

THE PROACTIVE NATURE OF WARNING IN ANTICIPATING CRISIS SITUATIONS

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Adequate use of warning can contribute decisively to avoiding or reducing major consequences in case of crisis situations. This paper intends to emphasise the contribution that strategic warning can have in the proactive development of the decision-making process. The paper analyses the way in which the issue of warning was approached by a number of experts in the field. At the same time, it is noted that paying adequate attention to medium and long-term analysis methods could contribute to an effective transition towards a proactive approach to warning, in order to avoid strategic surprise, adapt strategies and maintain competitiveness in the operational environment.

Keywords: warning; crisis; proactive; risk; trend; Ukraine;

INTRODUCTION

During the recent years, humanity has faced at least two major crisis situations, with relatively different origins and typologies, but with similar security implications. The first, having as its starting point the medical field – the Covid 19 pandemic, the second, having a primary expression in the military field – the Russian aggression on Ukraine.

In both situations, the causes, developments and possible consequences were discussed, the understanding of these elements being absolutely necessary for the decision-making level. In both cases, warning played an important role, regardless of whether it was expressed through an explicit or implicit form.

The concept of warning is not a novelty, as it has seen numerous theoretical and practical developments over time, especially in the form of early warning systems and related to their role in anticipating or even preventing crisis situations. Against the background of the multitude of fields in which the implementation of warning systems has been attempted and of the particularities specific to each of these fields, it is difficult to articulate a comprehensive definition of warning.

Starting from this aspect, we intend to bring back into discussion the anticipatory character of warning and to emphasise the contribution that strategic warning may have in the proactive development of the decision-making process.

In this regard, the paper analyses the way in which the issue of warning has been approached over time by a series of experts in the field. The paper starts from the premise that any data/information recorded before or during a crisis could, at a given moment, become the starting point for issuing a warning, to be used within the decision-making cycle. For this to be achieved, it is necessary to have a sufficiently well-organised and developed decision-making support system, so that it actively contributes to the transformation of data/information into a warning.

In order to support the proactive nature that warning can have, the paper uses the principle of identifying trends, insisting on the need to understand their nature. Specific methods for trend analysis are not detailed in the paper, but it should be mentioned that such methods have experienced different developments in recent

years, being used, at a given moment, including at some decision-making levels in Romania (Chifu, 2013).

On the other hand, the paper proposes a graphic representation of the main concepts and processes mentioned within the following pages, with the intention of highlighting the way warning may be regarded through its proactive character, respectively the analytical spectrum. At the same time, the last part of the paper contains a brief exemplification of the stated theoretical aspects, based on recent developments in Ukraine.

WARNING BETWEEN STRATEGIC AND TACTICAL LEVELS

From an etymological point of view, the notion of warning is related to the action of preventing in relation to the consequences of a possible situation (DEX, 2016). Some English definitions of warning also address the aspect of understanding a possible danger or a possible problem that would manifest itself in the future (Cambridge, 2013). Seen from the perspective of managing crisis situations, warning is rather a process whose objective is to issue a notification, in order to adopt preventive measures. Depending on the type of the crisis, this notification may refer, for example, to a potential hostile act (in the case of political-military and security crises), to a possible humanitarian/natural catastrophe (in the case of crises generated by disasters) or to possible dangerous developments (in the case of crises related to the economic/financial/banking field and the protection of critical infrastructures) (Popescu, 2018).

However, one should note the multitude of approaches related to the warning process, as well as the technical and conceptual challenges related to this process, aspects that make it difficult to articulate a clear and comprehensive characterisation of the warning.

Basically, the usefulness of forecasting and anticipating risks in the decision-making process is given by the contribution to reducing uncertainty, especially on the mid- and long-term (Trujillo-Cabezas, 2020). Technological developments specific to the current environment contribute to accelerating the dynamics of actions, but at the same time, they reduce the time gap between the strategic and tactical levels. A major challenge is related to the management of the flow of data and information, accepting that the way it contributes to knowledge and understanding of the operational environment is relatively different at the tactical/operational versus the strategic levels (COPD 2.0, 2013).

From a strategic perspective, it is more important to create an overview of the operational environment, to understand the general context and possible future developments. The strategic level calls for mid- and long-term assessments, which provide us with a broader perspective on visions and concepts related to strategic goals and the desired end state (Pherson, 2021).

The tactical level is more concerned with those data and information that directly support operations and to a lesser extent with the overall context in which they are conducted. That is why, at the tactical level, evaluations generally refer to specific actions, and focus, in particular, on aspects related to maintaining the operational rhythm and analysis of responsibilities, down to the individual level.

In an attempt to create a bridge between the tactical and the strategic level, the operational level provides recurrent evaluations of the activities and functions necessary for the implementation of strategies (Pherson, 2021).

A useful debate would concern the role that warning could have in anticipating future developments or actions impacting the operational environment and/or entities within. Cynthia Grabo, well-known for theorising the field of strategic warning, believes that warning can be characterised as *“a theory, a deduction, a perception, a belief. It is the product of reasoning or of logic, a hypothesis whose validity can be neither confirmed nor refuted until it is too late.”* (Grabo, 1987). Grabo notes that, despite multiple approaches of the concept of warning, there is no clear and universally accepted definition of strategic warning, and argues that for many, strategic warning is synonymous with a warning information that can be provided as early as possible by a system intended for this purpose (Grabo, 2002). Such an approach relates to a classification of the possible types of warning strictly to the temporal axis, essentially to the moment of providing the information, without taking into account a clear reference to the imminence of the action that is the object of the warning.

On the other hand, taking into account the level of certainty, Grabo notes that a comprehensive analysis of a set of information could only be possible when the adversary's action reaches such a high level of probability that it turns it into imminent (Grabo, 2002). The search for a minimum level of certainty for the aspects subject to a warning may cause a transition of utility of the warning from the strategic to the tactical. Thus, using available information to issue a warning would be done only when enemy action is imminent or has already been already triggered. Such warning would be useful rather to leaders from the operational-tactical area, to lead to current operations and plan future ones (Grabo, 1987) and less to strategic level leadership.

From John Bodnar's (2003) perspective, warning can be considered a fitting of indicators from a past or current moment into a model representing the future. In his view, in the substantiation of the warning there is a dependence on a series of models or mental images related to the environment of interest and the way that different elements of this environment interact (Bodnar, 2003). Bodnar claims that an analysis process is necessary to generate such models, and that the main objective of strategic warning is to generate a model of the environment, through which to provide current information with the necessary context for framing reports and syntheses on the short term (Bodnar, 2003). J. Bodnar proposes a differentiation between the warning aimed at the strategic level and the one aimed at tactical level, based on the way resources are used. Thus, warning may be considered more tactically useful when it refers to an enemy action that can be countered with available resources. When it refers to an enemy action that requires a significant reallocation of resources for an effective response, warning is rather aimed at the strategic level (Bodnar, 2003).

As part of an analysis of the evolution of strategic warning, Gentry J. and Gordon J. (2018) introduce a classification of the types of warning, depending on the moment of the actual triggering of the crisis situation. In this way, they appreciate that warning is more useful for the tactical level when it refers to any moment following the outbreak of hostilities, while for the strategic level the warning must refer to moments prior to their triggering (Gentry, Gordon, 2019).

Basically, it can be considered, in the absence of a strategic orientation, that the collection mechanisms cannot be correctly used to obtain additional information, and the signals that can trigger warning mechanisms at the tactical level could be misinterpreted or even ignored (Grabo, 1987). In other words, limiting knowledge of the broader context of the threat (normally provided by strategic warning) considerably affects the warning process at the tactical level and available resources may be unable to act effectively.

WARNING FROM THE PERSPECTIVE OF THE PROACTIVE COMPONENT

This paper started from the premise that "*being proactive*" implies the existence of an action that aims to generate a positive result (Cambridge, 2013). For this action, an active attitude is necessary, as a premise for generating a positive result in the perspective of a future context.

On the other hand, the reactive attitude entails the existence of a reaction, determined by an event or an action. We can thus consider that the difference between the proactive and the reactive character is given at least by the relationship of determination to an event or an action. In the case of the proactive component, the anticipatory element is more significant, and the future context in which the positive result is desired to be generated is rather an estimated one, with the level of probability of the estimate possibly validated over time. The anticipatory element can be present also in the case of the reactive component, but the level of certainty of the event or action that determines the reaction is higher than in the case of the proactive component.

When not generated by intuition, anticipation is the result of an intensive process of estimative analysis. Usually found at the strategic level, this process is deeply forward-looking and involves a proactive component in addressing the courses of action that decision-makers have available to respond to stimuli (Pherson, 2021, p. 14).

The estimative analysis is oriented, among other things, to the identification and understanding of the nature of some trends (Postma, Papp, 2021) as well as the possible risks, negative or positive, that could accompany the respective trends.

The notion of "*trend*" is used to express the evolutionary aspect of a situation. Liebl and Schwarz (2009) note, however, that this term has generated multiple confusions, especially in the area of strategy and management. Thus, although the term is used in numerous works, many authors avoid defining what they mean by "*trend*" (Liebl, Schwarz, 2009). This situation is not found, however, in the statistics area either, where the "*trend*" is very clearly defined and, at the same time, very useful in forecasting some models in the economic field (Ștefănescu, Dumitriu, 2018). However, although it can be accepted that data is the foundation of trend analysis, the usefulness of a strictly quantitative approach in the field of strategic management is debatable.

It should be noted that the pyramidal representation of the link between "*data*", "*information*" and "*knowledge*" (also known as DIKW¹) is considered in the paper. The use of this pyramidal model does not, however, imply the acceptance

¹ The DIKW diagram (Data-Information-Knowledge-Wisdom) represents a graphical model in pyramidal form, which refers to the relationship between data, information, knowledge and wisdom. This model is still used as a theoretical foundation in fields such as information science, being attributed, in some articles, to theorists Stephan H. Haeckel and Richard Nolan (Tariq, 2013).

of the existence of a hierarchical relationship between the concepts that are the object of the representation. This aspect is relativised in the paper, by taking into account the differentiation between “data” and “information” based on their dynamic character² (Sanders, 2016). Also, from the author’s point of view, the contextualisation of data is a condition for it to be considered information.

Returning to the estimative analysis, one of the objectives is represented by issuing warnings, which, when accepted and assumed at the decision-making level (Grabo, 1987), can generate the necessary conditions to avoid strategic surprise (Schwarz, 2005). On the other hand, the absence or ignoring of such an analysis mechanism could represent a potential source of failure at a strategic level (Haghani, 2018), given that we admit the fact that no development having a crisis potential occurs without issuing signals in advance (Schwarz, 2005). If correctly understood, these signals can help identify emerging trends and, subsequently, issue a warning regarding the effects of these trends.

The transformation of data (collected by different sensors) into information, through contextualisation and dynamism, contributes to the identification of trends. This process is represented in *figure no. 1* by the fundamental questions “who?”, “what”, “where?” and “when?”. Afterwards, the information would be used in the development of knowledge (“how?”), understanding (“why?”) and interpretation (“with what purpose?”) of certain actions (Corduneanu, 2020, pp. 73-82).

However easy this transformation may seem, it represents a whole process, whose complexity should not be treated simplistically. Through this framework and through the answers to the fundamental questions, formulated with the help of descriptive analysis, explanatory analysis and evaluative analysis, the premises of a transition from a reactive to a proactive approach (Pherson, 2021, p. 14) of different situations with risk or crisis potential are generated.

Such a construction could as well be based on the principle developed by Schwarz (2005), who believes that the objective of a warning system at a strategic level is to understand, as precisely as possible, the nature of the trends identified. Misunderstanding or even partial understanding of trends could result in inadequate implementation of strategies (Liebl, Schwarz, 2009).

² J. Sanders believes that data can be defined as “organized spatial representations within a flow of information” that “exist only in the presence of a modelling agent, which is able to manipulate static components to form a representation”. According to J. Sanders, an information flow can be built by overlapping data, represented in terms of properties of the given flow (Sanders, 2016).

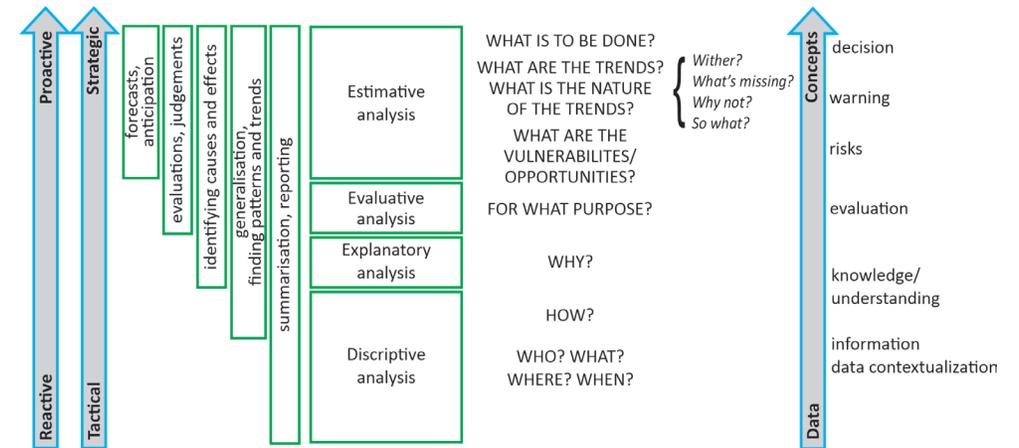


Figure no. 1: A possible model regarding integration of warning in the analytical spectrum, proposed by the author³

In an attempt to establish a series of limits for the definition of the trend as a strategic issue, Schwarz notes that the specialised literature starts, among other things, from the assumption that a trend has a life cycle, which overlaps many times with the cycle of (public) attention enjoyed by a topic: a lower importance in the first part of the topic’s existence, until a critical point of interest is reached; subsequently a steep increase, until a saturation level is reached; respectively a decrease, until the disappearance of interest, usually by normalisation (Downs, 1972; Postma, Papp, 2021).

Starting from the life cycle of a trend, Postma and Papp (2021) consider it relevant to classify them into at least three categories, having the following characteristics:

- lasting up to 5 years (micro-trends) – they can take the form of phenomena or events; have the lowest level of abstraction; their monitoring and analysis supports the identification of meso-trends;
- lasting between 5 and 10 years (meso-trends) – they capture changes in specific areas of society and are visible in various sectors, industries, groups, regions, states; they must be analysed individually, because the conclusions resulting from the study of a trend are not automatically applicable in another situation;

³ The proposed model represents an adaptation of the Pherson model for representing the analytical spectrum (Pherson, 2021, pp. 14, 43) and the integration in this representation of the Liebl-Schwarz model regarding the understanding of the nature of trends (Liebl, Schwarz, 2009, pp. 12-13). The author’s intention was to create a model representing the main concepts and processes mentioned in the paper, which would highlight the reporting of the warning to the proactive character, respectively to the analytical spectrum.

- lasting over 10 years (mega-trends) – refers to changes in society (such as demography, economy, culture, technology, ecology, politics); their effects are visible when their evolution exceeds a critical point and when they have determined several meso-trends; mega-trends can be identified by analysing some meso-trends; on the other hand, the identification and understanding of mega-trends, their critical points and the duration of their life cycle, could contribute to the anticipation of meso- and micro-trends (Postma and Papp, 2021).

Schwarz and Liebl (2009) believe that, in order to have a strategic potential, a trend must first of all have a novelty character, and its manifestation must not yet represent a quantifiable phenomenon and/or action, which have already been identified and evaluated (Liebl, Schwarz, 2009). In the view of Schwarz (2005), the purpose of identifying the strategic potential of a trend is more than *“being faster than the competition”* or *“being better prepared in the face of a crisis”*. The effort within a warning system should be channelled, first of all, towards understanding the nature of a trend and not necessarily towards identifying its direction of evolution. From this perspective, we can consider that the set of questions that Schwarz and Liebl developed for identifying and understanding new trends is still useful:

1. *“Whither? Which contexts are involved in a trend? What can be regarded as the new in this constellation? What is the current stage in the life cycle of this trend – normalization or post-normalization?”*
2. *“What’s missing? What is the paradoxical element of the trend? What is the corresponding countertrend? Are there any contexts which would be needed to allow the trend to advance in its process of normalization?”*
3. *“Why not? Are there any contexts which could prevent the trend from moving on in its normalization process? How could the trend relate to other trends – i.e., does the trend have some contexts in common with other trends?”*
4. *“So what? What aspects of the trend match our expectations or seem familiar? What is unexpected or represents an anomaly? What aspects of the trend challenge the premises of the current strategy? In what contexts will the trend cause the maximum damage? In what contexts will the trend provide the greatest strategic potential?”* (Liebl, Schwarz, 2009).

These questions, added to the answers to the fundamental questions (*“who?”*; *“what?”*; *“where?”*; *“when?”*; *“how?”*, *“why?”*, *“to what end?”*), could complete

the process represented in *figure no. 1*, by identifying positive (interpreted as opportunities) or negative (interpreted as vulnerabilities) risks. Starting from the risk analysis, warnings can then be formulated, which will produce the adaptation of strategies to future realities and give these strategies a proactive character.

APPROACHING WARNING FROM THE PERSPECTIVE OF THE COMPETITIVE ENVIRONMENT

The experience of some important companies during the crisis generated by the pandemic, summarised in a study developed within the analysis company McKinsey, by a team led by Alfonso Natale (2022), highlighted the need for investments in forecasting and risk assessment capabilities as a possible way to building resilience. At the same time, the study identified the intention of large companies to make the transition from a reactive to a proactive crisis management. In this sense, actions were considered necessary to improve the capabilities of reporting and capitalising on data in a timely manner and in greater depth. Companies have also taken into account the possibility of integrating digital solutions to identify trends, as well as to perform estimative analyses. In this framework, it was noted the willingness of some companies to move towards a holistic approach, in the sense that the attention is no longer focused on a specific group of risks, but tends towards a longer-term environmental assessment, which overcomes the reactive approach to uncertainty (Natale, Poppensieker, Thun, 2022). In this way, companies believe that the resilience gained through warning could represent a competitive advantage during crises.

However, the study mentioned above highlighted also the difficulty of maintaining this approach on the long term. Thus, it cannot be excluded that, due to the fading of the impact of a crisis over time, after crossing it, a temptation to change the general effort of the companies towards immediate priorities could emerge. Such a change in approach could have the effect of reducing the ability of companies to respond to the challenges of future crises (Ibid.).

On the other hand, we must not lose sight of the fact that, although many of the consequences of a crisis are observable in a time horizon close to it, there are also effects that remain active over a longer period after crossing the crisis, being possible even to generate new challenges to systems and organisations or even new crisis situations (Chifu, 2013; Banu, 2021).

An essential element in understanding trends as a basis for issuing warnings can also be the development of the warning architecture. The dynamism of this architecture can ensure efficient communication between both the elements and structures within, and with similar external structures. In this way, isolation situations of some of the components or even of the system as a whole can be avoided.

In order to understand a trend, a unitary way of reporting towards their identification and characterisation is necessary in the entire warning architecture. Despite the differences between the strategic, operational, and tactical levels that were mentioned earlier, it is unlikely to have within an organisation the possibility of duplicating sensors and/or other data and information gathering structures, in order to have an exclusive allocation to each of the three levels. For this reason, it can be considered that the knowledge-understanding-evaluation-warning process will be based on the same set of data for all levels – strategic, operational or tactical.

In practical terms, from data collected at a present moment can result information for short-term assessments that directly support the conduct of operations. The same data and information, analysed in a different context, can support the answers to the set of questions proposed by Liebl and Schwarz for identifying trends. In this way, the understanding of trends can substantiate mid- and long-term evaluations, respectively issuing warnings, for the proactive adaptation of strategies, in order to achieve objectives and maintain competitiveness in the operational environment.

In the early 1980s, when the foundations of concepts such as *“competitive intelligence”* (Corduneanu, 2020) were laid, by taking over the warning principles used in state structures (Barnea, 2020), W.A. Reinhardt made a series of observations regarding the appearance of changes in the operating environment of companies, appreciating that growing economic markets can no longer be considered isolated. Among the factors generating change, Reinhardt identified at that time: the impact of non-economic elements, the acceleration of changes at the social and economic level caused by the introduction of new technologies, the enhancement of the influence of governments in the economy, the emergence of new economic and social powers, the profound alteration of demographic structure and educational standards (Reinhardt, 1984). Surprisingly or not, some of these factors can be found among the causes of change of the current environment.

At the same time, Reinhardt proposed the implementation of strategic warning systems within companies, as a way to reduce the growing uncertainty of the operating environment. In this sense, Reinhardt introduced several principles for the foundation of his theory, principles that could be considered valid even today, as follows:

“-social and political changes do not happen accidentally; they are ‘made’ by people and guided by people’s interests.

-the changes are underlain by specific development mechanisms and relatively stable dispersal patterns.

-changes in the company’s environment are triggered by specific events.

-changes are often pushed or directed by precursors.

-changes in the company’s environment often cast their shadows ahead.”

(Reinhardt, 1984).

The model of the warning system proposed at that time by Reinhardt to be applied within companies was deeply inspired by the military early warning systems, specific to the Cold War, which were mainly based on the monitoring of predetermined indicators. The architecture of the Reinhardt model was, in fact, an adaptation for the economic environment of a surveillance system, composed of a series of sectorial radars (the company’s departments), the relevant signals collected by them being transmitted to central stations (the upper management level). An integrated analysis was carried out at this level. After implementing this system for a period of five years, Reinhardt noted the advantages that systematic and consistent anticipation brings to the company, as well as the fact that environmental analysis must be extended to changes in other areas than those in which the company operates, including in the political and social fields. One of the challenges observed was represented by the management of the information flow, being necessary to achieve a balance between the need to filter data and information and the need not to concentrate knowledge in a single point (Reinhardt, 1984).

The need to create architecture that supports the consistency and the systematisation of thinking and taking action has been maintained until now, being also mentioned by contemporary specialised literature. The main conceptual evolution compared to the period of development of the Reinhardt’s model could be represented by a greater depth of interconnection between domains. The proactive component could be added to this, considering that the warning systems and going through a crisis should also be seen as opportunities for adjustment in front of the following crisis situations (Mitroff, 2020).

Avner Barnea proposes an inter-organisational approach of the analysis of warning, starting from the idea that both the private and the state environment have developed over time warning systems using similar principles. A. Barnea believes, however, that a more efficient evaluation of errors is carried out within private companies, especially when errors are made by the decision-making levels (Barnea, 2020).

Barnea's finding seems to be supported by the developments during the pandemic, the state system, in general, and the military, in particular, having the opportunity to adapt to the new environment starting from the lessons identified by private companies. Many of the private economic structures that have gone through the crisis generated by the pandemic have been able to quickly identify new solutions, starting from the reconfiguration of logistics chains (rearrangement of logistics hubs; shortening the size of logistics chains; readjustment of stocks according to the anticipation of needs), up to reconfiguring decision levels to ensure the continuity and solidity of decision-making chains (by applying the concepts of digitisation and remote work, as well as keeping only strictly necessary elements in the field) (Natale, Poppensieker, Thun, 2022).

The main problem identified by Barnea in relation to warning failures is not represented, however, by a lack of information, but rather by the combination of organisational limitations, analysis failures and a possible problematic relationship with the decision-making level (Barnea, 2020).

The attention paid to strategic warning should remain high, but focusing exclusively on the aspect of reducing negative effects creates the conditions for failures to be more visible than successes. Many of the reforms implemented in the strategic warning architecture were generated and/or driven by failures (Barnea, 2020), an aspect that highlights the reactive nature of adaptation.

WARNING THROUGH THE LENS OF THE CONFLICT IN UKRAINE

The non-identification, misinterpretation or possible ignoring of some of the trends existing before 2014 may have caused the lack warning signals regarding the appearance of the so-called "*green men*" in the Crimean Peninsula at the beginning of 2014. Thus obtained the Russian Federation the strategic surprise not only regarding the Ukrainian authorities, but also in the case of the international community (Bruusgaard, 2014). In the absence of strategic warning, the tactical level structures of the Ukrainian armed forces were deprived of the ability

to formulate an adequate response to the situation at that moment, any warnings issued at that level losing their usefulness.

On the other hand, it can be noted that before the invasion of Ukraine in February 2022, a better understanding of the risk was achieved, possibly on the basis of a better monitoring of the operational environment, doubled by identifying trends, the use of predictive assessments, and the dissemination and communication of the warning. This enabled undertaking steps to prepare a better response capacity compared to 2014, both in political-military and diplomatic terms (ISW, 2022). Unlike the situation in 2014, understanding trends and the existence of strategic-level warnings provided enough time for Western states to provide assistance to Ukraine in preparing a more robust defence strategy. Moreover, a new approach was chosen for disseminating the warning, with the mass-media having at their disposal numerous open sources as a basis for their reports, thus increasing the level of credibility of the published information. In this regard, the contributions of the private sector and social-media are noteworthy, practically allowing both mass-media and private individuals to directly follow the mobilization effort of Russian forces on the border with Ukraine (Abdalla, Davies, Gustafson, Lomas, Wagner, 2022).

It can be assessed that this approach had a proactive character and, despite the fact that it did not prevent the invasion of Ukraine, it forced Russia in many moments to cede the initiative and adopt a more reactive attitude.

Monitoring activities undertaken by the Russian forces especially starting with the spring of 2021 – e.g., the deployment of forces in the Southern Military District at the end of March 2021, in the north, east and south of Ukraine (Gressel, 2021), the conduct of the joint strategic level exercise Zapad 21 (Kofman, 2021) – allowed obtaining data and information that could be used in the process of developing knowledge, understanding and interpretation of Russian actions.

It can be appreciated that understanding the nature of the trend identified in this case (from escalation at the border with Ukraine to generating the premises of a large-scale action on Ukrainian territory) included, among other things, an effort to understand the context in which the political decision for a large-scale action could have been made and the rationale that might underpin it.

The novelty of the trend could be considered the very fact that it represented the largest concentration of Russian forces in the period following the dissolution of the USSR, to which was added a change in the willingness of Belarus to play a role in Russian actions (Abdalla et al).

The difficulty of identifying trends, interpreting data and using it in predictive analysis so as to obtain the anticipation needed for strategic warning, especially with regard to the timing of Russia's actions, could be highlighted in this case by the significant differences between the assessments regarding the developments in Ukraine that were made at that time by states with proper strategic analysis capabilities (Ibid.).

CONCLUSIONS

Analysing warning from the perspective of proactiveness, it can be stated that the effective transition from a reactive attitude could be achieved when the process of knowing-understanding-evaluating creates the possibility of disseminating a warning or a warning product as soon as possible before the moment of a crisis. At the same time, the running of this process allows the reallocation of enough resources for an answer, if this is necessary (according to the Gentry and Gordon approach, respectively the Bodnar approach). Increasing the level of certainty, however, might not always be a guarantor of the ability to act proactively, considering the possibility of losing the anticipatory nature of the warning and decreasing its usefulness for the strategic level (Grabo's approach).

Because of the wish to reduce uncertainty and avoid exposing the organization to situations that can generate surprise, at the decision-making level there could sometimes exist the temptation to turn to more concrete elements, usually provided by current information. Although current information can represent a source of information for strategic level warning, the more descriptive aspect of the analysis made at this level and the time horizon make it difficult to identify trends.

On the other hand, it is noted that paying adequate attention to medium and long-term analysis methods offers the possibility of an efficient transition towards a proactive approach to the decision-making process. Identifying trends and understanding their nature can represent one of the useful methods for anticipating developments with crisis potential, accordingly adjusting decision-making at the strategic level and orienting the tactical/operational levels.

Warning systems are easier to use in the fields where data collected by the sensors are easier to measure. For this reason, trends can be easier to identify in areas closer to the statistical area. The specialised literature abounds in developments regarding anticipation or prevention in areas such as the prevention of natural, financial-banking or medical disasters. In terms of preventing conflicts with military development, social crises or political crises, anticipating risk-generating trends

is more difficult, especially when attention is focused on a certain type of risk, usually generated by the relationship with an adversary/competitor and the effort to obtain a strategic advantage in relation to it (Barnea, 2020).

Developing an integrated warning architecture, which promotes a unitary way of reporting on the identification and characterisation of trends, could represent a basis for the development of new models of understanding risk in an environment characterised by competitiveness. Starting from the way that civilian companies adapted to recent crises, a logical evolution would be to integrate new technologies in the warning architecture.

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