Cyprus gas and Cyber Dragon

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Introduction
The discovery of natural gas in the Exclusive Economic Zone (EEZ)\(^1\) of Cyprus raises security issues which are connected to Cyber War (Nye, 2013). In this regard, we cannot discuss about investments and development, presale and exploitation of natural gas unless we first solve security issues. No person, company or state is ready to invest money without guarantees. The geopolitical and geostrategic location of Cyprus is very sensitive and the political and diplomatic landscape volatile. Therefore, investments and security go hand in hand. Under these circumstances, we should firstly examine the international system and how it functions and secondly, how important technology is within the developments of the global system. Technology is in fact inherent to cyber space, cyber security and cyber war.

This article deals with the cyber war in the global system as well as, in relation with the defence policy that Cyprus should establish in order to protect its gas resources and exploit them safely. Cyber war is inherent to structural changes occurring in the international system, with technology playing its own significant role (Charalambides, 2013 pp. 12-13). Oil and gas wars are not restricted in terms of conventional conflict, but they are currently conducted in the frame of cyber conflict. It is of utmost importance for Cyprus and other neighbouring countries to study in depth what cyber war is, its techniques, methods and weapons through case studies. In this respect, we examine the pertinence between investments and security and why Cyprus should address the relevant security problems and deficits in order to successfully exploit its gas deposits. Accordingly, the question we should answer is whether and in what extend cyber security is significant for Cyprus regarding the exploitation of its gas reserves.

1. Living space and cyber space
Before going deeper in analyzing the security issues, we should firstly underline the importance that both geopolitics and geostrategic play a significant role in the international arena (Dodds, 2007; Sempa, 2002). These theoretical concepts are of utmost importance for the interpretation of international relations and particularly, in the case where the analysis is centered on the services of national interests (Morgenthau, 1978 pp.9-14). "Living Space" (Lebensraum) is always a keystone regarding the analysis of issues which are relevant to geopolitics and geostrategic. When the term of "living space" is defined and included within the context of a certain strategy, imperialistic trends and policies as well as sources of frictions and conflicts are

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\(^1\) On December 29, 2011 Noble announced that it discovered gas reserves in field 12 within the Cyprus EEZ. The commodity of gas which has been discovered is estimated to 8 tcf with a gross mean of 7 tcf which is about 198 bcm
likely to be generated. Hitler’s policy falls into the sense of "living space" and the social and racist views regarding the superiority of the Aryan race (Lee, 2003 P. 237; Harriet, 1961 pp. 36-40). Inspired by these political conceptions which constitute a racist and disastrous ideology, he made ordinary people and the international system, suffer inhuman atrocities. This policy was enriched by imperialistic views and practices with the use of force, based also on the tenet that political and strategic wills can be imposed through “fire and sword” (Baranowski,2011 p. 141; Charalambides,2013 p.205). Throughout the years, "living space" has not been synonymous with a "sinful policy", but it became a concept pertinent to legal and defensive strategic goals in line with international and EU Law values and principles. Raw materials such as gas and oil constitute methodological tools for the efforts of a nation state or of a coalition of nation states in order to design a strategy and attain its defined goals (Yanatam, 2011, cited in Sunday’s Zaman, Loizou 2011 cited in Simerini p. 13)\(^2\). Similarly, Cyprus is the only strategic way out for Israel and in fact the Israeli’s "living space", particularly after the discovery of natural gas in two plots, namely "Leviathan" and "Damar" (Noble Energy 2011, LNG World News 2011, Oil in Israel 2009). Cyprus has its own "living space" which lies within its Exclusive Economic Zone due to the deposits of natural gas.

Traditionally, the term “living space” is related to geopolitics, comprising land, sea, air and space. Due to the leaps which have been taken in the field of technology, "living space" is a term pertinent to cyberspace, where economic, commercial and military, in short national and private, even individual interests, are currently served and/or are stake (Lynn 2010 p.97-98; Economist 2010). Heretofore, strategies were designed by governments and states with the disposals of means on land, air and/or in the sea and the space like the Great Powers do. Now, cyberspace is the new dimension where states, companies and persons act and react and they are called by the new political, economic, commercial and social needs to dispose means and take measures in order to achieve their goals (Morrison, 2012 p. 33; European Parliament, 2012 pp. 55-57). Thus, a new dimension of “living space” has been generated upon which states and private companies can build their strategies in terms of a “power game” and thereby win the technological advantage of strength. Like the “living space” on land, sea, in the air and space, the cyberspace – being in fact the new technological dimensions of “living space” - includes security issues of which the aim is to protect, defend, damage, advance and serve national and private interests. Therefore, security is part of a strategy formulated in the frame of cyberspace, which is the new dimension of “living space”. What we observe is a combination of land, sea and air “living space” with cyberspace particularly in terms of cyber-security. Hence, both cyberspace and cyber-security are key components of strength, geopolitics and geo-strategic issues in terms of “living space”. Accordingly, security issues which are raised by the exploitation of gas and oil are pertinent to cyber-security.

2. Cyprus Gas and Cyber Security

It is obvious that cyber war is evolving throughout the global and regional system. Cyprus is a Member State of the EU which is in fact a sub-system of the global system. The location of Cyprus is of eminent geopolitical and geostrategic importance and therefore, it faces many threats. Accordingly, the question is not only whether Cyprus disposes reserves of natural gas or even oil within its EEZ but whether it can effectively exploit its energy deposits. Security constitutes one of the main pillars upon which the system of gas exploitation is based. Therefore, no reliable security system can be constructed unless we detect and

\(^2\) As Turkish Prime Minister Tayyip Erdogan stated, on September 26 2013:
"The Mediterranean sea was always a Turkish lake. However, during the last period, as we did not get there, some found the landscape free. It is neither place for celebration nor a place for ramble. What business Israel has to do there? Israel is not a country which is specialized in oil research".
define the threats and then strategic options should be designed in order to prevent not only threats but also attacks. In attempting to put threats and attacks in order we should underline the following main categories:

1. Classical and conventional threats. 2. Nuclear Threats. 3. Threats which are launched through cyber space. 4. Terrorist threats. In this respect, we should be concentrated on the ways that we may enforce to prevent terrorist attacks, particularly if Cyprus establishes an LNG (Liquefied Natural Gas) at Vasiliko (Kaplan, 2006 pp. 1-3) and thus becoming an energy cross road and regional energy centre of the EU in Eastern Mediterranean Sea. As to the establishment of an LNG at Vasiliko the following threats are likely to be launched:

- Attack from hostile state (directly or by proxy)
- Attack from non-state actors (national regional or global terrorist organisations)
- Cyber- attack from either state or non-state actors
- Underwater Sabotage
- Seaborne Attack
- Ground Penetration
- Rocket Attack (ERPIC, 2013)

Classical, conventional and terrorist threats and attacks are pertinent to the Kurdish attacks on Turkish pipelines and the explosion of the Egyptian pipelines (Reuters cited in ‘The Telegraph’, 2013) through which Israel was supplied about 40% of its necessities in gas (Al Arabiya, 2012). In the current era, terrorist actions and/or interstate threats and attacks are conducted both conventionally and through cyberspace. The combination of conventional and cyber threats and attacks, constitutes a special category of actions and reactions that determines the international relations and the issues of conventional and cyber security and cyber espionage. In this reality, threats combine conventional means of war and deterrence as well as means and weapons used by states and hackers in cyber war. Individual armies of hackers act in the international system serving national and/or private interests of oil and other companies and/or international colossi. Some of these armies are guided by states which never take the responsibility of the hackers’ actions. As already mentioned such armies are based in Russia and China and bear the names, «People’s of war” and "Red Hackers Alliance” (European Parliament, 2012, p. 55; Beech, 2013; Clabum, 2008). In the past they caused serious problems in the US and particularly in the private sector in the frame of a "cyber-economic war" and "cyber–espionage war”. Similarly, we had attacks on major oil companies such as Saudi Aramco and RasGas, the latter being, a "joint venture" between Qatar and ExxonMobil (Clyaton and Segal, 2013, p. 3). The attacks had been launched by "two cyber weapons” namely “Shamoon” (Sandle, 2012) and “stunxet” (Byres 2010). The latter is characterized as a US-Israeli cyberspace missile used against the Iranian Nuclear Program in order to target the uranium enrichment capability and thus damage and delay the Programme (European Parliament, 2012 p52). A classical form of attacks which combines conventional and Cyber means of war is the "kinetic combat" (European Parliament, 2012, pp. 7-8). This belligerent combination of means and methods was implemented in practice by the Israelis against Syria in 2007. The Israelis used the US cyber weapon, namely "Senior Suter" (Airforce -technology 2008), in order to neutralize the Syrian radar and other electronic security systems before airstrikes. One year later, in 2008 the Russians launched a wave of cyber attacks against Georgia with the aim of paralyzing the state’s military, administrative and energy systems. In order to be able to understand the dimensions of the war through cyberspace, we refer to the losses that the US suffered in 2012 in terms of economy - business which reached 114 billion dollars plus another loss of 250 billion of dollars resulting from intellectual property rights and copyrights (Rogin, 2012).
Further to what we have mentioned above, we should also refer to another threat that Cyprus faces, that of espionage. In this context, states, companies or other actors of the international system such as terrorist organisations do not only use traditional methods but also techniques and weapons of cyber war with the aim of penetrating into devices, destroying and stealing valuable data of companies and states. This type of threat and attack is much more insidious as the victims cannot immediately realise the attack and its damages. The greatest cyber threats on the US oil companies lasted from 2008 to 2011, namely "Night Dragon" (Clayton and Segal, 2013 p. 2). These threats are pertinent to thefts of proprietary data, critical information, and other designs of oil companies and caused, among others, losses of international bids. "Night Dragon" attacks are estimated to be based in China; however, the attacks were also launched from other locations (Hodge and Entous, 2011).

3. Threats and Defence system

The Cyprus government is under the Turkish threat and under the threat of terrorist attacks especially due to the fact that both the Israeli and American interests will be served through the Cyprus EEZ. These threats can be conventional and/or may be conducted through cyberspace. The cost of the establishment of an autonomous Cyprus defence is prohibitive. However, Cyprus should spend an amount of the profit which will result from the presale of its natural gas for building a reliable security system including cyber deterrence. In addition, it should establish coalitions based on common gas, commercial, economic and strategic interests.

Under these conditions, the Cyprus defence system, which must be set up in Vasiliko-where a terminal is likely to be constructed-requires:

1. Military alliances and in particular the participation of Greece, Israel and the USA. Already, an American School of Thinking, that supports the "axis" consisting of Cyprus, Greece and Israel, exists. As the Former Undersecretary of the US Navy during both the Ronald Reagan and George H.W Bush Administrations, Seth Cropsey underlines:

   “American statesmen should be looking ahead to consider how best to create a practical order that reflects the US’s own interests as well as those we share with Israel, Greece and Cyprus -first among those in security. There is increasing cooperation in both defence and security, including intelligence between Athens and Jerusalem”. (Cropsey, 2013).

The defence and security issues in the Eastern Mediterranean region are associated with the US and the EU through NATO, which is an Organization that has its own strategy for cyber war and particularly the infrastructures for a new deterrent against attacks through cyberspace (NATO, 2011; NATO 2013). An application of Cyprus to join the Partner for Peace ( PfP) and NATO could not only be a concrete pillar upon which the Cyprus settlement could be based, but it would also be an issue relating to the regional security system and a prerequisite for the protection of gas exploitation. The anachronistic views prevailed in the 60's against NATO advocated for the Turkish policy whose aim was to safeguard its control over Cyprus and the region through NATO. The political rationalism and realism cannot be based on syndromes of the past but on political and strategic choices through which the future can be strategically shaped (Charalambides, 2011).

3 Noble Energy, the company conducting the researches in plot 12, is a US based interests and thus it is evident that the US Administration has the political and national responsibility to advance and protect Noble’s interests. Furthermore, in January 2013, Delek (an Israeli company) bought a share of 25% from Noble and got more profoundly into the energy game in the sense that it is also Noble’s partner in the plots lying in the Israel EEZ. On December 17, 2010 the Republic of Cyprus and Israel signed an agreement and delineated their Exclusive Economic Zones as both countries intent to advance their convergent interests (Cyprus Foreign Ministry, 2010).
The relations between Cyprus, USA and NATO do not infer Russia’s exclusion of any contingency planning, albeit Moscow has undertaken the responsibility of consulting Turkey about the establishment of its nuclear program (World Nuclear Association, 2013). As we have already analysed, the relations between Cyprus and Russia as well as between Russia, Israel and Greece should be based on convergent national interests. The Republic of Cyprus never took a negative position to any Russian political intention of being involved into the gas energy game. The convergent of interests resulting from states and companies involved in the exploitation of the Cyprus natural gas will create a preventive umbrella on external threats.

2. The defensive system which must be established in Vasiliko in order to protect the infrastructures of the entire project should include and cover Cyprus sea (offshore), land and air through alliances and therefore an amount of the gas profits (resulting from the presale) should be invested in order to acquire conventional weapon systems and create “special forces” with modern electronic warfare capabilities in the cyberspace and cyber-war. In this rational, so as to serve its defensive interests Cyprus must use the Military Base of Andreas Papandreou and upgrade its naval bases and/or create new ones – if necessary. The control, surveillance and security of Greece, Cyprus, and Israeli’s EEZ and open sea is related to the issues of piracy, an area in which NATO has experience and good cooperation with Russia (NATO 2013a). By definition, Cyprus is connected with the EU security system which functions in cooperation with NATO.

4. **Variables of presale and foreign investments.**
A reliable defensive system creates security conditions and gives diplomatic and economic advantages while attracting foreign investors, since at the same time, it can act as deterrence to the Turkish and other threats. The defensive system is pertinent to the investments and the presale of natural gas through which Cyprus can finance the infrastructures and thus making the gas exploitation effective. Taking into consideration the situation in the EEZ of Cyprus and the Turkish policy, one may allege that since there is no solution of the Cyprus issue in line with the Turkish revisionist policy (Charalambides 2011 p.81), Ankara will probably escalate its military threats to deter investors, because nobody is going to invest in conditions of political, economic and especially military insecurity (Yanatam, 2011, cited in Sunday’s Zaman, Loizou 2011 cited in Simerini, p. 13). Thus, Cyprus should be ready to prevent such threats through a reliable strategic deterrence.

The credibility of a defensive system is related to the following issues:

Therefore, the presale of gas and investments are pertinent to the following variables:
1. Military, ecological security issues and infrastructure and/or facilities. 2. Legal issues which are inherent to the processes of presale and participation of companies of gas and oil in international stock exchanges such as that of New York. The New York stock exchange is regulated by the "Blue Sky Law" (Securities Markets-Blue Skies Laws and the Securities Act 1933), which has been enacted after the crash of ’29 and aims at the reliability of companies, brokerage and investment security. 3. Appraisal trilling which offers credibility and form an environment of secure investment. 4. Political and economic stability and security and trust in the banking system and services. 5. Enhancement of the reliability and flexibility of the state, an issue which is relevant to the legal regulatory framework of energy and particularly that of oil and energy
companies. 6. Strategy and determining ways about the exploitation of gas. These strategies can be designed and adapted in relation to the decision of the Cyprus government to construct an LNG at the Vasiliko and/or elsewhere, or to establish or pipelines from Cyprus to Greece.

5. Conclusions
Cyprus geopolitical location and its gas deposits should be examined through the lens of the global cyber war. The international system is already in a new era in which power co-exists with technological development and capacities. Technology constitutes a structural component of strength (Dougherty and Pfaltzgraff 1992, p. 116) used by states in order to advance and defend their national interests in the context of a trade - economic cyber war. In fact, it is a combination of an economic, commercial, military and cyber war upon which the new era is reflected. Armies should take advantage of cyber mechanisms as an indispensable tool for espionage purposes in the frame of a wider strategic plan with the aim of promoting and defending national interests, including those stemming from gas and oil recourses. In parallel, the tools and weapons of cyber war are also used in conventional wars. In fact we should see the "living space", geopolitics and geostrategic beyond their natural dimensions such as land, air, sea and space. Therefore, cyberspace constitutes integral part of “living space”. Cyprus lays in the cyclone of the cyber space and the cyber war particularly in the current period during which deposits of gas have been discovered within its EEZ, which is in fact its natural "living space". Accordingly, Cyprus cannot exploit its gas resources unless it invests in its security and cyber deterrence. The Cyprus "living space" is also included within the cyber space. The investment on cyber security constitutes a strategic decision for Cyprus in order to establish a reliable defence system and thus protect its natural gas, attract new investors and presale a share of its gas resources. Without the establishment of a reliable and respectable defence system, it will not be easy for Cyprus to exploit its gas resources and furthermore it may run the risk of becoming a victim of new “Dragon’s cyber threats and attacks” launched by “invisible soldiers” in the context of a global merciless cyber war.

REFERENCES


44. Securities Markets-Blue Skies Laws and the Securities Act 1933, chapters 9-12
