also carries some risk. Looking at such a wide range of technologies (from big data to nanotechnology and space technology) can lead to some degree of generalization in separate subsections. A recommendation to the author for future work is to focus on an in-depth analysis of one or two of these technological groups, exploring in even greater detail the specific challenges for their implementation in Bulgarian conditions.

The author correctly points out in the limitations of the work that it is based mainly on publicly available sources. This is inevitable given the specifics of the topic. As a recommendation for future research, consideration could be given to developing a methodology for conducting empirical research (through anonymous surveys or in-depth interviews) among employees in the sector, which would add another valuable layer to the analysis.

The parts dedicated to future paradigms such as Security 6.0 are largely predictive and hypothetical. This is completely understandable, but it would be useful in the future for the doctoral student to focus on validating and possibly correcting these predictions as technology advances.

I would like to explicitly emphasize that **these remarks and recommendations are only debatable and recommendatory. They do not in any**

way reduce the high quality of the dissertation and the significance of the scientific and applied contributions received.

7. Conclusion

The dissertation of Dr. Teodora Kirilova Licheva on the topic "Transformation of the management cycle in intelligence and counterintelligence through the integration of modern technological solutions" is a complete, in-depth and original scientific research. It solves important scientific and practical problems of strategic importance for the development of the security sector in Bulgaria. The results obtained contain significant scientific contributions and demonstrate the exceptional theoretical training, research skills and erudition of the author.

The presented paper fully meets the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its implementation.

Based on the above, I give my **POSITIVE** assessment and confidently propose to the esteemed Scientific Jury to award the scientific degree of **"Doctor of Sciences"** in the professional field 9.1. "National Security" by **Dr. Teodora Kirilova Licheva.**

Reviewer:

Flot. Adm. (Ret.), Prof., Doctor of Military Sciences/Boyan
Mednikarov/

03.08.2026

Varna