WHERE TO TOMORROW IN A BETTER INTELLIGENCE ANALYSIS – FUTURES STUDIES AS A FACILITATOR

Iuliana UDROIU[*]

Abstract:

We need better predictive intelligence analysis. This statement has driven pundits and practitioners to find better ways to provide anticipative knowledge about future vulnerabilities, threats, and risks, but also about windows of opportunity to promote one countrie's national interests.

In this collective effort, futurists have managed to make a difference proposing vision, solutions, methods, and products in order to facilitate the making of better intelligence analysis.

But futures studies are not easy to study and futurists are not always right. They come with different names, different methodologies, complex argumentation and multiple plausible alternatives for better decision making processes. Either way, they provide a framework for creatively and proactively exploring the possibilities and working toward a safer future.

Keywords: *intelligence, analysis, future, predictive, decision.*

Predictive analysis – the emergent trend in intelligence

For individuals, as well as interest groups, businesses, and governmental institutions, including intelligence services, it is essential to anticipate changes, either to undertake protective measures, or to get an early advantage of new opportunities. Moreover, given the ubiquity, speed, and penetration of communications and the velocity at which events can escalate to crises, one of the great challenges to the broader security and defense strategy is surprise.

[*] Romanian Intelligence Service

The fear of being taken by surprise is what makes the policy-making community to demand timely, relevant assessments that address known or anticipated threats and challenges, generated by state or non-state actors, related to their development, deployment, or employment of force to achieve objectives contrary to national interests.

But anticipation is not the same as guessing. Intelligence analysts must base their predictions on solid analysis using specific tools and methodologies that go beyond examining, assessing, and comparing pieces of raw information and synthesize findings into an intelligence product that usually reflects vulnerabilities, risks and threats. Predictive analysis goes further because its objective is not just to establish capabilities or past events, but to determine intentions and probable courses of action.

Decision makers expect intelligence services to find better ways to provide anticipative knowledge about future vulnerabilities, threats, and risks, but also about windows of opportunity to promote national interests. They often demand answers to questions that haven't been formulated yet and solutions about problems that haven't occurred so far. That complicates intelligence services tasks that usually limit to presenting the facts and trends as they arise from operational, tactical and strategic intelligence.

On the other hand, in order to set their strategic, tactical and operational objectives, intelligence services are interested in anticipatory foreknowledge, for example, the terrorist type of actions, objectives, and targets, or the trends of organized crime. They make considerable efforts in order to improve anticipatory capabilities, using methods and techniques, such as horizon scanning, scenarios, Delphi or expert opinion, in conjunction with their needs, objectives and missions. Governmental organizations such as intelligence services must continuously identify and monitor indicators of change, but more importantly, evaluate all possible futures to identify those that offer conditions most conducive to meeting goals that help achieve the organizational vision, or "preferred future".

According to Riel Miller, coping with an universe that seems to be getting more complex is not an easy task without bringing the capacity to use the future into alignment with both the perception of the complex, emergent reality and aspirations. Nevertheless, as a suitable solution he proposes thinking about the future in terms of anticipatory systems because this perspective takes into account animate and inanimate, conscious and unconscious mechanisms for integrating the non-existent (yet) future into the present (Miller, 2011, pp.23-24).

Future studies

There is almost nothing in security or society matters that can be accurately predicted. Moreover, intelligence analysts must keep in mind 3 predicaments: the future is not predetermined, the future is not predictable, and future outcomes are our choices in the present. Joseph Voros explains these `laws`.

The future is not predetermined because at the most fundamental level of nature, the physical processes of the universe are inherently indeterminate. Given this: any future stemming out of present physical processes is indeterminate also; there is no, and cannot be, any future stemming out of present physical processes anything other than indeterminate also; there is no, and cannot be, any single predetermined future, rather there are considered to be infinitely many potential alternative futures.

The future is not predictable because even if the future were predetermined, we could never collect enough information about it to an arbitrary degree of accuracy to construct a complete model of how it would develop. At some point, the errors introduced by not having infinitely-precise information would cause the model to deviate from "reality" (whatever that is). And because the future is not predetermined, predictability is doubly impossible; we are therefore able, and forced, to make choices among the many potential alternative futures.

Future outcomes are our choices in the present because, even though we can't determine which future of an infinite possible variety will eventuate, nevertheless we can influence it by shaping the future which does eventuate by the choices we make regarding our actions (or inaction) in the present (inaction is also a choice). These choices have consequences and so they need to be made as wisely as we can (Voros, 2001).

One might get lucky and guess a course of action or event. But there is also always the possibility to anticipate one or multiple outcomes of someone's actions. And this is precisely what futures studies can do: they enable individuals and groups to anticipate their futures more usefully, and to shape them appreciably more to their own preferences. Futures studies is about exploring, inventing, and implementing ideas about the future. It is also about building and adapting alternative futures, integrating multidisciplinary perspectives about actions or phenomena people are interested in.

The multidisciplinary nature of foresight, while a strength for practice, creates a challenge in terms of boundary-setting. Different disciplines have

their own interest in the future and their own ways of producing knowledge about it (Hines & Gold, 2013, pp.37-38).

Futures studies and intelligence: methodological and practical complementarities

Decision-makers need and want more and more the kind of information that Futures Studies and intelligence analysis can offer, and anticipation and prediction are core functions of intelligence soon to develop into new scientific disciplines.

The connection between futures studies and intelligence is natural. Moreover, intelligence analysis can benefit if futures concepts are introduced into all facets of the analytical process. Understanding the benefits of placing into the future in order to cope with uncertainty, the intelligence analysts have been moving in a much more proactive direction for quite some time and using the techniques of futurists will speed up the process.

Like intelligence analysts, future watchers have several broad categories of 'clues' to look for: events (their interpretation, contexts and background); trends (which can give rise to events, fade from view, or lead to significant changes over time); emerging issues, which can arise from events or trends; weak signals, hard-to-detect-developments which are "below the radar" of public awareness, but can potentially become emerging issues, or even significant trends or events; ideas and visions (collective or individual) which can spark and sustain movements for change; alternative possibilities, which may be publicized as scenarios, or expressed in forms which we can categorize broadly as "What if…?; historical investigations and parallels which deepen our understanding of how other societies managed, or failed to manage, changes (Coote, 2012, p. 108).

Similarly to futures researchers, intelligence analysts have developed and used structured analytical techniques to improve the quality of analysis. Indeed, futurists and analysts often end up using the same tools, such as scenarios and the Delphi technique, to achieve somewhat different ends (Jensen, 2012).

Futurists have managed to make a difference in anticipating the future and reducing the possibility of strategic surprise by proposing vision, solutions, methods, and products in order to facilitate the production of better intelligence analysis. Not only do they offer alternative solutions for alternative futures, but they also discover possible new risks, threats, and opportunities, in the most diverse scientific fields, with major impact on

national security, such as nanotechnology, climate change, biotechnology, engineering, etc.

Very often scholars link futures studies with collective intelligence. For example, Riel Miller includes collective intelligence, along with narrative and reframing into the threefold framework of the foresight process. In his opinion, collective intelligence generates evidence through action research that uses imaginary futures to invent and create collaborative maps, enabling all participants to bring their deep and specific knowledge into the story (Miller, 2011, p. 27-28).

Harnessing collective intelligence can play an important role in generating new ideas, solving age-old problems, disaggregating and distributing work in new and innovative ways, and making better, more informed decisions about the future *(Collective Intelligence. Capitalizing on the crowd).*

In terms of methodology, Joseph Voros remarked that "foresight work" is similar to intelligence work. This can be conceived as comprising three broad steps which follow a logical sequence.

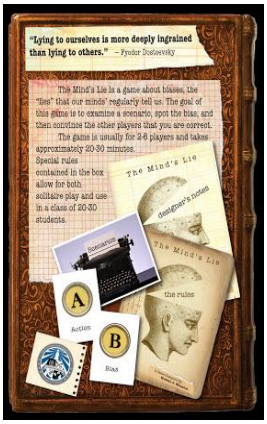
The first step is analysis, which is best considered as a preliminary stage to more in depth work, rather than as a stand-alone technique itself. Forecasting and trend analysis are the best known methods.

The results of the analysis are then fed into a second step, interpretation, which seeks to "probe beneath the surface" of the analysis to look for deeper structure and insights. This is the realm of critical futures studies and causal layered analysis, systems thinking, and other "depth" approaches to futures thinking.

The third step is the actual creation of forward views, prospection. "Prospection" is "the activity of looking forward and creating forward views. This is where various views of alternative futures are examined or created. It is where scenario planning, "visioning" and so-called "normative" ("preferred" futures) methods are located in the broader foresight process.

Great consideration has been given to the existing large palette of futures methods and techniques. Causal Layer Analysis (http://metafuture.org/Articles/CausalLayeredAnalysis.htm)and Integral Futures (Slaughter, 2005, pp. 1185-1192) are at the core of methodological renewal, complementary methods and techniques are needed to increase the accessibility and impact of these existing approaches (Voros, 2001).

For the sake of debate, I propose an *I3C concept*: *Imagination, Innovation, Investment, Connections*. The input of Futures Studies in governmental intelligence doesn't necessarily resume to this, but I believe this is the essence of the fusion between these two fields.



http://sourcesandmethods.blogspot.ro

As for imagination, let's play seriously! Forecasting games, simulation, scenario exercises, and modeling, as futures analytical methods, are not new in intelligence. They were used by military commanders from ancient time to determine possible patterns, enemy strength or alternative solutions for practical tasks in order to gain competitive advantage in the field of shadow actions. Nowadays, they are driven to perfection in intelligence research labs and scientifically applied and tested in collaborative networks. For example, in 2008, *Wired!* Magazine (Spy games, 2008) revealed 3 PC-games (*Rapid Onset, Vital Passage, Sudden Thurst*) (http://www.mercyhurst.edu/mu-news/news/faculty-spotlight/2013) used by newly and soon-to-be intelligence analysts to analyze complex issues such as organized crime or terrorism. Kristan J. Wheaton, associate professor of intelligence studies at Mercyhurst University in Erie, Pennsylvania, has made a habit from challenging his students to play strategy games in order to practice their natural skills as analysts and operational agents. Kristan Wheaton's gaming skills featured him as a subject-matter expert in notable academic publications and served as the impetus behind Mercyhurst being ranked among the nation's "10 best colleges for game-based learning" by bestcollegesonline.com (http://www.mercyhurst.edu/mu-news/news/faculty-spotlight/2013). One of his recent games, "The Mind's Lie," helps students identify cognitive biases and find ways to mitigate them.

Innovation is impossible without foresight. Good actionable intelligence is also impossible without innovation, for simple reasons: vectors do not live in a separate world from intelligence officers; they can and usually are more interested in accessing innovative technologies in order to cover actions or gain actionable advantages.

Anticipating future needs investment. It takes time, money, and human effort. These 3 resources are essential for intelligence analysts and futurists in order to accomplish their missions or goals. It involves investment in new technologies and development of revolutionary scientific domains, and it involves investment in people with original ideas, vision, patience and commitment.

Success in foresight and intelligence work also involves connections. Analysts and futurists both must benefit from the wisdom of crowds. That means to pool the analysts'/ experts' combined information processing power as well as the unique perspectives they bring.

One solution in this area is cloud computing. From data analytics and information sharing to innovation and cost efficiencies, the significance of cloud computing is extremely important in creating necessary knowledge and fresh perspectives about how the future should look like.

Another solution is valuating collaborative networks. Again, Millennium Project offers a very good example about how collaborative networks can be used for getting valuable validated information, through its Global Futures Intelligence System.

According to project disclaimer, "GFIS is The Millennium Project's new way for you to participate with and have access to all of our resources in one place. Participants can interact with all the elements of the system, make suggestions, initiate discussions with experts around the world, and search through over 10,000 pages of futures research and 1,300 pages of methods. The text has built-in Google translation with 52 languages" (http://millennium-project.org/millennium/GFIS.html).

Challenges and opportunities

Futures studies are very ambiguous and complex endeavors. They come with different names (futures research, futures studies, futures analysis, futurism, futuristics, futurology, prospective studies, etc.), different methodologies, complex argumentation and multiple plausible alternatives for better decision-making processes. This concept is extremely generous and it integrates various dimensions, such as anticipation, foresight, prognosis, and forecast. Even the community of practice is still divided about the name the practitioners should have, coming to a common ground with the notion of 'futurist'. They are still in search for a scientific field for prospective studies and argue about the theories they should promote. But the work they have done so far is very useful, no matter how they call it.

The main characteristic of this scientific discipline is the perishability of the solutions it offers, under the pressure of technological evolution and cultural changes – what appears to be out-of-the-box and challenging in the present can be outdated tomorrow. Futurists, in that sense, have the additional burden of making an initially-ridiculous idea plausible by

marshalling appropriate evidence and weaving alternative scenarios of its possible developments.

But the opportunities of using futures studies in the framework of intelligence and integrating them into analyst toolkit prove to be far more important.

First, they provide a framework for creatively and proactively exploring the possibilities and working toward a safer future. They have relevant inputs in decision-making processes, education or technology, setting the knowledge base of modern society. They make the best of intuition theories, in the same time relying on structured analytical methodology.

Second, they provide a sound, diverse, and solid scientifically-based methodology. Some methodological instruments are adapted from sociology, statistics, mathematics or political sciences; some are experimentally generated by the futurists. Through environmental scanning, trend impact analysis, cross-impact analysis, prediction market, etc. futures studies intend to solve tomorrow's problems today, and discover opportunities early on. A very good permanently updated compendium of futures methodologies is offered by the Millennium Project. Either way, intelligence analysts benefit from this experience. People often just choose one foresight activity as a stand-alone project, i.e. horizon scanning or scenario building or visioning. This creates weak and ineffective foresight projects. What should be useful, instead, would be to sensitize oneself to change and identify the change emerging around oneself—one can then consider and map out the potential impacts of change, in which combinations of impacts create scenarios of alternative possible futures.

Third, they create flexibility in decision-making by moving from a focus on one future to an analysis of alternative futures, moving from the management of reality to the creation of possibilities and from narrow problem-solving approaches to broader and deeper systemic and trans-disciplinarian perspectives and solutions.

Forth, they change the temporal horizon of planning from the short to the medium and long term; indeed, strategic foresight provides methods and tools to navigate the three horizons (short, medium and long term).

Fifth, they reduce risk by understanding the worldviews of multiple stakeholders. Blind spots - which are always built into the knowledge framework of each person and organization - are addressed by including difference. This makes implementation far easier and moves the focus from risk avoidance to risk reduction, and risk management to the creation of opportunities and innovation (Inayatullah, 2013).

Conclusions

Maybe we are too enthusiastic when we envision future intelligence as "the Big Game of assumptions and understandings", but ignoring the multiple possibilities futures studies bring into the intelligence processes in order to cope with uncertainty is worse that living in uncertainty. We have to find practical ways to use the future as part of the process of discovering and creating the present.

Without doubt, futures studies improve the intelligence analysts' capacity to reframe and attract collective intelligence and help them create a "foresight culture", meaning to engender a better anticipation of trends in both short and long terms. From this perspective, if we have to make predictions about "the future of intelligence", we can say that it would be cloud-based, collaborative, high tech, but still subjective to error due to human nature.

Aknowledgment: This paper has been financially supported within the project entitled "Horizon 2020 - Doctoral and Postdoctoral Studies: Promoting the National Interest through Excellence, Competiti veness and Responsibility in the Field of Romanian Fundamental and Applied Scientific Research", contract number POSDRU/159/1.5/S/140106. This project is co-financed by European Social Fund through Sectoral Operational Programme for Human Resources Development 2007-2013. Investing in people!

References:

1. Bell, Wendell, *Foundation of Futures Studies: History, Purposes, and Knowledge*, vol. 1 (New Jersey: Transaction Publishers, 2003).
2. Coote, Jennifer, "A Simple Guide to Futurewatching", *Journal of Futures Studies*, March 2012, 16(3): 107-112.
3. Hines, Andy, Gold, Jeff, „Professionalizing foresight: Why do it, where it stands, and what needs to be done", *Journal of Futures Studies*, June 2013, 17(4): 35-54.
4. IBM Institute for Business Value, *Collective Intelligence. Capitalizing on the crowd*, accessed 30 August 2013 at http://www-935.ibm.com/services/us/gbs/thoughtleadership/ibv-collective-intelligence.html.
5. Inayatullah, Sohail, "Futures Studies The Six Pillars Approach", Report from the Futures Workshop *Creating alternative and preferred futures*, accessed 30 July 2013 at http://www.ibo.org/ibap/conference/2013keynotespeakers/documents/Futures-workbook-ibap-arc-2013.pdf.

6. Jensen, Carl J., "Beyond the Tea Leaves, Part II: Integrating Futures Research Into Intelligence Analysis", paper presented at *Understanding and Improving Intelligence Analysis: Learning from other Disciplines Conference*, 12-13 July 2012, London, England.
7. Miller, Riel, "Futures Literacy-Embracing Complexity and Using the Future", *Ethos*, October 2011, 10: 23-28.
8. Slaughter, Richard, "Review of Mapping the Global Future, NIC, Washington DC, 2004", *Futures* 37, 2005: 1185-1192.
9. Voros, Joseph, "A Primer on Futures Studies, Foresight and the Use of Scenarios", *Foresight Bulletin*, no. 6, December 2001, Swinburne University of Technology, accessed 30 July 2013 at http://www.academia.edu/672713/A_Primer_on_Futures_Studies_Foresight_and_the_Use_of_Scenarios.
http://metafuture.org/Articles/CausalLayeredAnalysis.htm, accessed 30 July 2013.
10.www.wired.com/politics/security/news/2008/04/spy_games?currentpage=all, accessed 5 August 2013.
11.http://www.mercyhurst.edu/mu-news/news/faculty-spotlight/2013/wheaton%20aims%20to%20kick%20start%20yet%20another%20game, accessed 5 August 2013.
12. http://millennium-project.org/millennium/GFIS.html, accessed 5 August 2013.