Escape from Mind-Set Prison:

Psychological impediments to the intelligence effort and Structured Analytical Techniques

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It is the curse of intelligence agencies that their successes must remain hidden and that their failures are widely publicized. Nonetheless, intelligence failures are inevitable. It is impossible to predict the future, so ultimately forecasting on threats remains guesswork. Lessons learned from the past enable us to identify certain mistakes that have contributed to intelligence failures (Gill & Pythian, 2012, 169), mistakes that many times originated from psychological mind-sets. As such they act as impediments to the overall intelligence effort and are common causes of failures. With the benefit of hindsight (Omand, 2010, p. 239), attempts have been made to identify them (Bar-Joseph & McDermott, 2010, pp. 366-372; Goodman, 2007, pp. 529-551; Heuer, 1999, pp. 161-170; Marrin, 2004, pp. 655-672), and in so doing tentative solutions can be put forward to help prevent these mistakes from further contaminating the intelligence process.

Intelligence services are organizations for human beings, of human beings, and by human beings: they are therefore fallible and mistakes will happen. Typically human thought processes, first impressions, prejudices, disagreements and a whole range of other shortcomings interact to impede the intelligence effort. Rarely one sets to work on a particular problem with an open mind; certain perceptions very easily dominate the view that is taken (Heuer, 1999). The ability to detect the out-of-the-ordinary is usually blurred by the change-resistant cognitive patterns employed by analysts to make sense of large amounts of information: “... analysts become acclimatized and such intelligence as may be produced is hard to accept since it would involve those concerned in being prepared to admit that things will change” (Omand, 2010, pp. 212-213; Heuer, 1999, 5-6, 10; Honig, 2007, 706 Omand, 2010, 225-226). Eventually that results in generalizations, predetermined beliefs and a biased approach, with mistaken assumptions as a consequence that can be detrimental to security (Betts, 2007, 22-23, 54-59; Heuer, 1999, 111-160). Organizational culture can also lead to subconscious thought patterns that stand in the way of getting to the right judgement or convincing the policy-maker – often impeded by path dependence – to act upon it (Betts, 2007, 11-14, 24-27). And then, for certain policy priorities good intelligence is only regarded as that which supports those priorities (Betts, 15, 19; Lowenthal, 2012, 202-207, Marrin, 2004, 660, 665). That also makes it clear that the impediments affect both producers and consumers of intelligence (Gill & Pythian, 2012, 149). Policy-makers might find themselves comforted in denial of certain clear facts or are unwilling to act upon sound intelligence, hampered as they are by budgetary constraints or fear of burning one’s fingers.

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2 Here there is a conscious choice for the word ‘impediments’, and not, as was put forward by the scholar who first pointed out these causes of intelligence failure, ‘enemies of intelligence’ (Betts, 2007). Certainly as there is no scholarly consensus on the very concept of intelligence, it should not be viewed as a stand-alone independent entity that can have enemies.
on sounding an unnecessary alarm (Betts, 2007, 25-37). Warning fatigue is a dangerous psychological impediment, for there is no way of knowing whether acting upon the warning was useless or led to the adversary’s postponement of their plans, while the analyst or decision-maker is held responsible for causing a great deal of – often very costly – trouble because of a threat that failed to materialize. Anticipation can make or break careers, and concern for one’s job can severely cloud one’s judgement.

There is an ongoing debate whether these impediments can be overcome or not. In this debate two schools of thought are opposite one another: revisionists tend to believe solutions are possible, while those of the orthodox line of thought hold the fatalist approach that little can be done to remedy these shortcomings in intelligence analysis (Honig 2007, 699-716). But lessons of the past, while perhaps confirming the orthodox view, offer the inherent means to adjust the intelligence process in order to improve and make the professionals conscious of their limitations. Scholarly research makes it clear that a sufficient amount of safeguards can be implemented to try and circumvent the obvious psychological traps inherent to analysis (See for instance the recommendations by Heuer, 1999, 16; Marrin, 2011; Marrin, 2004, 668-669). Much has been said in this regard about dissenting opinions, devil’s advocacy, exceptional thinking and other reforms (Betts, 2007, 37-52; Marrin, 2004, 664-665) that can help to critically reflect on the mental processes by which (mis)perceptions form. At the core of most recommendations is the virtue of mixing expertise with generalism: “specialization encourages rivalry and restriction of information, as each unit becomes a guardian of its own mission, standards, and skills” (Honig, 2007, 708). Experts can get lost in their own superior knowledge of the subject and fail to see an obvious trait of the problem they are trying to analyse or try to uphold the importance of their field even though this could deflect attention from more pertinent issues. Some argue that a non-specialist look can help to change the perspective and is a key element to separating the wheat from the chaff (Gill & Pythian, 2012, 105; Omand 2010, 225; Betts 2007, 53-65).

Improving the quality of intelligence analysis is the key to avoid intelligence failures as much as possible. Analytical mind-sets have been recognized as one of the main causes of intelligence being analysed wrongly and ever since much effort has been undertaken in both scholarly and tradecraft literature to find the best ways of being conscious of these psychological impediments and how to overcome them (Hoffman, Henderson, Moon, Moore & Litman, 2011, 226-228; Pherson, 2009, 1-8; George, 2004, 387-393; Treverton & Fishbein, 2004, 1-10). In order to achieve this the US intelligence community has developed a number of Structured Analytical Techniques (SATS), which “externalize and decompose our thinking in a manner that enables it to be reviewed and critiqued piece by piece, or step by step, by other knowledgeable analysts.” (Heuer, 2008, 3). As such “they help analysts overcome one or more of the well-known human cognitive limitations or pitfalls that inhibit effective analysis.” (Heuer, 2008, 4) The many difficulties of intelligence analysis require a number of techniques to cope with them: SATS are foremost in current tradecraft (Hoffman et al., 2011, 228-236). These techniques can consist of one or more intellectual exercises in thinking that challenge the views held so far or can stimulate the formation of new hypotheses. Most SATS have apparent diagnostic value in their method and consequences and all lead to key examination of the evidence – so important to improved intelligence analysis (Heuer, 1999, 183). In what is certainly not an exhaustive list, they are as follows (Central Intelligence Agency, 2009, 7-36; Pherson, 2009, 2-6; George, 2004, 394-398):

- Key Assumptions Check: analysts identify key assumptions and their bases. In this way the argumentation behind the conclusions becomes clear, which allows critical reflection and validation.
• Quality of Information Check: review of sources and their strengths and weaknesses, possibly by means of a database that can be used for future reference.
• Analysis of Competing Hypotheses (Heuer, 2007, 1-5): developing a matrix of alternative hypotheses against which the evidence is weighed so the most likely conclusion can be identified and deception detected.
• Devil’s Advocacy: challenging conventional wisdom and formulating an alternative explanation, which either confirms the analytical view or invites rethinking it.
• Team A/Team B: two opposing sides lay out their divergent hypotheses and describe how the data supports their conclusions. This invites reflection on the logic of the conclusions and allows for the view of all sides on important issues.
• Red Team Analysis: thinking as the adversary. Main achievement of this technique is the prevention of mirror-imaging but is subject to great knowledge about the adversary in order to translate oneself into the red team’s culture.
• Contingency Analysis: “what if?” analysis, focuses on the possible causes and consequences of an unlikely event. It is useful when information is limited, by thinking about how something can happen rather than if.
• High Impact=Low Probability Analysis: analysts look for domestic and international factors that could lead to an unlikely event that would have huge consequences. It can lead up to a collection of indicators that can provide early warning.
• Scenario Analysis (Alternative Futures): exploring possible outcomes by developing a matrix of possible alternative scenarios. It allows imagining what might happen and what the best responses could be. It could lead to better preparedness for when the analysis might prove wrong.

In abstract thinking on intelligence, SATs seem excellent tools to work with, but intelligence is needed in the real world and is therefore of little use in the abstract (Stack, 1997, 463). Despite the theoretical appeal SATs are not ultimate intelligence tools: “no approach, however fresh, could make the inherent difficulty of the cognitive work go away.” (Hoffman et al., 2011, 236). It can also be said that no approach will remedy it either. Intelligence is and will always be a matter for the human mind(s). The level of expertise required for some of these techniques could prove difficult to achieve – indeed, one could say a ‘Quality of Information Check’ is needed first for some of them –, neither will every professional be convinced of the virtues of employing these techniques (George, 2004, 400).

However, the main problem with the above techniques is the same problem that leads to so many intelligence failures (Pherson, 2009): time and resources (Gill & Pythian, 2012, 109; George, 2004, 401; Marrin, 2002, 10; Stack, 1997, 458). In a real time crisis when preparedness and rapid reaction is of the essence, time is a luxury intelligence and decision do not have. Unfortunately, arguing about hypotheses and checking them, through, for example, ACH, takes a lot of time. But when a highly volatile situation develops somewhere, every minute counts and so they should not be spent on counsel, not debate. Time constraints and the need to act fast also have their bearing on the consumption of intelligence. While many might appreciate the “more thoughtful, comprehensive analysis” (Pherson, 2009, 7) SATs produce, not all policy-makers consider themselves well served by this argumentative kind of intelligence (George, 2004, 399; Stack, 1997, 459-460): they want facts, not an academic seminar with contrary views and an outline of different possible outcomes. The consequence of the urgency of a situation that unfolds before our very eyes, is summed up perfectly by Richard Russell when he outlines this as a major obstacle to effective analysis:
“Political-military analysts working on conflicts are often peppered with daily and even hourly tasking for the production of current intelligence. They simply do not have the luxury of time needed to sit back, read, and think more broadly about strategic intelligence problems to develop even a common wisdom, much less alternative analyses. The immediate always takes precedence over the “nice to have,” the category into which competitive and alternative analysis falls among working level analysts.” (Russell, 2012, 383)

A short deadline makes it very understandable there is such sparing use made of analytic techniques in intelligence communities (Gannon, 2008, 223).

When time is not an issue, for long-term analysis, the techniques have great value. Not only for producing the most thought-through intelligence, but also because of the cognitive processes analysts go through when making use of SATs. Imagination and creative thinking (Heuer, 1999; Marrin, 2012) are at the core of SATs, not prediction. “The reported findings are not always judged as insightful as the critical thinking that went into the process.” (George, 2004, 400). The stimulating effects of the exercise are therefore of greater value than its possible ad hoc outcome. Having had experience of, but without using ACH, an analyst might construe a hypothesis in such a way as making it able to withstand its test. The same goes for any other sat the analyst might hold at the back of the mind. So while it might be cumbersome to subject analytic thinking to these techniques – in some cases even counterproductive – they could provide a subconscious framework wherein the abovementioned checks on hypotheses are employed, and so they are conducive to better methodology and self-critique (Heuer, 1999, 109; Heuer, 2008, 6-9; Marrin, 2012, 35). The end result is better intelligence.

As awareness of the many flaws inherent to human thinking and analysing is raised, critical attitudes can be adopted and will lead to producers and consumers towards being introspective and self-conscious about the work they are doing or that lays before them (Gill & Pythian, 2012, 200; Heuer, 1999, 5). Such attitudes are the main ingredients of making intelligence as little imperfect as can be. This is done by “self-awareness, training and good management” (Omand, 2010, 249); increasing (international) co-operation and interdepartmental exchange might also be conducive to the process (Omand, 2010, 15). Although most will remain classified for a long time, it can be assumed that intelligence successes surmount intelligence failures (Betts, 2007, 21; Gentry, 2012). But it is not always possible to piece the puzzle together in time (Marrin, 2012, 21-23; Marrin, 2004, 659; Omand, 2010, 239-240;). It is equally wrong to believe it can than it is to assume there is nothing that can be done to improve the effort. The ball will be dropped from time to time, but it always stays in court. Freedom from mind-sets means engaging the very difficult task of applying methods of critical thinking without getting lost in imagination and argument. Intelligence will remain at its best if those working for it and with it are very well aware of their fallacy and are willing to do something about it (George, 2004, 402; Marrin, 2012). Structural analytic techniques provide some excellent tools to do that.

It all comes down to one’s way of thinking. Analysis is, as Stephen Marrin has noted, far more about structured intuition than about structured analytic techniques (Marrin, 2007, 7-16.) Therefore intelligence analysts must, like historians, be at times psychologists. Not just to understand their adversary, but also because the effect of their warning depends on their ability to understand their political masters and their response to the warning. Empathy, openness, and feedback are keywords here, and Betts’ recommendation for a ‘Socratic dialogue’ (Betts, 2007, 51; (Omand, 2010, 249) could be helpful in this respect to improve
the way policy-makers think about what they can expect from intelligence. In order for such an interaction to occur, a careful balance must be found between having a close relationship between producers and consumers without running the risk of politicization (Marrin, 2004, 667). Above all, anyone who comes in contact with intelligence must be very well aware of the many limits facing the intelligence effort and therefore know what is realistic to expect and what is not (Honig, 2007, 712-713; Omand, 2010, 243). And in the pursuit of the set goals, it is essential to think freely and keep an open mind. Either could adopt as a working motto what Beatrice told Dante in Paradise:

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\text{Apri la mente a quel ch'io ti paleso} \\
\text{E fermali entro: ché non fa scienza} \\
\text{sansa lo ritenere, avere intenso.}\]

**Bibliography**


\[^{3}\text{Open thy mind to that which I reveal/And fix it there within; for ‘tis not knowledge/The having heard without retaining it.” DANTE, La Divina Commedia : Paradiso V, 40-42 (trans. H.W. LONGFELLOW).}\]


