THEORY OF NATIONAL SECURITY

LT. COL. CSABA VIDA, PHD

INTELLIGENCE ANALYSIS

Abstract

In this brief study the author – who teaches the intelligence analysis at the National University of Public Service – elaborates the basics of intelligence analysis, and gives an overview of the analysing activity. The study concludes that the intelligence analysis is a science-based assessment of a theoretical activity, and the problem solving is in its focus point.

Keywords: intelligence, intelligence analysis, evaluation, theoretical methods, matrixes, intelligence reports, intelligence cycle, databases, procedures

The intelligence analysis is a complex system of activities. The information gathered by information collectors is processed systematically by analysis organizations with defined spheres of authority, and through procedures based on professional knowledge. Conclusions, assessments and predictions are conceptualized from the results. Therefore, the available data and information go through a positive, incremental, qualitative change through the analysis. The conclusions, assessments and predictions represent the value added. The process is similar when information collectors can only gather half-information, and it is the analyst officer's job to supplement it by using different procedures. Analytical work is a theoretical, conceptual system of activities, whose main aim is to solve the problem. Aside from their own procedures and theoretical methods, the analysts draw also on the results of other disciplines, like politics, law, history, statistics, economy, sociology, psychology and military science.

The analysis is a central element of the intelligence cycle, as their aim and purpose are the same: to provide the users[1] with analysed information to help them in decision-making and to uncover and define possible threats, risks and challenges posed to the state. Based on the intelligence cycle, the analysts receives the information requests from the users, control the data gathering activities pursued by the information collection services, process the data

[1] The users of intelligence are the leaders of the state, for example the government and the legislation, but military leaders and the leaders of law enforcement organizations also belong to this group.

obtained by collectors, analyse the information and inform the users about the required questions.

So the analysis work is executed within the frames of the intelligence and operates the intelligence cycle, based on defined methods and principles.

Fundamentally, intelligence analysis can be divided into six different spheres of action.

- analysing and assessing information;
- making reports;
- managing the databases of the analysing and assessing organization;
- dissemination;
- operating the intelligence cycle (helping the work of information collectors);
- supporting (intelligence and military) operations,

The above activities represent different stages in the analysis and assessment, because the operation of the intelligence cycle is going on during the whole process, while analysing and evaluating information, preparing reports and operating the informatory system are consecutive procedures, and the operation of intelligence databases only happens periodically.

It's important to emphasise that analysis doesn't only include the preparation of reports, because its main function is the analysis and evaluation of the information. Analysis work – similarly to the whole intelligence work – is not an autotelic activity, because its main objective is to provide the users with such information that helps them in making the right decision.

Information analysis and assessment

The complex analysis of the available information takes place during the analytical-evaluative work. In the course of this process, with the use of different analytical-evaluative procedures, the information goes through a qualitative change. The person who does analytical-evaluative work first places the information in space (location), time and (network of) occurrences (processes), establishes causal connections and draws up predictions, conclusions and possible scenarios. During the process, the value of the information rises significantly, because of the value added by the analytical-evaluative procedures and the expertise of the analytical-evaluative specialists. In order to produce a significant added value, the analysts can use basically the following procedures:

- simple formal logical procedures

- fixed analytical-evaluative procedures
- complex analytical-evaluative models and methods

The analysis and assessment based on **simple logical procedures** is the most common method, because this method is extremely effective when it comes to examining the circumstances, effects and consequences of an event that has already occurred. The logical procedures – the deductive[2], inductive[3] and abductive[4] – start with formal logical thinking methods.

In this respect, we can also mention:

- the observation (empirical understanding of reality);
- trial (inquiry of a consciously elicited event);
- analysis (dividing the whole system in its components and examining each component);
- synthesis (examining the connection between the components by arranging them into a logical system)
- abstraction (getting rid of the unnecessary components)
- generalization (drawing conclusions from certain events that may apply to the whole process)
- comparison (exploration of the differences and similarities between the occurrences)
- analogy (drawing conclusions from the similarities of distinctive features and characteristics)

Unlike others, analytical-evaluative experts use these methods consciously, not instinctively. Aside from the above methods, numerous other simple procedures can be distinguished, such as the following:[5]

[2] In the course of deductive thinking, one draws conclusions about an individual based on generalization, so one reaches the individual from the general. According to deductive thinking, „Something must be true!"

[3] In the course of inductive thinking, one reaches the general from an individual, so one gets to the full picture through the parts of it. This method might have a number of different results. According to inductive thinking, „Something is likely to be true!"

[4] In the course of abductive thinking, one makes conclusions about the reasons behind a certain event based on its consequences, so the method offers an explanation to the events. According to abductive thinking, „Something is believably true!"

[5] The intelligence services of the United States currently use around 160 simple analytical-evaluative methods.

- **comparative method** (a quite usable method of creating models, it doesn't require computer simulations yet, it's mostly used for the analysis of devices, objects and processes; it can be a very good method of analysing the development of the target object /country/, because it's comparable with the development of their own system; in this case, their own system and technology can be the basis of the comparison);

- **graphic model** (the model is based on the analysis of the given topic, using one or more variables (mostly plotted against time); it examines the changes that the topic goes through; however the model simplifies the results quite a lot, because it ignores other factors that influence the topic and are not contained in the coordinate system; analytical-evaluative experts can use this model to summarize the results of the analysis; the graphic model has different types, for example the exponentially increasing one, the one converting to a given value or the bell-shaped curve; these graphs depict the changes from which conclusions for the future can be drawn);

- **application of patterns** (in this model the analyst examines the previous repeating events and processes; the problem with the pattern is how much the route indicated by the pattern differs from the previous experiences, and whether the difference is significant enough to be noted; there are statistical, chronological and spatial patterns for the different pattern models);

- **enumeration** (the simplest model, which is based on listing the characteristics of the given topics and the arguments about it; these arguments can be negative or positive and can either support or contradict the topic; the next step is to delete the similar arguments on both sides and draw conclusions based on what is left, the other name of this model is the parallel list);

- **connection network** (inquires the system of connection between entities – people, places, organizations, objects, events –; the models that explore the hierarchy, the connections, the matrix and the network are all different types of connection models);

- **the process model** (describes the order of the events or the actions related to the topics, and with the use of this information, the possible future actions are predictable; the feedbacks are an important part of the process, the system of loops and lines describing the process defines the connection between the input and output, while the feedbacks are controlling elements);

- **profiling** (it is used to model people; the aim of creating profiles is to help to analyse the actions of a person and to predict his future actions, and also to determine his expectable behaviour/reaction to a certain event);

- **simulation model** (describes the interactions through a mathematical method, so it can determine the behaviour of the system).

The choice among the procedures depends on the contents of the given information and the aim of the inquiry, but there are cases where the personality of the analytical-evaluative expert influences which simple logical procedure he chooses to analyse the available pile of information. The results of the procedures usually contain only preliminary information for the conclusions, because these must be attained through further logical procedures by the analytical-evaluative experts, who also have to use their own expertise and knowledge. However, simple logical procedures also provide an opportunity to make predictions for the future.

The **fixed analytical-evaluative procedures** are special methods of analytical-evaluative work during which a given event, process or person is processed in a similar fashion every time, just as they were filling out a „form" with analysed-evaluated data. For example risk calculations, budget analysis and biographies are these kinds of procedures. When filling out the „form", the analytical-evaluative expert may use simple analytical-evaluative procedures as well. Among logical procedures mathematical and statistical methods are the most prominent ones. During the procedure it is important to pick out only the most necessary information, so the exhaustive, detailed analysis and evaluation of information falls into the background. In this case, the results of analytical-evaluative work – conclusions, the hypothesis, estimates and the results of mathematical procedures – cannot be substituted by the most necessary information. The missing information cannot be replaced with the analysis and evaluation of the available data; instead they need to be collected by the information collectors.

Thanks to fixed analytical-evaluative procedures, when it comes to identical subject matters, the users can get the same type of reports, which increases the efficiency of the information dissemination.

The **complex analytical-evaluative models** are very rarely used by the intelligence services, because they are more time-consuming and require a higher level of expertise. But at the same time, they ensure the determination of conclusions and predictions that are essential to users when it comes to making decisions. Most complex analytical-evaluative models are methods of different disciples that are transplanted into the intelligence work.

The complex models include:

- **complex matrixes** (using a few chosen characteristics, the complex inquiry of the systems can be done with the matrixes, and on the different levels of these chosen characteristics the factors influencing the operation of the system can be determined);

- **game theory** (examining the actors' behaviour in situations where every participant's actions are influenced by the possible reaction of the others; in this way strategic problems can be modelled);

- **space-time model** (models the changes that occur to an event and a process in different places and times);

- **geographic model** (makes it possible the placement of a certain event or process in time and space and the complex examination of the changes);

- **analysis of trends** (suitable for the description of processes and tendencies; helps to predict forecoming events);

- **models of security theories** (numerous procedures have been developed in security theories and IR theories that define and establish complex security, some of which can be used for analytical-evaluative work).

Based on the above descriptions, the analysis and assessment work uses the analytical procedures of different scientific fields in order to achieve the most accurate results when examining intelligence information. Experiences show that analytical-evaluative work mostly uses the methods of IR theories and security theories. One of these is the theory of regional security complex[6], which examines regional security systems based on the interdependency among states.

Drawing conclusions, developing evaluations, predictions and sometimes drafting scenarios are parts of the analytical-evaluative process. The above models help to draw conclusions and develop evaluations based on the available information. The evaluations are useful to the users because they refer to the background, the causal connection and the impact of certain events that occurred, while conclusions might include the possible consequences and the way forward as well. The preparation of predictions is one of the most important aims of analytical-evaluative services, because this is the best way to support users. Predictions have different types, ranging from simple statements to complex systems. Scenarios are one of the keys to complex systems.

Probable future occurrences are detailed in these scenarios. When preparing them, they analyse how and in which way the current situation might develop, so in a few words, what kind of situation might emerge in the future, and they set up hypothesises that model the ways in which the changes could happen. It's impossible to predict what will happen exactly, but the probability of future scenarios can be – more or less precisely – determined. In the case of scenarios prepared by analytical-evaluative services, it is extremely important to define the probability of certain events in the reports, because it helps users making a decision.

Basically, four types of scenarios can be distinguished:

- **demonstrative scenario;**
- **propelling scenario;**
- **scenario of political transformation;**
- **time-slice scenario.**

[6] The Theory of Regional Security Complex by Barry Buzan and Ole Weaver. Barry BUZAN – Ole WEAVER: Regions and Powers: The Structure of International Security. Cambridge, 2003

Disseminating information, preparing reports

When the analysis and evaluation of information is done, the preparation of responses to the users' information requests – which means writing informatory reports – can begin. This could be viewed as the second element of the analytical-evaluative work, however, the preparation of a report isn't always part of the process, because during the analysis and assessment, it might become clear that the information collected for a specific topic isn't satisfactory or is irrelevant to the users, so it is unnecessary to inform them about it. If further information is needed – and the information requests of the users are still relevant –, then the analytical-evaluative service or person files a supplementary (repeated) request of information to the information collectors.

Thus, at this stage, the preparation and elaboration of information takes place. In the case of information, punctuality, precision and uniformity are of heightened importance as users only trust intelligence reports that always contain truthful information.

The preparation of information is always based on the users' requests and the regulations of public acts (a system of duties for intelligence services determined by the law), during which users or public acts define the subject matter or the exact topic of the information.

Information can be written or verbal. Written information is in the form of reports, and for verbal ones, presentations are held. Nowadays, written reports are not only written on paper, but different documents on the computer belong to this group as well. Aside from that, information can be distinguished in numerous ways, but the process of preparation and the contents are more or less homogenous, as all of them must meet the contextual and formal requirements of intelligence information. The extent, the level of elaboration, clear, understandable wording, punctuality, uniformity, completeness and the separation of information and evaluation (conclusions) all belong to the contextual requirements.

The **extent** is important because users may have a limited time to read a report, so when reading (or maybe just glancing through) a long document, the most important points could be missed, while if the report is too short, it cannot give a satisfactory answer to the information request, and as a result, further questions might emerge.

Ensuring a high **level of elaboration** is the duty of the analytical-evaluative personnel, which means that they have to prepare informatory reports that do not contain half

information or indications, but information and evaluations are shown through a defined track of thought or an elaborated system.

Clear wording makes it easier for the user to understand the report. Reports written with difficult, long, compound-complex sentences won't reach their goals of informing the users properly, because they are hard to read and understand.

As for certain information, **punctuality** is very important, because approximate data and inaccuracies only strengthen the generality of the report, so the user won't get the necessary support.

Uniformity is a characteristic of reports that can be observed in the unified interpretation and usage of definitions, names and descriptions of activities. However, at the same time, the structure of reports is uniform too, so users get what they expect from intelligence reports.

Completeness determines the quality of the informatory report, because the user expects a report that answers all of their questions, otherwise they will feel like something is missing or further questions will emerge.

The **separation of information and evaluation (**assessment**,** conclusions and predictions) in informatory reports is extremely important because the user has to be able to differentiate between the information gathered by the intelligence and the evaluations, conclusions and predictions of the analytical-evaluative personnel.

Reports have definite formal requirements, for example they must have certain obligatory elements (title, résumé, summary for the leader, elaborated information, evaluation, the level of protection of the information (classification), the date of estreatment, the person who estreated the document etc.), the text should be readable, if necessary, it should contain footnotes (comments), and it should use Hungarian language in a precise, grammatically correct way. The formal requirements for reports – except for references[7] – are exactly the same as those for scientific publications. Documents of the intelligence must be free of grammatical errors and mistypings, as these errors question the punctuality of the report and its writers (and the estreaters as well).

[7] Leaving the references out is important because of the protection of intelligence sources. At the same time, the intelligence service itself is the safeguard that guarantees the usage of exact and relevant data for its information [report].

Because of their uniformity, the structure of the information is always pre-defined. The title at any time must include the subject and the field the information deals with. A résumé, which offers a quick orientation for the users, is often part of the information as well. The content is mostly elaborated in the text, and to make it more understandable, should/could be supplemented by pictures, graphs, tabs and sketch maps. The information must be stated first, and later on, it has to be followed by the evaluation. The informatory report should be closed by the name of the estreater and the date of estreatment, which also serves to verify the document.

The preparation of information starts with the collection and organization of available information and data, and the execution of the chosen analytical-evaluative procedure. In the meantime, the information that is planned to be included in the report (names, events, definitions, activities) is corrected. After that, the synopsis of the informatory report should be put together, during which the hypothesises are defined as well. The structure of the synopsis must meet two requirements: first, it must have an understandable train of thought, and second, it must include the main message of the informatory report. The train of thought is a well-structured process with points of junction. The main message is a determinant piece of information that the user won't forget on the long run. When composing the the text, simple, short sentences should be used. The usage of difficult, compound-complex sentences isn't beneficial. Using too many foreign words counts as a mistake as well – and that includes not only the words adopted from, for example, Latin language. English expressions and names should be avoided as well. The informatory report – if not stated otherwise – should be written in Hungarian, as it cannot be expected of the user to understand a language other than their mother tongue. The elaboration of the information could be followed by the evaluation, which is prepared after the analytical-evaluative procedures. The evaluation has to be clear and unambiguous.

Verbal reports should be prepared and organized in a similar way to written ones. If it is possible, verbal reports should be elaborated in writing, too, so they have a written (textual) version as well. This is important firstly because the service has to keep track of what kind of information did it share with whom. Secondly, it is useful to prepare presentation material (drafts) so that the oral presentations are easier to understand. It is also possible that after the oral report, the user will ask for the content of the presentation in a written form.

In the course of the preparation of information, the system of supervision and feedback – in which the leaders of analytical-evaluative organizations play a key role – is extremely important for national security services. The supervision guarantees that the intelligence information always contains real information and remains absolutely neutral politically.

Analysis-assessment databases

Databases are integral parts of the analytical-evaluative process, because they contain all pieces of information necessary for the execution of analysis and evaluation and the praparation of informatory reports for the users. Fundamentally, databases have two main parts. One contains every information gathered by the collectors, while the other has tematical database filled with information about a given target area, person or object. (For example, databases of names or organizations, or technical databases belong to this group). Aside from these, analytical-evaluative personnel can use other, external databases as well. These are operated by other organizations. These databases need to be examined and their credibility must be verified, because intelligence services can only use credible, reliable databases. These external databases can be commercial OSINT databases purchased by national security services.

Informatory system

Informing the users is the most important stage of the intelligence cycle, because this is the part when it becomes clear whether the intelligence was useful for the users. At this time, the whole process is evaluated as the users decide whether the products of the intelligence were useful to them. Intelligence services develop their informatory system based on this. In the system, there are different, predetermined types of information.

Information can be distinguished based on their periodicity, subject, extent, level of procession and urgency. As for periodicity, there are daily, immediate, periodical (weekly, monthly, yearly etc.) and ad hoc information. The subject is mainly determined by the information requests of the users, but certain information might cover more than one subject, and can offer a full, global-scale review about a given question. The extent of reports can be quite varied, but they should never be too long, because users have a limited time to read intelligence reports. The level of procession is defined by the nature of intelligence, which was already discussed before in the chapter about analysis and evaluation. Aside from that, the aim of the information also influences how deeply the user should be informed. The

urgency is defined by the content of the information. It means how urgent it is for the user to receive the information necessary to make a decision.

Aside from informing the users, intelligence services have obligations to supply information, which is also part of the informatory system. They send certain reports not directly to the end-users, but to the state organizations obliged to cooperate with each other. Instead of analysed-evaluated material, piles of information are sent to these organizations. However, this process needs some analytical-evaluative work, too: the data need to be systematized, classified and supplemented. The format of reports (supply of data) is not defined by the intelligence service, but the user (a.k.a the state organization with an obligation to cooperate).

Operation of the intelligence cycle

Analytical-evaluative organizations might have a heightened role within the intelligence cycle if the management of information is one of their duties, because if that is the case, they are present at every stage of the cycle. Looking at the cycle from an analytical-evaluative point of view, the process – whose aim is to, naturally, meet the information requests of the user –, happens in a way that is beneficial to the analytical-evaluative organization, which means it will be able to prepare informatory reports that support the decisions of the users to a satisfactory degree.

Five different stages of the classic intelligence cycle can be differentiated: receiving information requests, collecting information, processing and systematizing the collected data, analysing the topic and finally informing the users.

Analysing organizations take part in the acceptance of information requests. At this stage, after the questions of the users are received, analytical-evaluative personnel plan and organize the intelligence process as long as there are no specific bodies appointed to coordinate and control the collection of information. After that, the analytical-evaluative organization checks whether the answers are already available in the analytical-evaluative databases. If they aren't, the analyst organizations start the second stage of the cycle, which means they tell information collectors to gather the missing data. In the stage of information collection, analytical-evaluative organizations control the information collection activity through the system of feedbacks. In the stage of processing and evaluation, transformation of data happens in a way that the analytical-evaluative organizations can use the information. In

the analytical-evaluative stage of the cycle, analytical-evaluative personnel analyse and evaluate the information and prepare the informatory reports containing the answers for the users. The process of information is also based on the analysed and evaluated material prepared by the analyst organizations.

Conclusions

From national secrutiy standpoint, the intelligence analysis is becoming ever more complicated and – perhaps – ever more important. Within the intelligence cycle, it is the analysis and assessment activity that crowns all the intelligence process, because it is this activity that makes it possible for the intelligence service to provide the interested politicl and military leaders with the indispensable information necessary for their decisions.

The analysis and assessment are pursued with predetermined, sophisticated methods, from among which the most important are: the comperative, the graphic, the profiling and the simulation models. The so-called complex analytical models are very rarely used by the intelligence services, because they are rather time-consuming and require special expertise.

The intelligence reports to be disseminated have certain indispensable requirements, such as their appropriate extent, level of elaboration, clear wording, punctuality, uniformity, completeness and separation of information from evaluation.

The analyzing and assessing organizations have to follow through the whole intelligence cycle; beginning with setting the tasks for the organs collecting the information; and ending the intelligence process with disseminating the results (the reports) of the cycle among the decision-makers.

References

- Dr. KOBOLKA István (szerk.): Nemzetbiztonsági alapismeretek.
  Nemzeti Közszolgálati és Tankönyv Kiadó, Budapest, 2013. ISBN 978 615 5344 32 9
- Mark M. LOWENTHAL: Intelligence from secrets to policy.
  CQ Press, Washington D.C., 2012. ISBN 9781608716753
- Richards J. HEUER – Randolph H. PHERSON:
  Structured analytic techniques for intelligence analysis.
  CQ Press, Washington DC, 2011. ISBN 9781608710188
- Robert M. CLARK: Intelligence analysis: A Target-Centric Approach.
  CQ Press, Washington D.C., 2010. ISBN 9781604265439
- Washington PLATT: Strategic Intelligence Production: Basic Principles.
  Praeger, New York, 1957.
- ZNEHKNB5140: „Információk elemzése és értékelése" című
  MSc tantárgy előadásainak anyagai – készítette: Dr. VIDA Csaba, NKE, 2012.