

# The future of NLD DISS

## *A complex perspective*

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**Intelligence and security services operate in a complex environment in which developments move rapidly and the fog of war obscures the overall picture. It is vital for intelligence services such as the Netherlands Defence Intelligence and Security Service (NLD DISS) to remain adaptable, and complexity theory offers a logical and interesting perspective from which adaptations can be explored. This article focuses on three organisational characteristics central to this theory: requisite variety, minimum specifications and learning ability. Various challenges facing NLD DISS are identified, the most important of which are the implementation of data-driven working, the use of open sources and the establishment of partnerships.**

*Evacuation operation at Kabul's Hamid Karzai International Airport in August 2021. Several intelligence services warned of the possible collapse of the Afghan government but few predicted exactly how this would pan out*

PHOTO US MARINE CORPS, SAMUEL RUIZ



The tragic events in Afghanistan in the summer of 2021 and the recent Russian invasion of Ukraine demonstrate all the more that we live in an unpredictable and complex world. Although several intelligence services warned of the possible collapse of the Afghan government in the months prior to the fall, very few people predicted exactly how the situation would pan out. General Nick Carter, the highest-ranking British officer, summed up the situation by saying, 'It was the pace of it that surprised us and I don't think we realised quite what the Taliban were up to. They weren't really fighting for the cities they eventually captured, they were negotiating for them, and I think you'll find a lot of money changed hands as they managed to

buy off those who might have fought for them'.<sup>1</sup> And while US and British intelligence services in particular predicted the Russian invasion of Ukraine with great accuracy, many were surprised by the resistance put up by Ukraine's armed forces. These examples demonstrate how challenging it is to generate intelligence that is accurate, specific and timely and that also offers perspective for action. This challenge is determined largely by the complexity of the operating environment of intelligence and security (I&S) services. This article begins by addressing this environment and outlining several major developments that contribute to its complexity. The following section discusses the literature on complexity and introduces three characteristics that are required by I&S services in general, and NLD DISS in particular, in order to operate effectively in a complex environment of this nature. The article ends with a conclusion.

## Developments

I&S services such as NLD DISS face numerous developments, the most important of which are the changing nature of war and conflict, privatisation, globalisation, and the technology and information revolution, as outlined below.

### The changing nature of war and conflict

I&S services face a wide range of threats. During the Cold War these threats were reasonably straightforward and transparent, but nowadays the situation is different. A wide range of terms are used to denote the current conflicts and threats, such as asymmetric warfare, hybrid warfare, grey-zone warfare and non-linear warfare.

And of course the current conflict in Ukraine resembles conventional warfare in many ways, although classifying it as such with no further qualification would be an oversimplification.

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<sup>1</sup> Jessica Elgot, "'Everybody got it wrong' on Taliban strategy, says UK defence chief", *The Guardian*, 5 September 2021.

The common denominator of all these conflicts is the violence and threat of violence between various combinations of state and non-state actors. The boundaries between war and organised crime are highly diffuse, human rights are violated on a large scale, and all kinds of non-traditional weapons are deployed. In Mark Galeotti's most recent book this is described as the 'weaponization of everything'.<sup>2</sup> Concrete examples include the case of the refugees who were picked up in Syria by Belarusian president Lukashenko and then sent across his country's border with Poland, and the Swedish children who were made aware of the impending Russian threat through warnings issued between TikTok videos. Identifying these developments and protecting against the multitude of threats represent a huge challenge for I&S services.

#### Privatisation

A second development concerns the increasing role of private organisations in the I&S domain. First of all there are the civil contractors, who provide a wide range of goods and services varying from cloud services and security to personnel performing mission-critical tasks. Privatisation in the I&S domain has soared in countries such as Australia, France and the United Kingdom, but nowhere in the Western world is it as important as in the US, where around 80 percent of the total intelligence budget of \$80 billion goes to private contractors. This inspired Simon Chesterman's maxim 'We can't spy... if we can't buy'.<sup>3</sup> Besides the procurement of goods and services by contractors, non-profit collectives have also proliferated in recent years. These collectives, consisting of networks of volunteers, utilise the abundant

open sources that are available. While Bellingcat is the most prominent collective,<sup>4</sup> even an organisation such as Amnesty International has managed to gather evidence on war crimes in Sudan by mobilising 28,000 volunteers and utilising publicly accessible satellite images.

#### Globalisation

A third development is globalisation. In her pioneering study, Mary Kaldor describes globalisation as the intensification of global interconnectedness in the political, economic, military and cultural sphere.<sup>5</sup> Globalisation is increasingly blurring distinctions between the local, national, European and global strata, and this is having a considerable influence on the security situation. For example, globalisation has led to a substantial increase in transnational crime, including drug trafficking, people smuggling and technology theft. The boundary between internal and external security is also becoming more diffuse, and geographically defined national borders are becoming increasingly irrelevant to the categorisation of threats. Another consequence of globalisation is that government organisations no longer have sole ownership of intelligence. Individual citizens and private organisations are increasingly able to generate intelligence in competition with I&S services. In her recent book *Spies, Lies, and Algorithms*, Amy Zegart ascribes this to the accessibility of satellite data, the increased connectivity and availability of information, and the available processing power of computers.<sup>6</sup>

#### Technology and information revolution

Technology and technological developments such as biotechnology, quantum computing, radar technology and artificial intelligence are undeniably of crucial importance to intelligence and security organisations. However, while military organisations were previously pioneers in the development of new technology, this is no longer the case, as universities and tech companies have been the primary innovators for quite some time.

Many technological developments are taking place in the information domain. For example,

2 M. Galeotti, *The Weaponization of Everything. A Field Guide to the New Way of War* (New Haven, Yale University Press, 2022).

3 S. Chesterman, "We Can't Spy... If We Can't Buy!": The Privatization of Intelligence and the Limits of Outsourcing 'Inherently Governmental Functions', *European Journal of International Law*, Vol. 19, No. 5 (2008) 1055-1074.

4 See E. Higgins, *We are Bellingcat* (Amsterdam, Spectrum, 2021).

5 M. Kaldor, *New and Old Wars. Organized Violence in a Global Era* (Cambridge, Polity Press, 1999) 71.

6 A. Zegart, *Spies, Lies, and Algorithms. The History and Future of American Intelligence* (Princeton, Princeton University Press, 2022).





Contradictory reports on the conflict in Ukraine hamper interpretation of the large volume of data in circulation

PHOTO TEUN VOETEN

in recent years developments in ICT have led to a massive rise in the volume of data that is generated and shared by companies, government institutions, scientific researchers, civilians and others. In the literature this data development is often referred to in terms of the so-called Vs,<sup>7</sup> which denote various aspects relating to data such as the large volumes, structured and unstructured forms, different formats such as text, video, images and sound recordings, major reliability discrepancies, and rapidity of access. The lack of reliability, for example, is clearly illustrated by the contradictory reports on the conflict in Ukraine. Data is often incomplete, ambiguous, contradictory or simply untrue, which makes it very difficult to interpret the information it contains.

The developments briefly outlined above are determining factors with regard to the complexity facing I&S services in general and NLD DISS in particular. This situation shows

strong parallels with the so-called wicked problems,<sup>8</sup> which are ambiguous and fuzzy and which cannot be adequately resolved through the application of existing knowledge and standards. Even if something faintly resembling a solution is devised, it will not be possible to apply it across the board since different situations require different solutions. The literature on complexity defines various characteristics required by organisations in order to respond adequately to these wicked

7 Depending on the source, 3, 4 or even 7 Vs define the key aspects of data: Volume (large data sets consisting of terabytes, petabytes, zettabytes of data or more); Variety (multiple data formats with structured and unstructured text, images, audio files, videos, sound fragments or sensor data); Veracity (increasingly complex data structures, inconsistencies and incompleteness in data sets); Velocity (large volumes of incoming data with no homogeneous structure); Variability (data with constantly changing meaning); Visualisation (the presentation of data in a clear and comprehensible way); Value (the extraction of knowledge from large quantities of structured and unstructured data with no loss for the end users).

8 H. Rittel and M. Webber, 'Dilemmas in a General Theory of Planning', *Policy Sciences*, Vol. 4, No. 2 (1973) 155-169.

problems.<sup>9</sup> Three of these characteristics – requisite variety, minimum specifications and learning ability – and their relevance to NLD DISS are discussed in this article.<sup>10</sup>

## Requisite variety

The first characteristic is based on Ashby's law of requisite variety,<sup>11</sup> which states that in order to be viable a system must have a level of internal variety equivalent to that of its environment. Only then will the system be capable of identifying and facing up to challenges.<sup>12</sup> In the case of NLD DISS, this means that the service must fulfil multiple, wide-ranging information requirements, varying from the identification of cyber threats from hacker groups affiliated with China or the Russian Federation to the detection of terrorist activities

by groups such as Islamic State of Iraq and al-Sham (ISIS). This calls for highly diverse knowledge and expertise covering many different areas. An organisation that attempts to cover all these information requirements is in danger of becoming overly complex,<sup>13</sup> so in order to avoid this complexity it is essential to cooperate with various stakeholders. NLD DISS works with a wide diversity of stakeholders<sup>14</sup> within the Netherlands Ministry of Defence<sup>15</sup> and other ministries,<sup>16</sup> in addition to partner intelligence services in other countries, the business sector,<sup>17</sup> the scientific community and non-profit organisations. Managing all these partnerships is a huge challenge, particularly for an organisation that is intrinsically secret and quite closed. While the focus is often placed on formal cooperative structures, research by Pepijn Tuinier reveals that mutual trust and social relations are equally important, if not more so.<sup>18</sup> Ties between intelligence professionals are founded on reputation, acknowledged professionalism and shared characteristics. This helps them to bridge the divides created by nationality, organisation or even conflicting interests.

Besides cooperation, diversity is another important enabling factor in the quest for the requisite variety.<sup>19</sup> Cultural diversity is often viewed as the primary expression of diversity, based on race, skin colour, religion, gender, sexual orientation, background and age,<sup>20</sup> but cognitive diversity is also important since it offers different perspectives, experiences and ways of thinking. In his book *Rebel Ideas*, Matthew Syed suggests that complex problems must be viewed from different perspectives in order to release a group or organisation from the constraints of conventional frames of reference and thought patterns.<sup>21</sup> A classic example of the importance of diversity is the CIA's failure to pick up on the various signals that preceded the 9/11 terrorist attacks, a failure that can be attributed partly to the predominance of highly educated white males on its staff.

A distinctive feature of NLD DISS's workforce is the mix of military and civilian personnel. The civilians outnumber the military personnel and

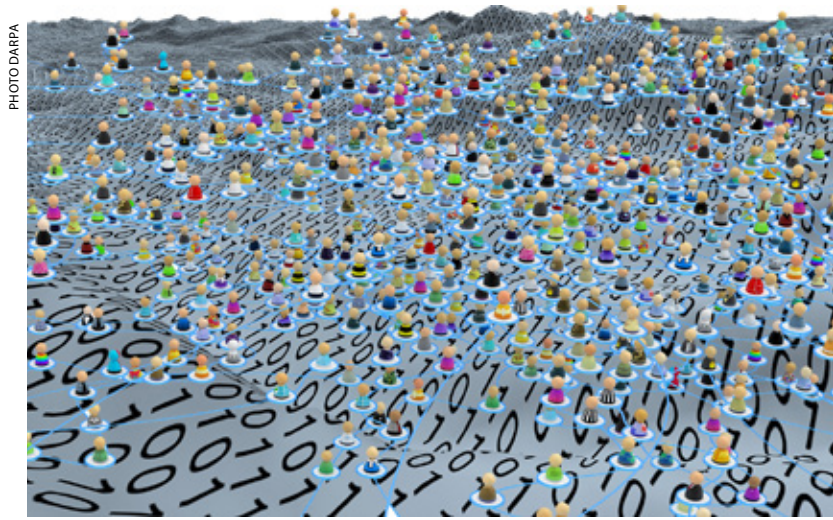
- 9 See also S. Brown and K. Eisenhardt, 'The art of continuous change. Linking complexity theory and time-paced evolution in relentlessly shifting organizations', *Administrative Science Quarterly*, Vol. 42, No. 1 (1997) 1-34.
- 10 These analyses are based on available literature and documents as well as informal conversations with NLD DISS personnel. A draft version has been presented to three peer readers in order to reinforce validity and reliability.
- 11 W. Ashby, *An Introduction to Cybernetics* (London, Chapman & Hall, 1956).
- 12 See also G. Morgan, *Images of Organization. The Executive Edition* (Thousand Oaks, Sage, 2006).
- 13 K. Desouza, 'Information and Knowledge Management in Public Sector Networks. The Case of the US Intelligence Community', *International Journal of Public Administration*, Vol. 32, No. 14 (2009) 1219-1267.
- 14 See also H. de Bruijn, *Managing Performance in the Public Sector* (London, Routledge, 2007).
- 15 Including the Directorate-General of Policy (DGB), the operational commands, the Special Operations Command (SOCOM) and the Joint ISTAR Command (JISTARC).
- 16 Including the General Intelligence and Security Service (GISS), National Cyber Security Centre (NCIS), National Coordinator for Security and Counter-Terrorism (NCTV) and the various departments of the Netherlands Ministry of Foreign Affairs.
- 17 Including cyber security companies such as Fox-IT.
- 18 P. Tuinier, T. Brocades Zaalberg & S.J.H. Rietjens, 'The Social Ties that Bind: Unraveling the Role of Trust in International Intelligence Cooperation', *International Journal of Intelligence and CounterIntelligence* (2022) DOI: 10.1080/08850607.2022.2079161.
- 19 See also J. Gentry, 'Demographic Diversity in U.S. Intelligence Personnel: Is it Functionally Useful?', *International Journal of Intelligence and CounterIntelligence* (2021).
- 20 R. Callum, 'The Case for Cultural Diversity in the Intelligence Community', *International Journal of Intelligence and CounterIntelligence*, Vol. 14, No. 1 (2010) 25-48.
- 21 M. Syed, *Rebel Ideas. The Power of Diverse Thinking* (London, John Murray Publishers, 2020).



have diverse backgrounds, frames of reference and types of experience. For example, they may have knowledge relating to a specific country, mastery of a particular language, hacking expertise or experience with large data sets. However, it is the military expertise and knowledge that distinguish NLD DISS from other organisations and enable the service to fulfil its responsibilities,<sup>22</sup> and NLD DISS's increasing difficulty in attracting and retaining sufficient military personnel is therefore cause for concern. Another related factor is that NLD DISS employees have followed a wide range of different educational programmes. In terms of the traditional distinctions between the arts (history, languages), the sciences (physics, IT) and the social sciences (psychology, sociology, economics), personnel with a background in science are scarce. Given the significant developments in the information domain, it is vital for NLD DISS to recruit and hold on to people with expertise in science and technology. Facing competition with many other knowledge-intensive organisations in this employment market, NLD DISS attracts creative people with a science background through initiatives such as the annual summer school organised by the Joint Sigint Cyber Unit.<sup>23</sup> However, managing diversity involves more than just a varied workforce, which is why NLD DISS established the Devil's Advocate in 2008.<sup>24</sup> This office is charged with questioning the dominant train of thought within NLD DISS and proposing alternative perspectives with a view to reducing groupthink.<sup>25</sup> Other diversity management challenges facing the service include the creation of a collective identity, the combination of different leadership styles, optimum utilisation of the diverse backgrounds and areas of expertise, and the provision of a wide range of career and training opportunities.<sup>26</sup>

## Minimum specifications

The second characteristic that enables organisations to cope adequately with complexity concerns minimum specifications. This entails specifying only the most essential aspects so that the individuals actually tasked



NLD DISS has a mixed workforce comprising military and civilian personnel who introduce different perspectives, experiences and ways of thinking based partly on their diverse educational backgrounds in the arts, sciences and social sciences

with the activities have the freedom to experiment and question existing procedures, norms and performance criteria. Karl Weick refers to this as 'the charm of the skeleton',<sup>27</sup> emphasising the need to strike a balance between keeping a firm control over the organisation while simultaneously relaxing application of the regulations. In the intelligence domain these minimum specifications create a paradoxical situation. I&S services need room to manoeuvre when addressing complex intelligence issues, since intelligence teams are increasingly confronted with unknown threats, referred to in this field as 'unknown unknowns'. An important strategy for identifying such unknown threats is the concept of enactment, or, in the words of Dan Isenberg, 'fighting

22 See Article 10 of the Intelligence and Security Services Act 2017 (Wiv).

23 See <https://jscu.summerschool.sh>.

24 A. Claver and H. van de Meeberg, 'Devil's Advocacy within Dutch military intelligence (2008-2020). An effective instrument for quality assurance?', *Intelligence and National Security*, Vol. 36, No. 6 (2021) 849-862.

25 Claver and Van de Meeberg (2021).

26 NATO STO HFM-226 Task Group, *Civilian and Military Personnel Integration and Collaboration in Defence Organisations* (Brussel, NAVO, 2018); I. Goldenberg e.a., 'Integrated defence workforces. Challenges and enablers of military-civilian personnel collaboration', *Journal of Military Studies*, Vol. 8 (2019) 28-45.

27 K. Weick, 'Rethinking Organizational Design', in R. Boland and F. Collopy (Eds.), *Managing as Designing* (Stanford, Stanford University Press, 2004) 36-53.



Statement by an attendee at the announcement of the advisory referendum on the Wiv in 2018: the level of public support restricts the scope of NLD DISS's activities

PHOTO ANP, REMKO DE WAAL

empirically'.<sup>28</sup> Enactment is based on the symbiotic relationship between an organisation and its environment, the assertion being that only organisations that take concrete action can comprehend and adapt to their environment. In this regard it is necessary to constantly reflect upon the situation rather than to regard the environment as a static entity. Offensive counter-intelligence operations such as breaking into the computer networks of a rival service are a good example of how I&S services interpret the concept of enactment. In principle the aim of these operations is not to put a stop to hostile intelligence operations but rather to acquire as much information as possible on the adversary, his operations and the development of his covert activities.<sup>29</sup>

A second strategy for identifying unknown threats is to detect correlations in large quantities of data such as bulk data sets. The aim of this strategy, often referred to as the data-driven approach, is to recognise general trends and deviations and thus diminish the influence of cognitive prejudices.

The minimum specifications characteristic does not imply that the activities of I&S services should be free of all restrictions. Various mechanisms exist to limit their scope. The Intelligence and Security Services Act 2017 (Wiv 2017) Evaluation Committee<sup>30</sup> and the Netherlands Court of Audit<sup>31</sup> have clearly identified where the tensions lie between the operational striking power of the I&S services and the implementation of the Wiv 2017, including the associated supervisory regime. The main tensions arise in relation to the collection and processing of bulk data, the automated data analysis, the cooperation with foreign services and the regulatory system. For example, Article 26 of the Wiv stipulates that when collecting bulk data sets the services must satisfy the requirements of necessity, proportionality and

28 D. Isenberg, 'Some Hows and Whats of Managerial Thinking', in J. Hunt and J. Blair (Eds.), *Leadership of the Future Battlefield* (New York, Pergamon, 1985).

29 B. de Jong and P. Keller, 'Contra-inlichtingen en contraspionage', in B. de Graaf, E. Muller and J. van Reijn (Eds.), *Inlichtingen- en Veiligheidsdiensten* (Alphen aan den Rijn, Kluwer, 2010) 280.

30 Wiv 2017 Evaluation Committee, *Evaluatie 2020: Wet op de Inlichtingen- en veiligheidsdiensten 2017* (2021).

31 *Slagkracht AIVD en MIVD. De wet dwingt, de tijd dringt, de praktijk wringt* (The Hague, Netherlands Court of Audit, 2021).

subsidiarity. Another important requirement is that data collection must be targeted. This means that the service must do everything that is reasonably within its power to minimise the by-catch of data that is not essential to the investigation and to explain how this is to be achieved when requesting permission to exercise investigatory powers.<sup>32</sup> The service must also demarcate its search as far as possible in terms of location, time, type of data, object or conduct. However, this demarcation conflicts with the need to identify unknown threats.

In addition to the legal regime, the activities of the services are limited by the Integrated Directive (*Geïntegreerde Aanwijzing – GA*). This document must be compiled on the basis of close consultation between the requisitioners and the services and must describe the target of the investigation, the intended goals and the priorities. The depth of the investigation must also be indicated per theme.<sup>33</sup> The GA is relatively effective in the case of known unknowns, when the investigators know there are things they do not know, and it is also a good instrument for allocating resources to a service and evaluating their results. However, in the case of unknown threats this directive is often felt to be too restrictive. The GA is valid for four years but can be adjusted annually, although an annual cycle seems too long to enable an adequate response to new and unforeseen threats to national security.<sup>34</sup> The legislator has attempted to overcome this problem by granting limited discretion to the Minister of the Interior and Kingdom Relations and the Minister of Defence to issue supplementary investigation orders. The Wiv 2017 also explicitly states that the services can continue to utilise their capabilities to identify unknown threats. However, I&S services will be inclined to prioritise the assignment of capabilities to those investigation themes for which they are accountable. Although this is understandable, it helps to create a situation in which unknown threats receive less attention than they deserve.

A final restriction governing I&S activities concerns public support and the associated balance between transparency and confidential-

ity. Many companies and government organisations collect and use personal details pertaining to civilians. It is often unclear why this data is collected, what it is used for and the extent to which this is in the citizens' interest. This lack of clarity is a major cause for concern within society, particularly in relation to privacy, since this data could be used for profiling, influencing or even manipulating citizens.<sup>35</sup> Special investigatory powers have been assigned to I&S services by society through the legislator, and consequently it is vital for these services to preserve public support and keep their activities as transparent as possible. Public perception of NLD DISS has been damaged not only by the sweeping revelations relating to the interception activities of the US National Security Agency (NSA), but also by recent reports on the activities of the Netherlands army's Land Information Manoeuvre Centre (LIMC)<sup>36</sup> and the NCTV's analysis division.<sup>37</sup>

In summary, the minimum specifications dilemma can be resolved by striking a fine balance between responsibilities, room to manoeuvre and restrictions. In order to perform its tasks effectively, NLD DISS needs room to manoeuvre, for example in relation to the above-mentioned enactment concept, but is restrained mainly by the legal regime, the GA and public perception.

## Learning ability

The third characteristic relates to the learning ability of an organisation. The literature on organisations distinguishes between single loop learning (making relatively simple adjustments and implementing corrections), double loop

32 Parliamentary papers II 2018/2019, 35 242 No. 3, p. 5 (Explanatory Memorandum Wiv 2017 amendment).

33 P. Abels, *PER UNDAS ADVERSAS? Geheime diensten in de maalstroom van politiek en beleid* (Leiden, Leiden University, 2018).

34 Abels (2018).

35 Wiv 2017 Evaluation Committee (2021) 22.

36 E. Rosenberg and K. Berkhout, 'Militairen zouden dit zelf heel netjes moeten willen regelen', *NRC*, 16 November 2020.

37 A. Kouwenhoven, E. Rosenberg and R. van der Poel, 'Onmin en uitglijders bij de club die het land moet beschermen', *NRC*, 9 April, 2021.



## The minimum specifications dilemma calls for a fine balance between responsibilities, room to manoeuvre and restrictions

learning (reframing and perceiving subjects in a new way), and triple loop learning (developing new processes or methods in order to enable reframing and new perspectives).<sup>38</sup>

There are clear examples of single loop learning within NLD DISS. Learning is continuous at both individual and team levels. For example, employees increasingly use open sources and data analysts experiment with the available software applications and models. However, few formal procedures exist at the organisational level to codify experiences and lessons learned, and while some employees register their experiences and lessons (often in self-designed formats), others pay little attention to this, resulting in fragmentation and preventing

structural comparisons and analyses of the lessons learned. This problem is exacerbated by the limited term of office of military personnel in particular, who frequently move to a new position, leading to a loss of knowledge and the need to re-establish relationships. In addition, managers often have a preference for personnel who can be deployed operationally rather than personnel charged with registering and codifying acquired knowledge. Although this may be understandable from an operational perspective, it is detrimental to the organisation's learning ability. Finally psychological security plays an important role in learning ability. This concerns the capacity for critical self-reflection and criticism of the team and the organisation as a whole based on the expectation of constructive feedback from colleagues and managers when doing so. Only then will an organisation actually learn.

The double loop learning level represents a gradual change in the approach to intelligence issues. In the intelligence literature this is explored within the context of two schools of thought<sup>39</sup>. The first of these, derived from Jomini's theory of war, constitutes an attempt to systematically unravel the environment. The well-known spaghetti diagram created by General Stanley McChrystal and his staff to portray the situation in Afghanistan is a good example of this.<sup>40</sup> Critics of this approach point out that it is simply impossible to include all relevant elements in a single analysis,<sup>41</sup> and even if this were possible, the result would often be a stark simplification of reality with no satisfactory solution to the problem. The second school of thought acknowledges the problematic nature of this approach and instead places the emphasis on complexity and the associated uncertainty and confusion. This is often equated to the 'fog of war', a term introduced by the Prussian General Carl von Clausewitz, who stated that three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty.<sup>42</sup> According to this school of thought, a sensitive and discriminating judgement that approximates the truth or truths is the most that can be achieved.<sup>43</sup>

38 See also A. Romme and A. van Witteloostuijn, 'Circular organizing and triple loop learning', *Journal of Organizational Change Management*, Vol. 12, No. 5 (1999) 439-453.

39 See also W. Agrell and G. Treverton, *National Intelligence and Science. Beyond the Great Divide in Analysis and Policy* (Oxford, Oxford University Press, 2015).

40 See <https://www.theguardian.com/news/datablog/2010/apr/29/mcchrystalafghanistan-powerpoint-slide>.

41 K. Galster, *The Face of the Foe. Pitfalls and Perspectives of Military Intelligence* (Kingston, Legacy Books Press, 2015).

42 C. von Clausewitz, *Vom Kriege* (1832). Translated by M. Howard and P. Paret, *On War* (New Jersey, Princeton University Press, 1984).

43 Galster, *The Face of the Foe*.

The Dutch intelligence community still harbours many advocates of the Jomini approach, who often seek to unravel an environment systematically using tools such as the PMESII (Political, Military, Economic, Social, Information and Infrastructure) framework. Another frequently voiced expression is ‘speaking truth to power’, which implies that there is one single discernable truth, a notion that is clearly at odds with complexity theory. Even so, ideas are slowly but surely shifting towards the Clausewitz approach. Many of the parties concerned acknowledge that it is simply not possible to make the fog clear completely and they consequently recognise the need to manage complexity and uncertainty. This was underlined during a recent seminar on the occasion of the 20th anniversary of NLD DISS.<sup>44</sup> In this seminar, aptly entitled *Fog of War 2.0*, almost all speakers alluded to the confusing circumstances and the impossibility of acquiring full environmental awareness.

With awareness of this paradigm shift gradually dawning, it is important for NLD DISS to develop new processes or methods to enable an adequate response. This constitutes the third level of learning: triple loop learning. One of the greatest challenges at this level is the use of open sources. The conflict in Ukraine has reinforced the importance of open source intelligence (OSINT). There are many examples that illustrate this, ranging from the satellite data provided by Maxar Technologies to the Live Universal Awareness Map (Liveuamap), which tracks near real-time battlefield developments and depicts these on a map.<sup>45</sup> Open sources have several advantages. For example, OSINT enables already available intelligence to be placed in a broader context, it is less expensive than other intelligence capabilities, it can be used to compare intelligence products from different services, and it can easily be scaled up and disseminated.<sup>46</sup> John Gannon, former deputy director of the CIA, recognised this as early as 2001 when he stated, ‘Open-source was the “frosting on the cake” of intelligence material dominated by signals, imagery, and human-source collection. Today, open source comprises a large part of the cake itself.’<sup>47</sup>

The huge potential of OSINT is apparently not yet being fully utilised, despite its clear advantages and the requirement of the subsidiarity principle that I&S services must deploy the lightest possible means to achieve the intended goal. This applies to I&S services in general, and therefore also to NLD DISS. This underutilisation is partly due to the culture within I&S services, in which special intelligence capabilities are often afforded a higher status than open sources. Another concern is that a more intensive use of OSINT could detract from the exclusive character of I&S services in relation to think tanks, research institutes and collectives such as Bellingcat.

Furthermore, since open sources are not protected and their collection is not covert, the distinction between information and intelligence is often vague and the concept of intelligence may consequently be devalued. Wilhelm Agrell summed up this dilemma two decades ago, stating, ‘When everything is intelligence, nothing is intelligence.’<sup>48</sup> I&S services will therefore be compelled to rapidly reassess their perception of OSINT and its embedment within their organisation.

The second challenge in relation to the development of new processes and methods constitutes the implementation of a data-driven working approach. While many intelligence teams mainly use traditional and qualitative analyses, they now have to contend with major developments in the technology and information domain (Section 2). For example, the volume of data – including open source data – available to I&S services is growing exponentially, and the services also potentially have access to rapidly increasing computing

44 Seminar *The Fog of War 2.0* (The Hague, 23 June 2022). See [https://www.youtube.com/watch?v=\\_C0jgTqQQjw](https://www.youtube.com/watch?v=_C0jgTqQQjw).

45 See <https://liveuamap.com>.

46 See also S. Gibson, ‘Open Source Intelligence’, R. Dover, M. Goodman and C. Hillebrand (Eds.), *Routledge Companion to Intelligence Studies* (London, Routledge, 2014) 123-131.

47 John Gannon, ‘The Strategic Use of Open-Source Information’, *Studies in Intelligence*, Vol. 45, No. 3 (2001) 67.

48 See <https://www.hsd1.org/?view&did=442465>.

power and data analysis models. This necessitates the implementation of data-driven working. However, NLD DISS faces daunting challenges in this regard. One frequently mentioned challenge concerns the small number of employees with a background in science. Although this is certainly the case, this is just one of many challenges, such as the available infrastructure (including hardware, software and applications), the data illiteracy of many analysts and managers, the integration between quantitative and qualitative analyses, and last but not least information management.

## Conclusion

‘It is not the strongest of the species that survives, nor the most intelligent; it is the one most adaptable to change.’ This quote is often attributed to Charles Darwin, the founder of the theory of evolution, although it cannot be traced back to him literally. Continual adaptation is also essential to the survival of I&S services in the face of major developments such as the changing nature of war and conflict, privatisation, globalisation and technology. Given the complexity of these developments, complexity theory is a logical and interesting perspective from which these adaptations can be explored. This perspective is defined by focusing on three organisational characteristics. The first of these is requisite variety, which emphasises the importance of both cognitive and cultural diversity and cooperation with a broad range of actors.

The second characteristic entails minimum specifications, for which a fine balance must be struck between responsibilities, restrictions imposed by rules and principles, and the room to manoeuvre and operational striking power required by an I&S service in order to be effective. The third and final characteristic is learning ability. In this regard a distinction can be made between making relatively simple



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adaptations (single loop learning), reframing and gaining new perspectives (double loop learning), and developing new processes or methods (triple loop learning). All of the above underlines the need to embrace complexity, make better use of open sources and adopt a data-driven approach. It was management guru Peter Drucker who stated, ‘The only thing we know about the

49 P. Drucker, *Management. Task, Responsibilities, Practices* (New York, Harper & Row, 1973).





*The smoke machine takes on a metaphorical significance as the intelligence community gradually shifts towards the Clausewitz approach, which posits that the current circumstances are so complex that the fog of war will never lift completely*

future is that it will be different,<sup>49</sup> and faced with such uncertainty I&S services will need to be optimally prepared for an unknown future. ■