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Teaching Modern Warfare Terminology

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Abstract. This paper is a study for learners interested in mastering modern-day warfare terminology. The study presents and examines military terms of the 21st century to familiarize learners with the latest military terminology and to help them to communicate spoken and written military information. The paper can make the work of the military academy instructor interesting and useful by introducing terms, phrases and expressions concerning up-to-date warfare to the men and women of the armed forces and by improving their military jargon. Understanding the current military terms and developing exchange skills, helps learners to succeed in memorizing phrases like *hybrid warfare* that blend conventional conflict with cyber warfare. Combinations, such as *hybrid threats*, *hybrid adversary* and *non-traditional war*, which are found in military journals, i.e. the *Military Review*, assist learners in practising current military terms in oral activities and in written assignments. Information, referring to the practices of Al Qaeda, HAMAS and ISIS, the three organizations that use financial threat, involves terms such as *asymmetric warfare*, i.e. the war between professional forces and resistance militias, revealing that the power, strategy and tactics of belligerents can differ significantly. *Cyber warfare* expressions, concerning modern espionage and sabotage and involving the use of computers, online control systems and networks, disclose how offensive and defensive operational terms are employed, what the threat of cyber attacks involves and how protection from assault can be accomplished. Terms such as *intelligence* and *security* help cadets to learn how a government agency is responsible for the collection, analysis and exploitation of information in support of national security and foreign policy objectives as well as how the means of information gathering, both overt and covert, including interception, cooperation with other organizations and evaluation of public sources, work at a specific time and place. The future of warfare, involving *robots* and *ciborgs*, part-human part-robot beings, help learners to understand how mechanical devices can reduce the risk of army casualties so that consolidation of the ‘fresh’ warfare information can aid learners in developing not only their comprehension skills but also their oral, written and spoken skills, thus strengthening their power to successfully respond to challenges.

Keywords: Hybrid warfare, asymmetric threats, cyber warfare, intelligence and cyborgs.

INTRODUCTION

The present study aims at aiding the military interested in comprehending 21st-century military terms as well as at acquiring the current military terminology in order to learn how to exchange written and/or spoken military information. The study discusses terminology concerning *hybrid warfare*, i.e. irregular warfare, as well as specialized vocabulary, like *asymmetric warfare*, as used in military texts and articles. The topics of *cyber warfare*, *intelligence and security* and the *future of warfare*, in military journals, include terms concerning modern wars and help tutors to attain their goal - that of aiding learners in understanding the latest military terminology in an attempt to control war, to reduce political risks and to maintain popular support for both the government and the army.

The study includes most of the new warfare terminology which is known as fourth-generation warfare (4GW) or as the conflict characterized by a chaotic state between war and politics, combatants and civilians. Fourth-generation warfare is militia (an unauthorized quasi-military group) which lacks hierarchy and conducts irregular warfare involving terrorism or the unlawful use of intentional violence, especially against civilians. It intends to achieve political aims with the aid of a decentralized base whose power is shifted from a central location to another less central place in order to reorganize and launch an attack on the culture of the enemy, commit acts of genocide, use political, economic, social and military pressure, employ an extended network of communication and financial support, use insurgency tactics, such as subversion, terrorism and guerrilla tactics, and employ decentralised forces.

MAIN BODY

The most popular current military terminology concerns *hybrid warfare* or the military strategy that blends conventional warfare, irregular warfare and cyber warfare, and combines *kinetic* (active) operations and *subversive* (aggressive) efforts thus avoiding *attribution* or *retribution*. Hybrid warfare uses terms such as *hybrid threat*, *hybrid adversary*, *non-linear war*, *non-traditional war* and *special war*. While the United States military tends to speak in terms of a hybrid threat and scientists tend to use the term hybrid warfare, the Greek military employs *hybrid war*. As there is no universally accepted definition, the matter has been open to debate. Experts on the subject argue that the term is too abstract because it is used for *non-linear threats* or wars that are fought when an army employs conventional and irregular military forces in conjunction with psychological, economic, political and cyber assaults in order to create confusion, disorder and insecurity.

Regardless of the dispute, hybrid warfare involves a non-standard, changeable and difficult adversary that can be a state or non-state. For instance, in the Israel-Hezbollah War in 2006, known as the thirty-four-day conflict between Lebanon and Israel, as well as in the Syrian Civil War (2011-), adversaries were non-state units, fighting within states. Occasionally, they acted as *proxies*, having independent goals. For instance, while Iran was a sponsor of the Lebanon-based Hezbollah, Hezbollah militants attacked an Israeli military border patrol in July 2006. Armed with high technology weaponry, i.e. precision guided missiles that were hidden in bunkers, Hezbollah shot down Israeli helicopters, damaged an Israeli patrol boat and destroyed Israeli armoured tanks. Soldiers were killed and captured on

both sides and the clash resulted in the Israel-Hezbollah war in which Iran appeared to have played no role despite the fact that it financially supported the Hezbollah organization.

Years later, in 2014, Russia was accused of generating the conflict with Ukraine and launching the Crimean War (2014-). When the war began, it became obvious that the Russian President Vladimir Putin was a traditional *actor*, a conventional state leader, accountable for waging hybrid war, who used a local *hybrid proxy*, i.e. pro-Russian protesters, armed men whose uniforms lacked any identifying marks and masked gunmen who occupied the Crimean parliament building and raised the Russian flag. The conflict severed links between Ukraine and Russia as the local population protested that the action was an unmistakable provocation and violation of Ukrainian sovereignty. President Putin answered that the conflict was an effort to protect Russian citizens in Crimea even though a local hybrid proxy helped Russia to capture Crimea easily.

Hybrid warfare involves *hybrid adversaries*, the use of a combination of conventional and irregular tactics, like non-standard formations, terrorist acts and clandestine activities in order to avoid attribution or retribution. To achieve this aim, hybrid adversaries use flexibility and adaptation, as in the response of the Islamic State to the aerial bombing campaign of the United States in 2006 when *ISIS aggressors* attacked America by reducing mobile phones usage and dispersing jihadists among the civilian population. The use of mass communication for propaganda purposes, recruiting men and employing fake news in order to spread stories that can influence the judgement of the public, is typical in non-linear threats and attacks. So is the use of *military drones* that gather intelligence, *encrypted cell phones* that assist hybrid adversaries in communicating safely, and *thermal night-vision equipment* that helps them to watch the enemy unobserved whether on the battlefield or among the *indigenous* population, i.e. the local people.

It is information like this that aids learners in developing written or spoken skills concerning hybrid warfare; and it is terms such as *actor* and *proxy*, *attribution* and *retribution*, *aggressor* and *indigenous* that help them to successfully understand written and oral forms. Consolidation is achieved through activities that require learners to make sentences with the new terms. Consider, for instance, the following example: Bashar al-Assad, President of Syria, is a political *actor*, an individual that has obtained political power to engage in activities that have an influence on policies and outcomes associated with conflict. The story behind the Middle East conflict is a *proxy war*, as Russia fights on behalf of Syria, Israel fights on behalf of the United States and Hezbollah fights on behalf of Iran.

By supplying definitions of terms such as *attribution* - the ascribing of something to someone, like an act of terrorism in the Hezbollah-Israel war - or *retribution* - the punishment or vengeance for something ‘wrong’ - instructors can increase the strength or depth of learners. Learning aids, for instance practice exercises, like the one called “choose the best answer,” can achieve the desired result which is the students’ acquisition of knowledge as well as their development of skills gained through instruction and repetition. For instance, in this interesting illustration, “The Iraqi forces continue to exercise their legitimate right to self-defence as the Iraqi government points the finger at the.... (*aggressor/defender*)” the correct answer is aggressor.

Learning through synonyms and antonyms improves the vocabulary of learners. Synonyms and antonyms are not a part of the vocabulary, they are the vocabulary itself. “During World War II, there was an indigenous ... (synonym ... *native* and antonym ... *foreign*) uprising in Greece that was brutally suppressed.” The acquisition of *native*, the correct answer

here, and *foreign*, the antonym, enhances the students' existing vocabulary and helps them express themselves better. In the following sentence, "During the fight, the soldier overpowered ... (synonym ... *defeated* and antonym ... *yield*) the guard and captured his rifle, *defeated* is the right answer while *yield* is the wrong one. Acronyms, words formed by the initial letters of words in a set phrase, e.g. NATO, from the initial letters of 'North Atlantic Treaty Organization,' should be taught for electronic communication such as emails.

In *asymmetric engagement*, the conflict between belligerents whose military power, strategy and tactics differ, two belligerents fight to exploit each other's weaknesses in quantity and/or quality. To achieve their goal, they employ strategies and tactics of unconventional warfare. In *symmetric warfare*, however, two powers have comparable military power and resources and rely on tactics that are similar, differing only in details and execution. Although symmetric wars can be lengthier and thus deadlier, security in symmetric warfare is more manageable and conflict on the battlefield is easier to avoid especially when it involves two or more powerful states. To achieve consolidation, instructors need to emphasize how important it is to memorize modern terms such as *insurgency* or *counterinsurgency*, *established lines* or *guerrilla warfare*, *terrorism* and *counterterrorism* by using examples: "Insurgency is a term restricted to rebellious acts that did not reach the proportions of an organized revolution" (Britannica). Guerrilla warfare is usually applied to armed uprising against the recognized government of a state and as such it can refer to violence during peacetime or to war against non-combatants, i.e. civilians.

Weak actors tend to consider carefully their opponents before responding to threats. *Resilience* and *adaptability* strategies, which deal with the nature of the adversary rather than the *correlation of forces* (the association of forces), help them to subdue the enemy: "Army operations require military personnel to demonstrate readiness and *resiliency* in the face of difficult environments in order to maintain physical performance necessary for success" ("Journal of Science and Medicine in Sport"). *Adaptability* is useful if army leaders require their men to adjust easily to a new environment and difficult conditions ("Army Leadership and the Profession"). Usually weak actors fight strong opponents because they have secret weapons and powerful allies, e.g. the Kurds have the Americans, or for the reason that they have willingness to endure more suffering, unlike strong actors that are reluctant to escalate violence because they lack group dynamics and direction and have exaggerated their war aims.

Asymmetric conflict phrases such as *interstate* and *civil war* are part of the modern warfare terminology. In the past, asymmetric wars were won by strong actors. Since the Fifties, however, weak actors have won asymmetric engagements in interstate or civil wars. Consider the example: "*Interstate* rivalries, including North Korea–South Korea in East Asia, and India–Pakistan in South Asia, continue to spark insecurity and fuel vicious cycles of armament, both within and outside of these rivalries" ("Threats, Arms and Conflicts"). Unlike interstate wars, *civil wars* are usually less severe. However, civil wars can be more frequent, lengthier and deadlier.

Although in conventional warfare, the belligerents deploy forces of a similar type and the outcome is usually the result of the quantity and quality of the opposing forces and/or better command, in *unconventional warfare*, victory depends on whether one side has a technological advantage that outweighs the numerical advantage of the other side. Technological superiority is of no use to a large actor if a weak actor attacks *vulnerable infrastructure*, i.e. cuts power cables and contaminates water supply systems. The attacks can have a devastating effect on the morale of the citizens and the economy of the country. Weak actors, however, do not have to

face this difficulty. Training, tactics, strategy and technology play a vital role in asymmetric threats by helping a small force to overcome a large one. For several centuries the Greek hoplites' (heavy infantry) use of the phalanx formation made them superior to their enemies. At the Battle of Thermopylae, the Spartans managed to temporarily prevent the Persian army from invading Greece as a result of the good use of the terrain. A small power under attack can defend itself if it uses unconventional tactics like *raids*. The purpose of a raid is not to seize territory but to inflict damage. An immediate exit to avoid retaliation is imperative. Raids can be useful because they expose the defensive weaknesses of the opponent and erode the morale of men and women, like the tactics of the Greek Army in the Greek Resistance in World War II.

If a weak actor uses tactics prohibited by the laws of war (*jus in bello*), its success depends on the larger power's decision to refrain from using a similar course of action. The law of land warfare prohibits the use of *ambush* (trap), the use of a flag of *truce* (ceasefire) or clearly marked *medical vehicles* as cover for an attack. An asymmetric combatant using prohibited tactics to its advantage depends on the larger power's obedience to the law. What is more, laws of warfare prohibit combatants from using towns as military bases. When an inferior power uses this strategy, it depends on the superior power to respect the law that the enemy is violating and refrain from attacking civilians. If it does attack them, the propaganda advantage will outweigh the material loss because in most conflicts of the 20th and 21st centuries, the propaganda advantage has nearly always outweighed *adherence* (obedience) to international law.

Activities, in which learners are asked to complete sentences by selecting the correct military term such as *engagement*, *insurgency*, *belligerents*, *essence*, *interaction*, *deficiency*, *reluctance* and *credibility* further expand the students' vocabulary: "The general noticed the men's ... to tell him the truth." The missing word here is *reluctance* or unwillingness. Collocations such as *wage war*, *ratify a treaty*, *impose a penalty* and *pay a fine* incorporate new vocabulary into the students' personal word bank. The sentence, "Both countries were due to *ratify the treaty* by the end of the year," suggests that the two states have given formal consent to a contract or agreement, making it officially valid.

To show that an action is taking place, we use verbs. Verbs provide students with a creative way to integrate required vocabulary skills in individual and/or group settings. They help them to accomplish their goal, e.g. to comprehend the meaning of terms like *penetrate* (enter), as in "The bullet *penetrated* the soldier's brain." *Retreat* or *withdraw* is used in sentences that reveal troop movement: "Attacks by enemy aircraft forced the tanks to *retreat* from the city." The sentence, "The decision has been made to *deploy* extra troops" implies that it has been decided to position troops in a specific area in readiness for action. *Contaminate*, in a war, signifies the pollution of water supply of the city of the enemy. "The treaty was signed when both world leaders agreed to *refrain* from building nuclear weapons for ten years," means that the two heads of state decided to cease producing nuclear weapons. "The two members of the military patrol were *ambushed* by the enemy" relates to a trap, as the men were taken by surprise. "The belligerents *violated* the terms of the ceasefire" expresses the idea that the aggressors disregarded the agreement. So if the enemy does not *adhere* to the rules, if the opponent *disobeys* the rules, there will be trouble.

In written or oral forms, learners can use verbs such as *renege*, break a promise, *incarcerate*, imprison, *evaluate*, assess, and *warp*, distort. Tutors should teach learners verbs such as *envision* (imagine), *counter* (contradict), *inaugurate* (open), *slash* (cut) and *augment*

(increase) and ask them to search the Net for definitions and make sentences with them in order to prove that they know how to use them in reports as well as in oral communication. For instance, “The writer has *envisioned* a world where there is no war”; “The soldier *countered* his opponent’s move with a blow”; “The Ministry of Defence will *inaugurate* the new type of drone next month”; “The Prime Minister *slashed* the budget of the department last year so there are a number of projects that were abandoned”; and “The budget of the state was *augmented* by various donations”.

Learners ought to acquire the ability to identify adjectives and nouns in modern military texts that relate the future of warfare. *Malevolent*, *marginal*, *improvised*, *cognition*, *egalitarian* and *legality* are terms that aim at avoiding the possibility of using them wrongly in written communication. For instance, *malevolent* is an adjective used in sentences like “A *malevolent* program is a program designed to have harmful effects”; “Some terrorist organizations regard violence as a *marginal* rather than a central problem”; “There was the time when faulty sensors prevented the space capsule from docking with Mir, forcing the astronauts to *improvise* a way in”; “It has been suggested that some aspects of *cognition* are dependent upon the speed and efficiency of nerve impulses”; “A person who advocates the principle of equality for all people is an *egalitarian*”; and “*Documentation* testifying to the *legality* of the arms sale has been stolen”.

Certain military terms have more than one meaning. To be able to differentiate one meaning from the other and avoid mistakes, learners need to remember that depending on the text *wound* means injury sustained in warfare and coiled or twisted; *magazine* means both periodical and arsenal; *train* denotes military followers and railway carriages; *lead*, the verb, means guide but lead [pronounced ‘led’], the noun, means the heavy grey chemical element Pb; *watch* has the meaning of observe and guard; and *drill* means practice marching and bore a hole.

Tutors require students to memorize nouns like *conflagration* (large destructive fire) and *equanimity* (calmness); adverbs such as *clandestinely* (in secret) and *overtly* (openly) as well as Latin phrases like *jus belli*, the law of war, *casus belli*, an act or situation that provokes a war, *jus ad bellum*, the right to wage war and *jus in bello*, the law of armed conflict. In *jus in bello* the belligerents are responsible for their actions, especially if their soldiers attack non-combatants, pursue the enemy beyond what is reasonable or violate rules of fair conduct and commit acts of murder. In *casus belli*, a government explains its reasons for going to war while in *jus belli*, the law of war or “the law of nations as applied to a state of war defining in particular the rights and duties of the belligerent powers themselves and of neutral nations”.

Consolidation of modern military terms occurs when learners can interpret sentences such as the following: “The wars in Gaza that occurred in the early Two Thousands between the Israelis and the Palestinians, when hundreds of people died, cost the lives of more than three-quarters of civilians, according to the United Nations.” (BBC News). The wars in Gaza were asymmetric in terms of the amount of death and destruction inflicted by the Israelis on the Palestinians. The conflict between the two opponents was not symmetric because better equipped Israel *inflicted* (imposed) greater destruction on Palestine. The Israel-Palestine conflict is a serious, *protracted* (prolonged) disagreement in which the more powerful actor, Israel, destroys the weaker actor, Palestine.

The Gaza Strip has been the *discord* (strife) between Israel and Palestine for many years. Palestinians have repeatedly declared that they want to make peace with Israel as long as they have their own state on the part of Palestine left after Israel’s War of Independence in

1948. Israel, via statements and attacks, has repeatedly declared its intention to keep hold of the land that it has captured. The Israelis, supported by powerful allies like the US, appear to be responsible for the sixty-year-old war, and the ongoing war appears to be the result of the murder of Israeli border patrol soldiers or the kidnapping of Israeli civilians. ‘Criminal’ acts such as these provide Israel with the opportunity to attack Hamas and Fatah, as well as with the excuse for occupying the West Bank. The blaming of Hamas and Fatah, without providing any evidence, may imply that the *guilty party*, i.e. the murderers and the kidnappers, are actors that want to *undermine* (weaken) the unity of the two organizations for their own reasons: the unity deal of Hamas with Fatah would support Palestine President Mahmoud Abbas’ negotiations with Israel and resolve the conflict between the belligerents.

Cyber warfare, which is used to target computers, involves both offensive and defensive operations such as *cyber attacks*, *cyber espionage* and *cyber sabotage*. Although the three operations are not considered to be “war,” states spend a great deal of money to improve their networks and engage in cyber warfare either as an offender or as a victim. The hostile acts of a state involve another state’s network for the purpose of causing damage. It is the work of *non-state actors*, i.e. political extremist groups, hackers and transnational criminal organizations. State actors attempt to prevent cyber attacks against infrastructure in order to reduce national vulnerability and to minimize damage and recovery time.

Cyber espionage is the practice of obtaining government secrets without the permission of the holder of the information for political or military advantage through the methods on the Internet. With the help of *proxy servers*, *cracking techniques* and *malicious software*, involving *Trojan horses*, *worms* and *spyware*, hackers obtain information that helps them to accomplish a successful cyber attack that can cause a serious conflict between nations. Consider, for instance, the *massive spying* by the United States on many countries, a secret revealed by Edward Snowden (1983-), the former Central Intelligence Agency (CIA) employee, who disclosed that the National Security Agency (NSA) of the US was spying on the German Chancellor Angela Merkel and recording cell phone conversations in Afghanistan, Kenya, Mexico and the Philippines.

Cyber sabotage can lead to the disruption of cyber equipment, the compromise of military systems such as C4ISTAR components (the acronym stands for *Command, Control, Communications, Computers, Information/Intelligence, Surveillance, Targeting Acquisition and Reconnaissance*) that are responsible for the interception of malicious viruses and their replacement. Electrical power, water, fuel, communications and transportation infrastructure, the stock market and trains are all exposed to *disruption* (open to attack). In July 2010, security experts discovered Stuxnet, a malicious software programme that had infiltrated computers and spread to plants around the world that delayed Iran’s nuclear program for the development of nuclear weaponry.

Cyber warfare is difficult to control. Both state and non-state actors may cause disastrous damage as groups of *malware developers* by inserting a special upgrade component into a legitimate application and assisting it to be updated to a new malicious version. Malware developers (hackers) can interfere in global politics because users of computers share developments on the web. *Intrusive* (unwelcome) software, developed by cybercriminals can steal data and destroy computers. The *Trojan virus* programme is designed to steal legitimate account data for online banking systems, *worms* spread copies of themselves from computer to computer without any human interaction and *spyware* gathers information about a person or organization and relays the data to criminals. These technical tools and software, which occur

every day without any regard for the consequences, are called *cyber capabilities* and are usually developed by hackers.

Exploiting the information in military periodicals, tutors can familiarize students with cyber warfare derivatives formed from nouns, i.e. *disruption* from ‘disrupt,’ *launcher* from ‘launch,’ *demonstration* from ‘demonstrate’ and *replacement* from ‘replace’. He/she can focus on synonyms, like *proliferation* from *proliferate* (increase rapidly), as well as on antonyms, e.g. *offence* # *defence*, *function* # *dysfunction*, *engage* # *repel*. The learners’ introduction to prefixes, like *trans-* in transport, *inter-* in interconnect, *dis-* in disconnect, *in-* in independent, *mis-* in misunderstand, *il-* in illegal; and suffixes like *-less* in lifeless, *-ness* in repulsiveness, and *-ful* in truthful helps them to enhance their capability of dividing unfamiliar words into segments that are easily understood. The skill aids learners in understanding and expressing their thoughts. Research studies have shown that learners need to become involved in communication before the current military terms become long-term memory. Learning is more easily acquired if learners define the terms they do not understand and use them in reports and official statements. A rich military vocabulary helps learners to choose words with precision, makes communication simpler and provides results in occupational success, as the operational pressure for uniform understanding of contemporary military terminology has developed since the 20th century on account of joint operations between the army, navy and air force services and international alliances like NATO.

Intelligence and *security* play an important role in the protection of national security. Their task is to acquire the decisions that policymakers make and keep their society safe and to protect democratic order. *Intelligence*, a government agency, is responsible for the collection, analysis and exploitation of information in support of law enforcement, national security, military and foreign policy objectives. Information gathering, both overt and covert, includes *espionage* (undercover activities), communication *interception* (capture), *cryptanalysis* (the study of analyzing information systems in order to study their hidden aspects), cooperation with other organizations and evaluation of public sources. The terms that are used in military operations concerning intelligence and security are *propagation* (reproduction), *enforcement* (application), *imminent* (about to happen), *exploitation* (mistreatment) and *objective* (end). The terms can be matched with their definitions, i.e. promulgation; implementation; impending; abuse; and goal, respectively, in order to engage learners in the process of gaining awareness.

The assembly and propagation of intelligence information is known as *intelligence analysis* or *intelligence assessment*, i.e. the process by which the information collected about an enemy is used to answer tactical questions about current operations or to predict future behaviour. It is provided by intelligence agencies that work on the analysis of areas relevant to national security; it warns governments of impending crises; it helps them to manage national and international crises, aiding the state in discovering the opponents’ intentions. What is more, it informs the ministry of war on defence planning and military operations and it protects national secrets and influences the outcome of events in favour of national interests or international security. It supports the agency’s intelligence programme against the intelligence service of the opponents with the help of *counter-intelligence*, it gathers information and participates in activities conducted to protect the state against espionage and engages in sabotage activities and assassinations conducted by or on behalf of foreign governments. The consolidation of the difference between *overt* and *covert operations*; *defensive* and *offensive strategies/policies*; *strategies of reprisal* (response) or *denial* (refusal); *standardized* and

tailored strategies; and *strategy by intent* (ambition) and *by default* (avoidance) helps learners to differentiate between the terms by meaning.

The *future of warfare* involves humanoid robots, *cyborgs*, or machines that fight in the place of soldiers. *Cyborgs* will play a prominent role in future combat as they are programmable machines that can interact within any environment like most robotic weapons systems, e.g. *cruise missiles*, a low-flying missile which is guided to its target by an on-board computer, and *air and missile defence systems*. Although robots can make fighting less destructive, they have not played an important role in warfare. Recently, however, the use of *Unmanned Aerial Vehicles* (UAV), an aircraft piloted by remote control or onboard computers, *drones*, used for intelligence, surveillance, target acquisition and reconnaissance, carrying aircraft ordnance (weapons) such as missiles, built to face the threat of unconventional warfare, has elevated the role of robots in military operations in developed countries. Although the United States has ended its counterinsurgency campaigns in the Middle East, surveillance drones have been deployed for air campaigns against powerful adversaries with modern air defence systems like China and Russia. Developed countries have focused lately on technologies that can face low-intensity conflicts, like the *War on Terror* or the military campaign led by the U.S., the U.K. and their allies against organizations considered by them to engage in terrorism.

Scientists work hard to combine robotic systems with humans. The idea is to control the cognitive abilities of soldiers and to achieve quick reaction, precision and strength. When the *cyborgization* of soldiers has been achieved, soldiers will be equipped with suitable clothing and footwear, *wearable* computers, advanced communications gear, *helmet visors* with night vision (eyeshades), *head-up-display*, *HUD*, a display that presents data, and robotic *exoskeletons* for improved mobility.

At the same time, there has been progress in *neuroscience* with respect to the *mapping* (the process of making a map) and *manipulation* (management) of the human brain. A technique called *transcranial direct current stimulation* (tDCS), or painless brain stimulation treatment, can enhance the mental alertness of soldiers, the clarity of their mind. *Electroencephalograms* embedded in helmets will enable soldiers to control weapons through the power of thought. Soldiers will be supplied with *nano sensors*, devices that monitor the medical status of soldiers and embedded *nano needles* that will release drugs when wounds occur. Accompanied by *nano robots*, the men will survive on the battlefield for days as they will be supported by other robotic devices such as robotic mules that will carry ammunition as well as drones that will resupply them with weapons.

CONCLUSION

When learners have acquired the information and skills necessary to communicate it, they can participate in projects that focus on how they imagine the next twenty years from now as far as the future of the military is concerned. Their ideas can be matched to ideas in documentaries on YouTube in which they can find answers to questions such as “Should countries set asymmetric warfare as high priority?” or “What is the future of military robots?” Meanwhile, classroom discussions can explore the concepts of building autonomous military robots with artificial intelligence and the usefulness or legality of robots as well as the danger of the *cyborgization of*

soldiers, answer questions that concern NCOs and officers such as “What will changes in future military technology initiate in human society? It seems reasonable to conclude, then, that the learning of the terminology of the twenty-first century warfare fulfils practical needs of the military that range from aiding communication among servicemen to the use of timesaving acronyms, to the development of neologisms that depoliticise discussions and concepts on certain sensitive military topics. Military terminology will help them to incorporate technical language and precision, avoid revealing more information than needed and disguise meaning, as in “kinetic activity” or active warfare, a phrase for combat, in use since the beginning of the War on Terror. To summarize, contemporary warfare terminology is absolutely necessary if the armed services, whether NCOs or officers, want to successfully accomplish their military tasks.

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Appendix

Effective Sample Lecture and Comprehension Exercises War in the 21st Century

Read the text.

When we imagine the future of warfare, we envision a battlefield where humanoid robots and other machines fight alongside or in the place of human soldiers. From the droids of *Star Wars* to *The Terminator*'s soldiers, robots will soon play an important role in future combat. While science fiction is populated with anthropomorphic robots that appear to be human, in the real world, robots are programmable machines that can sense and interact with their environment like most advanced weapons systems including cruise missiles, drones, and air and missile systems. Is this the rise of malevolent robots related in science fiction, or can robots actually make war less destructive? If war becomes less destructive what comes next in the advancement of military robots?

So far, robots have not played a significant role in warfare. Recently, however, the use of drones to counter the Improvised Explosive Device (IED) threat in the Middle East and execute aerial bombing campaigns in Afghanistan has elevated military robots to a more prominent role in military operations. As the US brings to gradual end its counterinsurgency campaigns in Iraq and withdrawal from Afghanistan, the robotic systems will be far less in demand. The Department of Defence plans to reduce the numbers of these drones, HID hunters, Global Hawk surveillance drones and the armed Predator and Reaper drones, due to both their inability to survive in contested airspaces and general budgetary pressures. Instead, there will be a greater focus on developing robotic systems for shorter but more massive air campaigns against more sophisticated adversaries with modern air defence systems in Libya, Syria, China and Russia. The Pentagon will continue its efforts to build global precision strike capability, allowing rapid deployment of unmanned weapons that can attack anywhere in the world within an hour. In addition, there will be a focus on technologies and capabilities relevant for low-intensity conflicts like the ongoing War on Terror.

As for the development of robot soldiers, despite decades of intensive research and continuous breakthroughs in robotics, the progress in creating autonomous military robots has been slow. Several projects have resulted in humanoid robot prototypes, but they lack the portable



power source and intelligence that would allow them to act beyond very limited non-combat roles.

The most promising advancements have been the Navy's X-47 drone, which recently mastered the art of landing on aircraft carriers and humanoid robot prototypes such as Atlas, a rescue robot. Another approach to implementing robotic weapons systems is ***cyborgization, the combination of robots with humans***, whose bodies could be augmented with robotic technology. This concept offers quick reaction times, precision and strength of robotic systems and the control and superior cognitive abilities of humans. Land Warrior and its successor Force Warrior, Future Force Warrior and Warrior Web aim to equip soldiers with wearable computers, advanced communications gear, *helmet visors* with night vision and *head-up-display*, and robotic *exoskeletons* for improved mobility. While the potential may be vast, such human enhancement has suffered the same setbacks and slow progress as the development of other robotic systems. The gear is too heavy and the exoskeleton that could enable soldiers to carry more and move faster lacks a sufficient power source.

At the same time, there has been remarkable progress in neuroscience with respect to mapping and manipulating the human brain. Though not currently employed, a number of technologies have potential military applications. A technique called *transcranial direct current stimulation* (tDCS) has been shown to enhance the concentration and alertness of human test subjects. EEGs (Electro Encephalograms) embedded in helmets might one day enable soldiers to control weapons through the power of thought. A research project has showed that a monkey with an implanted brain chip could control a robotic arm, and researchers have created the first wireless brain-computer interface.

The ultimate goal of the Pentagon is to develop *super soldiers* who could be deployed anywhere in the world within hours and remain in the field for extended periods of time. Their bodies and performance could be enhanced through *nano sensors* that monitor their medical status, embedded *nano needles* that release drugs when needed, and possibly even *nano robots* that can quickly heal wounds in the field. Those super soldiers might be supported by a range of robotic devices and weapons systems, including robotic dogs to carry their gear, drones to resupply them and robotic platforms from which to call in long-range precision strikes. The soldiers could one day assign robot helpers specific missions that they could then execute with human supervision.



Two quadrupedal robots, possibly LS3, being tested outdoors.

The use of military robots raises both ethical and tactical concerns. Will they be able to distinguish targets and use force proportionately? Will soldiers be willing to fight alongside completely autonomous robots? Could robots one day entirely replace humans and human-operated systems on the battlefield? What role might robots play in non-traditional wars such as the War on Terror or the fight against transnational organized crime? These questions have led the United Nations and others to call for a ban on autonomous military robots.

Critics are concerned that advanced Artificial Intelligence (AI) could develop in directions not anticipated by scientists. Because of this unpredictability, the US military has indicated that it will never remove humans from the battlefield. While unmanned weapons systems will become gradually more autonomous so that they can execute specific missions

with less human direction, they may never entirely replace human soldiers on the battlefield.

The technological augmentation and modification of human soldiers raises even more troubling ethical issues than the development of autonomous robots. Since millions of dollars could go into technologically upgrading the body and mind of a single soldier, would the soldier be allowed to quit military service? What does it mean for an egalitarian and democratic society to provide certain individuals with superhuman abilities? While enhancing human soldiers may have its benefits, it opens up a web of ethical, political and legal dilemmas.

Although autonomous military robots with strong artificial intelligence could potentially be built and deployed within the next twenty years, there are great doubts about their military usefulness and legality. Fully autonomous robots could easily turn out to be uncontrollable weapons. Furthermore, the difficult budgetary climate will not change in the foreseeable future, which means that the US military has to focus its research and acquisition on the projects relevant to the most likely military needs. Instead of designing robots for war, the Pentagon may aim to enhance and even *cyborgize* soldiers while further developing human-operated robotic systems. Under the most likely scenarios, it may not be the Pentagon's robots we should be worried about but rather the changes in humans that military technology will inaugurate.

[Adapted from <robohub.org/robots-soldiers-and-cyborgs-the-future-of-warfare/>.]

Now, answer the following questions:

1. How do you envision the future of warfare?

.....

2. What is the role of robots in the military?

.....

3. How are drones used in contemporary warfare?

.....

4. Where will the US focus now?

.....

5. What has been surprisingly low?

.....

6. What will future warriors do?

.....
7. What is the tDCS? What will it do?

.....
8. What will the new nano technology achieve?

.....
9. Elaborate on the ethical problems presented here.

.....
10. What does the text say about the super soldier of the future?

Exercise 1 Supply definitions for the following verbs. If in doubt, use a dictionary:

<i>envision, counter, inaugurate, slash, augment</i>
--

1. Envision.....
2. Counter.....
3. Inaugurate.....
4. Slash.....
5. Augment.....

Exercise 2 Identify the words in the box and then use them to fill in the gaps.

<i>malevolent, marginal, improvised, cognitive, egalitarian, legality</i>

Adjectives

1. Fortunately, his ... *malevolent/marginal* plot to our subways did not happen.
2. The ship sank because the crew knew only ... *cognitive/marginal* safety measures.
3. ... *Legality/Improvised* speeches were used by the officers of the Pentagon.

Nouns

4. The word ... has to do with the acquisition of knowledge: relating to the process of acquiring knowledge by the use of reasoning, intuition, or perception. (*cognitive*)
5. The dictator laughed at the priest's ... ideas and refused to believe that all people were equal. (*egalitarian*)
6. We have to take care of certain ... before using the new weapon. (*legalities*)

Exercise 3 What do the following acronyms stand for?

1. IED.....
2. EEGs.....
3. AI.....
4. HID

Exercise 3 Look at the following phrasal verbs and memorize them.

1. To *leave out* means to exclude: "They must decide what to leave out."
2. *Seek out* stands for search for witnesses or volunteers.
3. *Keep up with* is to maintain, not fall behind: "We need to keep up with technological developments."
4. To *hold up* means to delay: "Continuing violence could hold up progress towards reform."
5. *To take down* is to remove or destroy. E.g. "They have taken down the statue."
6. To *stand in for* implies to replace something temporarily.
7. To *sort out* means to solve a problem: "Things will sort out in the end."
8. To *put off* means to delay: "They have put off the attack until next week."
9. To *shut down* means to close definitively. For instance, "To shut down a project."
10. To *ramp up* is to intensify: "The Company hopes to boost sales by ramping up its advertising."
11. To *root out* means to force into the open: e.g. "To root out the enemy".
12. To *make up (for)* is to make amends. For instance, "To make up for errors."
13. To *get away with* is to escape punishment. E.g. "They'll get away with murder".
14. To *wind down* means to relax: "Plans began to wind down as men awaited further orders."

Exercises 4 Now that you have read the text on the future of warfare write a short essay on how you imagine yourself in twenty-years from now.

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Listening Comprehension Practice

Exercise 1 Listen to the speaker of the documentary entitled “Pentagon Sets Asymmetric Warfare as High Priority” and answer the following questions:

- ### 1. What is unconventional warfare?

.....

2. Name the various contemporary conflicts mentioned in the video.

.....

- ### 3. What was Desert Storm in 1991?

[View Details](#) | [Edit](#) | [Delete](#)

- #### 4. What is the US doing to face unconventional warfare?

Digitized by srujanika@gmail.com

- ## 5. How is the US Navy contributing to unconventional warfare?

.....

6. What does a non-traditional strategy include?
-

[Retrieved from <https://www.youtube.com/watch?v=nmNYIa_FuY0>.]

Exercise 2 Listen to the speaker of the documentary entitled “Future Military Robots”. Decide whether the following statements are True (T) or False (F):

1. According to the documentary, remotely controlled robots are used for surveillance and for destroying bombs.....
2. Unmanned Ground Vehicles attack enemies using lethal or non-lethal weapons.....
3. Tiny drones, the size of small birds or insects, are used for destroying grenades.....
4. A robotic, remote-controlled sentry gun can replace human guards on the North Korean side of the demilitarized zone.....
5. The Navy uses remote-controlled robots to confront drug smugglers.
6. The Pentagon has deployed 11,000 UAVs and 12,000 ground robots in America.....
7. Worldwide, military spending on the robotics industry is projected to reach \$ 7.5 million by 2018.....
8. The knife fish, an underwater minesweeping robot will replace the navy's trained dolphins in 2017.....
9. Robots will perform automated surveillance, reconnaissance, assault and breaching missions.....
10. A Joint Aerial Layer Network will link all military assets in a region to provide coordination.....
11. American pilots are now flying drone missions in Syria from Arizona.....
12. This is causing these soldiers not to experience Post Traumatic Stress Disorder (PTSD).

[Retrieved from <<https://www.youtube.com/watch?v=PVT5TfFL4Os>>.]

A Museological Proposal for a Maritime Company Museum

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Abstract. This article focuses on company museums, which are a new dynamic presence in the museum world in Europe and specifically on the new museum of AGEMAR SA a major Greek maritime group of companies. It aims to highlight the main conceptual museological idea, by presenting the collection, the museum space, the environmental specifications and the framework of the museums activities. It also sets the purpose and the objectives for this museum as well as the museological approach which is followed in the design of the exhibition.

Keywords: Conceptual design, ship models collection, permanent exhibition.

PACS: D Humanities and Political Sciences

INTRODUCTION

The landscape of museums has changed a lot in recent years with many qualitative and quantitative changes. Part of this spectacular scene is the '*company museum*', a new dynamic presence in the museum world in Europe and the United States. [1] Various large companies set up such museums either to highlight the value of the company brand, such as the BMW Museum in Munich or to highlight the owner's collection, such as the Vitra Design Museum in Weil am Rhein. Some major Greek companies, mainly banks (National Bank, Bank of Greece, etc.) have established such museums, seeking to illuminate and highlight their history. Possible reasons are to preserve a collection, illustrate the company's history, capture the entrepreneur's family or personal history, utilize an existing listed building or space, highlight and share core values of the company with the special conditions of a museum environment and also to provide the company with a space for the arrangement of cultural and other non-profit events. These reasons usually coexist in the establishment of a new company museum, such as the Maritime Company Museum recently created in the new headquarters building of AGEMAR SA in Athens.

AGEMAR SA is the major Greek maritime group of companies, family-owned and run, with offices in London and Piraeus. Antonis I. Angelicoussis founded the business in 1947, acquiring the first cargo vessel in 1948. His son Ioannis Angelicoussis joined the company in 1973 and ran it until his death in 2021. The company owns a fleet of 153 ships, including 15 vessels on order across three sectors of operation – dry bulk, tankers and LNG carriers of a total 26m DWT. The company's new headquarters 30,000 m² building in Athens, designed by the architect Rena Sakellaridou SPARCH, was finished in 2018 and apart from administration

and office spaces includes complementary spaces open only for the staff and guests, such as library, amphitheater, restaurant, café, the ship-owner's vintage car exhibition space and the company museum on the ground floor. The following is the museological proposal for the creation of this museum with emphasis on the conceptual design of the exhibition.

THE MUSEUM

The main purpose of the museum is to highlight the history of the I. Angelicoussis group of companies while telling the story of its founders. Its core is the collection of ship models which are currently scattered in the offices of the three companies of the group. From ancient times people made small idols of ships because of their great symbolic value. Some of them have been discovered in archeological excavations and belong to the time of the ancient Egyptians, Greeks and Phoenicians and were made of clay, stone, metal or wood. In modern times it is customary, together with the real ship, to build its model in scale and offer it to the ship-owner. Ship-owners often decorate their houses with the model of their sailboat carved by a folk craftsman or their offices with models of the vessels in their fleet. [2]

Apart from the models, the ship-owner's original intention was to display also various other items such as the awards awarded to the group and to the ship-owner himself from *Lloyd's List* and other international organizations, and gifts from shipyards confirming the close relationship that the group has established with them.

This museum may be seen as a cultural institution, a place visited by people or students related to the maritime industry or are visitors/partners of the group. Located on the ground floor, directly visible from the main entrance lobby, it will definitely catch the eye and interest of those who enter the building. At the same time the museum, in combination with the library, could be a nucleus of knowledge and scientific study. This display is intended to be a permanent and not a periodic exhibition.

The Space

The museum is located in the southern part of the ground floor of the new building, in direct contact with the entrance lobby. Access to the space is through two doors from the lobby or alternatively, for the disabled, it is proposed to enter through the secondary entrance between the two parts of the complex. The exhibition room is defined by a perimeter of a glass curtain-wall, except for the side towards the lobby, where a boundary is formed by a marble wall. Outside the glass curtain-wall, at a distance of 85 cm, the museum is surrounded by a self-supporting perforated system consisting of reinforced concrete panels with rectangular holes of variable cross-section, through which natural light enters the space. The material of the floor is gray marble of Crete while the ceiling is lined with white sound absorbing panels.

The Collection

The collection in question includes only items that are located in the administration offices and were indicated by the executives as desirable to be included in the exhibition. For the most part the collection consists of ship models which have either been built by the shipbuilding company of the respective ship and have been offered to the ship-owner as a representation of the ordered ship, or have been manufactured from photographs provided by the ship-owner to an independent modeler. There are no models for all the vessels in the fleet, the existing ones

are considered to represent the most important acquisitions, not only in terms of the size of the respective ship but mainly in terms of its importance in the evolution of the group. It should also be borne in mind that the number of models will continue to increase as there are new vessels under construction, some of which will be considered important and their models will have to be exhibited in the future.

In addition to the models, the collection includes items that have been offered to the company or the ship-owners as gifts or souvenirs of trade agreements and launching ceremonies, and have mainly emotional value. There are also some important awards for the company's achievements as well as a small number of photos and personal items.

All the objects of the collection have been recorded in detail in *Object Records* sheets that were created especially for this project. [3] The items in the collection are divided into 5 categories:

A. Ship models

There are a total of 39 ship models representing all types of fleet ships:

- a) Liquefied gas (LNG) vessels owned by Maran Gas Maritime (5 models).
- b) Cargo ships (Bulkers) owned by Anangel Maritime Services (21 models).
- c) Oil tankers (Tankers) owned by Maran Tankers Management (13 models).

Among them there are ship models that no longer belong to the fleet of the group of companies as well as older ships that belonged to Antonis Angelicoussis in the past. Finally, there are some models in double, i.e. there are two models of the same ship on the same or different scale.

The model scales vary from 1:100 to 1:500, the majority of them in 1:200 scale. All models are housed in glass showcases with or without a frame (metal or wooden) and are mounted on a wooden surface with the help of supports. Their origin from different manufacturers has created, of course, non-uniformity in the construction of showcases.

B. Gifts

This category includes 12 items of various kinds which have been donated to ship-owners as souvenirs of corporate agreements or ship launches. They are a heterogeneous group of objects whose form and material vary.

C. Awards

This category includes 7 objects, 2 in the form of paper document, 3 small sculptures and a medallion accompanied by a document and the American flag.

D. Photographs

There are 4 photographs, all in a frame with glass.

E. Personal objects

This category includes 4 photographs in a frame and a bronze bust of Antonis Angelicoussis.

Environmental Specifications of the Exhibition Space

The nature of the objects to be exhibited is such that it does not require special climatic conditions. Special care should only be taken for dust settling as the models are difficult to clean, for the relative humidity of the room and to avoid UV radiation. In general, models should not be exposed to direct sunlight or be subject to large temperature fluctuations (i.e. near a heat source).

The construction of the new showcases should be done in such a way that will allow the circulation of air into them through holes in their base which will be protected by appropriate dust filters.

Environmental specifications for the space: [4]

- Relative humidity RH: 45% to 50% all year round.
- Air filtration for dust, pollen, cigarette smoke, bacteria: 90-95%
- Light intensity (projects of medium sensitivity): 200-250 lux.
- UV radiation limit: 75 µW / lumen
- Temperature: 21 d.C. in winter, 24*d.C. in summer.
- Stability within the + - 0.5 °C limit is important for the constant value of RH

If the models are not placed in glass showcases then the room air must be filtered for absolute protection from dust and other microparticles, and the above values must be considered absolute. In this case, the lifespan of the objects will be influenced to a greater extent by the climatic conditions of the space.

Natural lighting: Natural lighting should be diffused and the direct entry of sunlight into the exhibition space should be prevented. Ultraviolet rays of sunlight cause damage to objects and therefore, if the orientation of the room is such that allows direct sunlight to enter, special UV filters must be installed on the exterior curtain-wall.

Artificial lighting: Artificial lighting is very important in the design of the exhibition and should be studied by a specialized lighting designer who will convey the wishes of the architect and the feeling she wants to give to the objects and the space. For example, low general lighting, more intense in objects (allows better viewing of details), or general lighting that does not emphasize the exhibits except in the places that the designer wants. Ship models have details that should be adequately lit. [5] In addition, the extensive use of horizontal glass surfaces in showcases favors the limited use of general lighting due to reflections, a problem that can be overcome with the use of anti-glare glass.

The Framework of the Museum's Activities

The management of the collection and the exhibits includes the research, the maintenance and restoration of the exhibits and the information material of the exhibition. Also, especially when new acquisitions are added, the texts of the exhibition as well as the Object Records should be updated. An important part in the management of the collection is the production of printed material such as an informative brochure (leaflet) which will be available at the entrance of the exhibition. It is also suggested to publish a directory as well as create a website.

Significant advantages can arise from the museum's presence online. The digitization of the collection and the accompanying material will make it available to the public online. Also through the internet the language borders are being demolished and access to the museum's information property is accessible to a large number of users remotely. Thus the museum guarantees the quality of information and plays an important role in the ongoing information process which is a feature of the knowledge and information society.

One of the key features of a museum that communicates with visitors in a friendly way is to leave them free to follow their own path in the exhibition. At the same time, however, for the convenience of the visitors, it would be very helpful to have a person present, informed and available, whom the visitors can ask for more info.

THE CONCEPTUAL DESIGN OF THE EXHIBITION

After the industrial revolution that changed the world maritime exchange system, the development of international trade in the world's seas is rapid. The Greeks became the main carriers of the eastern Mediterranean and the Black Sea to the West. For the last 170 years, six generations of sailors and ship-owners have been traveling in international waters serving maritime transport in the 19th and 20th century global economic systems. Owing almost 18% of the world's tonnage, Greeks today manage the largest merchant fleet in the world, larger than that of the United States and Japan. [6]

Greek shipping developed thanks to a network of merchant shipping communities scattered in the main ports of the Mediterranean, the Black Sea and northern Europe. More than thirty islands and ports of the Ionian and Aegean seas developed great shipping and shipbuilding activity, reaching their peak in 1870 with 2441 sailboats. It was at that time, specifically in 1880, when Captain Antonis Angelicoussis (1885-1927) buys the *Taxiarchis* brig of 750 tons and until 1914 he has under his management 4 other sailboats. [7] After 1885 the gradual shrinkage of the sailing fleet and the gradual replacement by steamships, especially during the 1870s, becomes apparent. However, sailing ships are still used for about 40 years, despite the competition. Since 1890 there has been an impressive increase in the number of Greek steamships which will continue to rise until the First World War. On the eve of World War I, the main Piraeus-London axis was formed, around which Greek shipping operates, but at the same time a significant number of Greek ships regularly cross the Atlantic and Indian Oceans. With the outbreak of the Balkan Wars and World War I, Greek ships due to the closure of the Dardanelles Straits left the Mediterranean market to operate in the Atlantic, Indian and Pacific Oceans, transporting mainly grain and coal. In 1946, with the end of World War II, the Greek merchant fleet had lost 70% of its vessels. However, in April of the same year, the Greek government guaranteed the purchase of 100 Liberty-type merchant ships from the United States, a move that is considered to be the "cornerstone" of the post-war Greek shipping evolution. [8] The grandson of Captain Antonis, Antonis Angelicoussis (1918-1989), the founder of the modern company, in 1950 buys his first Liberty ship, the *Astypalea*, and establishes with Efthymiou and Kaloudis the company "A. Angelicoussis and D. Efthymiou". It is the time, from the mid-1940s to the mid-1970s, when Greek shipping is experiencing rapid growth. They continue to carry bulk cargo but are also involved in the fast-growing international oil trade. [9]

Antonis Angelicoussis, who was twice awarded a medal by the Greek and twice by the British government for his actions during World War II, is considered one of the leading Greek ship-owners. But unlike most of them who bought second-hand ships, A. Angelicoussis turned to the new shipbuilding market, creating a "new age" fleet. From 1965 to 1985 he built 42 ships at the IHI shipyards at Japan, an indication of the close relations he established with the companies with which he collaborated with. After World War II and until the mid-1960s, the main centers of management of the Greek merchant fleets were in London and New York. At the beginning of 1960, A. Angelicoussis collaborated with the families of Peratikos, Xylas, Andrianopoulos and Igglei in the creation of the "Pegasus Ocean Service" from which he left in 1969 and founded in London, in collaboration with D. Efthymiou, the "Agelef" and in then in 1972 after the departure of D. Efthymiou, "Anangel Shipping Enterprises SA". Pioneer as we have already noted in the new shipbuilding, he created a fleet of modern and young vessels. It is indicative that the average age of the Anangel fleet in 1975 was seven years. [10]

He was also the first Greek ship-owner to take advantage of the opportunity to raise funds from the international capital markets by founding in 1987, in collaboration with American Express Bank, the company "Anangel American Shipholding Ltd", listing its shares on the Luxembourg and New York Stock Exchanges. Another key feature of A. Angelicouassis' activity in shipping was the choice of the Greek flag for all the ships he managed.

The successful course of Anangel Shipping Enterprises was continued by his children, Ioannis and Anna who in 2000 decided to operate separately dividing the family business between them. Ioannis Angelicouassis has been managing since 2002 through Anangel Maritime Services Inc a significant number of cargo ships, through Maran Tankers Inc the oil tankers and through Maran Gas the LNG ships. He continued to his recent death (2021) his father's strategy of building new vessels, raising the Greek flag on all of them. [11]

Through this brief review of the history of the Greek merchant navy and the Angelicouassis family, we were able to formulate the main conceptual museological idea of the museum's permanent exhibition. As already mentioned, our target is the expression and promotion of corporate memory of the group and the representation in a systematic and experiential way of its trace in history and society.

Purpose and Objectives

The main conceptual museological idea is to demonstrate the importance of the I. Angelicouassis group and its participation in the creation of the "miracle" of Greek merchant shipping. Secondary goals are to promote the participation of members of the Angelicouassis family and of dedicated executives and collaborators who contributed to the business evolution and also to highlight the fact that the main reason why this company currently holds this position worldwide is largely due to the continuous construction of new ships resulting in not only to a large number of privately owned ships but also a fleet consisting of 'young' ships, almost exclusively under the Greek flag.

Summarizing the individual objectives, we state that our intention is to formulate an exhibition that is comprehensible and accessible, which can be approached cognitively by the whole range of potential visitors of the museum. Both the museological and the architectural discourse must be understood, in direct connection to each other, arousing the interest of the public through an experiential approach.

The Museological Approach

The museological study aims to implement in space the multiple interpretations or methodologies of approaching, reading and finally receiving the objectives set by the proposed exhibition sections, following basic principles of contemporary museology. It is necessary to give the objects the opportunity to tell their story in order to expand the initial framework and to include, in addition to the promotion of the corporate memory of the group, its connection with the modern history of the Greek merchant navy but also the modern shipbuilding aiming at the development of maritime trade.

Every museum initiative is born from its collection. However, the implementation of the idea is not entirely determined by this component. In fact, the conceptual approach and the basic idea of this exhibition may include additional material such as registers, photographs, excerpts of publications but also information material, captions, short texts that will accompany the sections and sub-sections. The proposed museological sections will essentially function as a

single interpretive web, which runs through the space while structuring the conceptual sections. The interpretation of the past and present is expanded on overlapping levels, through the scientifically documented organization of modern and historical material and thus forms the code of communication of the public with the exhibits, which will be accompanied by the appropriate additional information. It is suggested to use, as much as possible, ship models that are in the same scale (1:200), which will contribute to the process of interpreting the exhibits, will release the possible 'stories' they contain and make them understandable to the visitors.

The Conceptual Design

Based on the above, the museum's exhibition should be treated as a thematic exhibition, which develops a story (story telling). The development of such an exhibition should be rather linear, with branches where it is appropriate. At the same time the exhibition should be didactic and experiential, informing the visitor and at the same time provoking his participation.

The exhibition will be organized around two poles: the fleet and the history of the group. As we have already said, the core of the museum is the collection of ship models. It is proposed to create a route which will start from the entrance and will follow the perimeter of the space where selected ship models will be exhibited, representative of the various types. The models will be displayed individually in uniform showcases designed by the architect and which should be consistent with the general style of the space. The models will be divided into subsections and at the beginning of each subsection there will be an accompanying text (approximately 50-70 words) which will tell the story of the group. Inside the showcases the technical characteristics of the relevant ship will be displayed. At the end of this route, in a banner on which there will be in abstract form a world map marking the sea routes of the ships, a short text will present the status of the Angelicouassis group today.

In the center of the space, in a specially designed showcase of corresponding aesthetics and analogy with the showcases of the models, through texts, photos, registers, publications and awards, the story of the Angelicouassis group and its founder will be narrated, along with the history of Greek shipping. At the same time, the human resources of the group should be promoted - ship-owners, captains, executives, sailors - who have actively contributed to shaping its history and current image. In collaboration with the historian and the ship-owner photographs of first ships, launching ceremonies, snapshots from life on ships, etc. should be selected and used from the existing photographic material.

As the spatial capacity of the exhibition space is limited and the models that will be exhibited will be minimal compared to the size of the fleet, it is proposed to write all the names of the ships belonging to the fleet around the base of the main showcase to highlight their large number. The models exhibited at the exhibition will be part of the history of the group. At the same time, space should be provided for the models of the future vessels. It is therefore suggested that all these new models be placed outside the museum, in the sitting area in front of the marble wall. The placement of the new acquisitions of the fleet at this point will make it easier to switch models, something that would be more difficult inside the museum. Existing gifts as well as new ones is suggested to be exhibited in a specially designed space in the library.

CONCLUSION

Summarizing the design solution, the narrative emerges from the two 'parts' that constitute the exhibition. The protagonists of the exhibition are the models. They are placed in parallel and slightly oblique to the perimeter glazing, into visual contact with the water around it, giving the image of a fleet sailing in the sea. In this way, the aesthetic and emotional effect that the models will exert will be enhanced, highlighting the experiential character of the visit. The central element creates a second 'space' where all the necessary information about the history of the group is given through objects and mainly printed material. The two different ways of narration help to arouse the interest of the visitor and push him to 'participate', enriching the suggested experience. The exhibition of the new acquisitions that continues outside the museum space but in visual contact through the glass wall to the lobby, diffuses the information throughout the main entrance area, removing the spatial restrictions of the museum. A fact which in turn conceptually contributes to the continuous evolution of the I. Angelicoussis group over time.

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The Test-Takers' Perspectives on the Oral Proficiency Interview of a High-Stakes English Language Examination

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Abstract. This paper focuses on the oral proficiency interview that officers of the Hellenic Armed Forces are required to take in order to have their speaking proficiency certified at Level 3 (Professional) and sets out to investigate their familiarity with the NATO STANAG 6001 Level 3 Speaking Descriptors in an attempt to gather validity evidence for the oral proficiency interview from their perspective. In doing so, an online survey was conducted and fifty-five military officers participated in it followed up by five interviews conducted with five different officers (who had first completed the online questionnaire). A qualitative approach to the analysis of the findings was adopted which aimed at gaining insight into test takers' perceptions about the oral proficiency interview in relation to the three research questions that this study revolves around. The study was conducted as part of my dissertation submitted in partial fulfillment for the degree of M.A. in Language Testing at Lancaster University, U.K.

Keywords: oral proficiency interview, validity, high-stakes examination, NATO STANAG 6001, speaking descriptors, linguistic interoperability

INTRODUCTION

Due to the fact that speaking is the most salient of the four language skills (Bachman, 1988), “[t]he ability to speak in a foreign language is [considered to be] at the very heart of what it means to be able to use a foreign language” (Alderson & Bachman, 2004, p. ix). In fact, speaking in a foreign language is very challenging and developing competence in speaking is a time-consuming process, Alderson and Bachman (2004) further note. In addition, there seems to be a commonly held view among language testers that speaking is the most difficult of the four language skills to assess (Ginther, 2012), and, according to Bachman (1988), assessing a person's speaking ability can be “problematic because of the complexity both of the skills and the context in which these skills are to be elicited and assessed” (p. 150).

The present study falls within the scope of language testing in the military. It focuses on the assessment of the speaking proficiency of the officers of the Hellenic Armed Forces through oral proficiency interviews in the form of a semi-structured interaction between the test taker (a

military officer) and the members of the examination committee. Following Ginther (2012), the oral proficiency interview is a direct method of assessing a person's speaking skills and abilities in actual performance involving "a series of warm up questions followed by a subsequent series of increasingly difficult questions where examinees are expected to display concomitantly increasing levels of complexity in their responses" (p. 1).

The oral proficiency interview, which is part of the English language examination that all officers of the Hellenic Armed Forces are required to take in order to be eligible for any post within the North Atlantic Treaty Organization (NATO), is conducted in accordance with the NATO STANDARDIZATION AGREEMENT (STANAG) 6001. The NATO STANAG 6001 describes six language proficiency levels coded 0 (No proficiency) through 5 (Highly-articulate native). Military officers are usually required to achieve Level 3 (Professional) in Speaking (as well as in the other three language skills). Following Berger (2015), the NATO STANAG 6001 is the *de facto* test construct.

It results then that the oral proficiency interview is part of a high-stakes examination. For Kunnan (2012), a test is considered high stakes when the test scores/results are used to make important career and life-changing decisions which can have serious consequences for test takers. In a similar vein, Shohamy (2001a) concedes that tests are powerful and play a major role as they can lead to far-reaching and high-stakes decisions and consequences about individuals and groups; "tests can create winners and losers, successes and failures, the rejected and the accepted" (p. 374).

Test takers have long been considered "important stakeholders" in language testing, perhaps the most important ones according to Rea-Dickins (1997), whose views "are among the most difficult to make sense of and to use" (p. 306). Based on Alderson and Clapham (1992), she further points out that "drawing conclusions about those views is not easy since often [test takers] contradict one another or may have no views at all". Brown (1993) and Wall, Clapham and Alderson (1994) are among the first who have practically demonstrated how and to what extent test takers' feedback and views can contribute to the development and validation of tests echoing Kenyon and Stansfield (1991, as cited in Brown, 1993) who support that test takers' comments can significantly help test developers improve the quality of the test product. Despite the inherent perplexities surrounding the interpretation of test takers' views, Rea-Dickins (1997) puts forward the case for a more active involvement of all interested parties in the process of test development and test use and calls for greater stakeholder involvement which will lead to fairer, more ethical and more democratic testing practices. This seems to signal the end of an era during which the test taker was not of major concern and consequently had no rights but "was viewed mostly as a block box ... [and] was important only insofar as computing the psychometric traits of the test" (Shohamy, 2001b, p. 155).

This study aspires to contribute to the emerging body of knowledge in which the emphasis is on the test taker in an attempt to "broaden the scope of inquiry and contexts that inform knowledge about language assessment" (Cumming, 2004, p. 5). In the context of language testing in the military, test takers are viewed as the key stakeholders as decisions based on test scores/results can profoundly affect their careers and lives. In addition, this study is the first of its kind in the field of language testing in the Hellenic Armed Forces and seeks to foster a better understanding of the nature of oral language proficiency assessment at military command level and establish a more consistent channel of communication between language testers and those responsible for the implementation of military language testing policy (Crossey, 2009).

In my capacity as one of the oral proficiency interview interlocutors and raters, I have often felt that test takers (i.e. military officers) are not (adequately) familiar with Level 3 Speaking Descriptors of the NATO STANAG 6001 prior to taking the oral proficiency interview. It is believed that this can give rise to a number of misconceptions which are reflected in test takers' views on the oral proficiency interview, their performance on it, and what being a Level 3 speaker actually means. In order to investigate the "observed problem" further, a qualitatively-oriented inquiry into test takers' perceptions and beliefs has been conducted. Cumming (2004, p. 9) suggests that "[s]uch inquiry is indispensable for understanding why people perform the way they do in language assessments, and thus necessary for validation".

PART ONE: THEORETICAL BACKGROUND

A PROPOSED FRAMEWORK FOR GATHERING VALIDITY EVIDENCE

Shaw, Crisp and Johnson (2012) acknowledge the importance of achieving validity with relation to the construct assessed and propose a framework for evidencing validity in assessments. Their framework, which is influenced primarily by Kane (2006) but also by Chapelle (2008), has been adopted in this study because it provides a practical approach to gathering validity evidence in a structured and systematic way. More specifically, Shaw et al.'s framework is based around a chain of inferences which "flow" from the task to the test performance (construct representation), from the test performance to the test score (scoring), from test score to test competence (generalisation), from test competence to domain competence (extrapolation), and from domain competence to trait competence (decision making). For each inference, an associated warrant sets out a statement that is claimed to be true. In practice, the inferences and warrants make up the interpretive argument. The validity argument is set out in the form of five validation questions which map onto the inferences. The validation questions seek to establish whether the tasks elicit performances reflecting the intended construct, whether the scores and grades are dependable measures of the construct, whether the tasks adequately sample the intended construct, whether the sampled construct is representative of wider competence in the domain, and whether guidance is available on the meaning of scores and how they should be used, and "are intended to guide the assessment professional through the validation effort in relation to data collection methods and analyses, whilst maintaining a strong link between the evidence collected and the inference which this evidence seeks to validate" (p. 166). To this end, Crisp et al. present a proposed set of data sources and methods of data collection that can provide evidence for each of the validation questions. Analysis of the evidence collected will provide evidence for validity (i.e. support for validity), and may suggest potential threats to validity, which, in turn, can indicate areas for improvement and further work.

Interpretive argument		Validity argument		
Inference	Warrant justifying the inference	Validation question	Evidence for validity	Threats to validity
Construct representation	Tasks elicit performances that represent the intended constructs	1. Do the tasks elicit performances that reflect the intended constructs?		
Scoring	Scores/grades reflect the quality of performances on the assessment tasks	2. Are the scores/grades dependable measures of the intended constructs?		
Generalisation	Scores/grades reflect likely performances on all possible relevant tasks	3. Do the tasks adequately sample the constructs that are set out as important within the syllabus?		
Extrapolation	Scores/grades reflect likely wider performance in the domain	4. Are the constructs sampled representative of competence in the wider subject domain?		
Decision-making	Appropriate uses of scores/grades are clear	5. Is guidance in place so that stakeholders know what scores/grades mean and how the outcomes should be used?		

Figure 1: Shaw, Crisp and Johnson's (2012) proposed validation framework

PART TWO: RESEARCH CONTEXT

LINGUISTIC INTEROPERABILITY

Although both English and French are officially recognized as the two working languages at NATO, English is the *de facto* operational language within NATO, and linguistic interoperability has become a high priority for both Allied and Partner countries especially due to an ever increasing number of peace-support operations (Crossey, 2005; Dubeau, 2006).

Crossey goes as far as to suggest that linguistic misunderstandings arising from inadequate language skills of non-native speakers of English on peace-support operations risk leading to mistakes, which may prove fatal and result in casualties. He states unequivocally that “linguistic interoperability is as important to ensuring that countries are able to participate effectively in both NATO and wider Alliance activities as any other form of interoperability”. In a similar vein, Adubato and Efthymiopoulos (2014, p. 27) support that good language skills are conducive to a successful administrative and operational environment as they help avoid “possible misunderstandings or misinterpretations across the whole spectrum of military activities and … duplication of efforts in NATO operations and/or NATO working environments”. It results, then, that language testing in the NATO context has taken on added importance and carries high stakes not only for individual military members but for participating countries as well (Dubeau, 2006).

THE NATO STANAG 6001

The Bureau for International Language Co-ordination (BILC) was established in 1966 within the NATO Training Group (NTG)/Joint Services Subgroup (JSSG) as a consultative and advisory body for language training matters in NATO (Dubeau, 2006). Its mission, as stated on its website (www.natobilc.org), is “[t]o promote and foster interoperability among NATO and PfP [Partnership for Peace] nations by furthering standardization of language training and testing, and harmonizing language policy”. This is mainly accomplished through a series of BILC initiatives, such as an annual conference and language testing seminars and workshops, which contribute to a mutual understanding of testing practices and developments among participating countries.

During the 1970s, the BILC developed a set of language proficiency levels which were derived from the ILR scale and in 1976 were adopted by NATO as the NATO STANDARDIZATION AGREEMENT (STANAG) 6001: Language Proficiency Levels (Green & Wall, 2005) reflecting a NATO-wide need to define language proficiency and promote a shared understanding of the language proficiency of its members (Dubeau, 2006). Currently in its fifth edition (published in May 2016), the NATO STANAG 6001 (hereafter referred to as “the STANAG”) is “the common standard (construct) for language curriculum and test development” throughout NATO responding thus to interoperability requirements. In essence, it is used as the *de facto* test construct (Berger, 2015). To this end, the STANAG provides NATO forces with a table describing proficiency levels in each of the four language skills broken down into six levels coded 0 through 5, as follows: Level 0 – No proficiency, Level 1 – Survival, Level 2 – Functional, Level 3 – Professional, Level 4 – Expert, Level 5 – Highly-articulate native.

There are also five “plus levels” in between the base levels 0 to 4 which are to be used when a candidate’s language performance exceeds a base level but does not successfully meet all of the criteria to be awarded the next higher base level. For each NATO post there is a four-digit Standardized Language Profile (SLP) indicating the required level for each language skill in the following order: listening, speaking, reading, and writing. In order to be considered eligible for any NATO post, candidates have to achieve the SLP required by the specific post.

Dubeau (2006) maintains that although the STANAG testing system presents itself as standardized, in practice each country develops its own tests and establishes its own procedures for measuring language proficiency in accordance with the STANAG (Green & Wall, 2005).

Dubeau points out that in fact “there are no standardized testing instruments administered throughout countries … [only] common testing practices are suggested” (p. 3). Although the BILC, as the custodian of the STANAG, provides testing training and consultation to national STANAG testers and testing teams with a view to helping them develop a better understanding of their own testing practices and better monitor their testing outcomes, in the absence of an effective mechanism in place which would ensure that the SLPs reported from one country are equivalent to the scores from another (Dubeau, 2006), the tests developed by each country run the risk of being viewed merely as “national interpretations of the language levels outlined in STANAG 6001 and often one nation’s Level 2 is another nation’s Level 3” (Adubato & Efthymiopoulos, 2014, p. 29).

THE ORAL PROFICIENCY INTERVIEW IN FOCUS

The oral proficiency interview (hereafter referred to as “the interview”) is part of the English language examination that all officers of the Hellenic Armed Forces are required to take in order to be eligible for any post within NATO. It is conducted on the same day as the other three sections of the examination at the Military Language Testing Center, which is the official national NATO STANAG 6001 Testing Center, established in 2008, and is located at Training Center Palaskas, Skaramagkas, Athens, Greece.

The interviews are conducted and scored by the members of the examination committee, who are in their majority military officers from the three branches of the Hellenic Armed Forces. The examination committee typically consists of seven members but not all of them are required to be present (and are not usually present due to other professional commitments) on the day of the interviews; the committee consists minimally of four members, that is the Head, a senior officer at the rank of Army or Air Force Colonel or Navy Captain, and three other members.

The interview is in the form of a ten- to fifteen-minute long semi-structured interaction between the candidate¹ (i.e. the military officer) and the examiners about a topic of general interest with social and/or professional implications. In this context, the interview seeks to assess an individual’s unrehearsed, general proficiency in speaking as this is outlined in the STANAG’s Speaking Descriptors. Military officers are usually required to achieve Level 3 (Professional) in Speaking (https://www.natobilc.org/en/products/stanag-60011142_stanag-6001/).

The questions posed in the duration of the interview, which require different levels of cognitive engagement on the part of the candidate and seek to establish how well the candidate can elaborate on the topic under discussion, serve as *level checks* and *probes* and help determine the candidate’s level. Typically, at the beginning of the interview, candidates are asked some *Warm-up* questions which act as “ice-breakers” while the interview is usually brought to an end through a short *Wind-down* phase. Candidates are given a holistic rating based on four broad assessment criteria: content (what the test taker can talk about), tasks (what the test taker can do with the language), accuracy (how well the test taker can use the language), and the length and organization of the text produced.

¹ The terms “test taker” and “candidate” are used interchangeably in this study.

RESEARCH QUESTIONS

In an attempt to demystify the construct of the interview, I will rely on Shaw et al.'s (2012) framework to gather validity evidence solely from the test takers' perspective, who are the key stakeholders as the interview (and by extension the English language examination) carries high stakes for both their professional and personal lives. The research questions and the respective inferences that are being addressed are as follows:

Construct representation

1. What do test takers think of the content of the interview and the way it is conducted?

Generalisation

2. Do test takers think that the interview can effectively assess their speaking proficiency in English for interoperability purposes at Level 3?

Extrapolation

3. Do test takers think that their scores on the interview reflect their linguistic readiness for NATO posts requiring Level 3 in Speaking?

The “Scoring” and “Decision-making” inferences have not been addressed in this study due to the fact that the former requires expert judgment while as far as the latter is considered it is well established in the context of the specific testing situation that the scores on the interview are to be used for staff appointments within NATO only.

PART THREE: METHODOLOGY

TYPE OF DATA, PARTICIPANTS & DATA COLLECTION INSTRUMENTS

This study employs a mixed methods research design, which Dörnyei (2007, p. 44) defines it in the most straightforward manner as “some sort of a combination of qualitative and quantitative methods within a single research project”. Indeed, both quantitative and qualitative data are used in this study for the purpose of data triangulation. According to Dörnyei (2007), triangulation effectively reduces the chance of systematic bias through the corroboration of evidence coming from different data collection/analysis methods and ultimately contributes to strong validity evidence. However, in this study the emphasis is on the qualitative end of the quantitative-qualitative continuum. Following Johnson and Christensen (2004, as cited in Dörnyei, 2007), the sequence and the dominance of the method constituents of this study can be represented as *quan* → *QUAL* indicating that the qualitative component is dominant and is preceded by a quantitative phase. In this way, quantitative data can be utilized in a qualitative analysis legitimizing thus the research findings, what Dörnyei calls “qualitizing the data”.

The bulk of the data was collected through an online questionnaire which was administered to officers of the Hellenic Armed Forces (Army, Navy, Air Force) who took the

interview during the academic year 2015-2016. I opted for a non-probability convenience sample for reasons of accessibility and representativeness (Dörnyei, 2007; Dörnyei & Taguchi, 2010). Subsequently, a series of semi-structured interviews were conducted in order to elaborate on emerging patterns in the questionnaire responses which are of particular interest to the purposes of this study.

The questionnaire consists of a brief introduction/welcome message and twenty-eight questions in English. Questions one to seven ask for background information on the respondents (factual questions), while questions eight to twenty-eight ask for the respondents' opinion on the interview and other interview-related issues (attitudinal questions). The attitudinal questions have been designed with a view to providing evidence to support the inferences and answer the respective validation questions in Shaw et al.'s (2012) framework. In this way, the resulting data will help me answer my research questions.

The questionnaire items are all closed-ended questions with the exception of the last one which is an open-ended question asking for the participants' comments (for the reasons explained above, the open-ended question was optional; therefore the respondents could skip it). The majority of the closed-ended questions are multiple-choice items and there are only two rating scale items (a *Yes-No-Probably-Don't Remember* item and a Likert-type scale item).

An email inviting the recipients to take part in the online survey was sent out to 135 officers of the Hellenic Armed Forces (67 Navy officers, 63 Air Force officers, 5 Army officers). These military officers had voluntarily provided me with their email addresses after I had briefly explained to them the purpose of my study and their role in it at the end of various examination sessions throughout the year. The disproportionately small number of Army officers can be attributed to the fact that the examinations for the Army officers took place mainly between September and November 2015 when the conception of this study was at an early stage.

The second stage in the data collection process was to conduct a series of semi-structured interviews with a sub-set of the questionnaire respondents in order to "to probe some [of the questionnaire] themes in greater depth and detail" (Banerjee, 2004, p. 39). I interviewed five military officers (3 Navy officers, 1 Army officer, 1 Air Force officer) who expressed their interest in my project either in an email they sent me after they had completed the questionnaire or after I contacted them by phone and asked them to participate in a follow-up interview. Furthermore, I made sure that I interviewed at least one officer from each military branch in an attempt to make the sample as representative as possible and encourage officers from the three military branches to voice their opinions on the interview. The interviews were face-to-face sessions and were conducted in English. They lasted from 20 to 30 minutes and were recorded with the interviewees' consent.

The interviews evolved around an "interview guide" (Dörnyei, 2007), that is a list of questions which were prepared in advance and used during the interview in the form of prompts and probes. However, the exact sequence and wording of the questions was not followed with each interviewee. The interviews were not fully transcribed. Initially, I carried out an analysis of the audio data which involved taking notes while listening to the recordings, marking parts of the data that were most relevant to the purposes of the analysis. Subsequently, I carried out a partial transcription of the most interesting and relevant sections of each interview.

PART FOUR: RESULTS

QUESTIONNAIRE RESULTS

Fifty-five military officers (36 Navy officers, 16 Air Force officers, and 3 Army officers) completed the online survey. The number of the respondents is in line with both Hatch and Lazaraton (1991, as cited in Dörnyei, 2007), who recommend a minimum sample size of 30 people for L2 research, as well as with Dörnyei and Taguchi (2010), who maintain that in order for the results to be statistically significant, a sample size of around 50 respondents is required. Furthermore, it is worth noting that the response rate (41%) exceeds the thirty per cent response rate that questionnaires typically attract (Gillham, 2008). All respondents are male, with the exception of one female officer. They are all graduates of the respective Military Academies in Greece (equivalent to state universities). In addition, eight of them hold an undergraduate degree from a Greek university, twenty-six hold an MA either from a Greek university (13) or from a university in the UK or USA (13), and one holds a PhD from a Greek university. Nineteen officers have graduated from the Supreme Joint War College of Greece while three others have graduated from a Defence College abroad (these Colleges provide senior officers with education and training in military issues on a graduate level). Interestingly, more than half of the officers (58%) who completed the questionnaire stated that they have previous experience of working in NATO or in a NATO-related environment. Regarding their English language proficiency, thirty-two respondents (63%) hold a C2-level certificate, eight hold a C1-level certificate, seven hold a B2-level certificate and four hold a B1-level certificate, while four respondents indicated that they do not hold any English language certification in accordance with the Common European Framework of Reference for Languages (CEFR). Commenting on their overall speaking proficiency, twenty-seven officers opted for “occasional difficulty”, twenty-one indicated that they have “no difficulty” while seven have “some difficulty”. Nobody opted for “great difficulty”.

The next question aimed to explore the officers’ familiarity with the STANAG Level 3 Speaking Descriptors, an issue which has actually propelled the conception of this study. The respondents could select more than one answer that applied to them. Only sixteen per cent of the officers stated that they are familiar with the Speaking Descriptors because they have actually read through them while another sixteen per cent of them stated that they “have been informed about [the Speaking Descriptors] from other colleagues/candidates”. Most officers (36%) stated that they have no idea what the Speaking Descriptors are about while an equally considerable percentage (31%) of them seem to have an intuitive knowledge of the Speaking Descriptors (“I feel I know what they are about although I haven’t read them”). Finally, seven per cent of the surveyed officers see no reason why they should be familiar with the Speaking Descriptors.

More than half of the officers (53%) took the interview because it was part of the English language examination they were required to take as they had applied for a NATO post. Some others (31%), being more prudent, took the interview in order to obtain a valid score in case they apply for a NATO post in the next three years while sixteen per cent of them chose to take the interview simply because they wanted to check their level of speaking proficiency for personal reasons.

When asked how they prepared for the interview, sixteen officers (29%) answered that they did not prepare at all because they did not have any time, while fifteen officers had lessons with an English teacher. Eleven officers felt really confident and stated that they did not prepare because they did not need to, while from the remaining thirteen, nine officers practiced by conversing in English with relatives/friends/colleagues and four others practiced by conversing with English-speaking relatives/friends/colleagues.

Subsequently, I wanted to investigate the extent to which the officers were familiar with the purpose and content of the interview before they took it so as to know what to expect. Only seven officers claimed that they were clear about the purpose and content of the interview prior to taking it, while the majority of them, that is twenty-nine officers, stated, rather compromisely, that they were “more or less” familiar with the purpose and content of the interview and the remaining nineteen officers answered that they did not know anything about the purpose and content of the interview before they took it. However, the surveyed officers proved to be aware of how test takers can find out about the purpose and content of the interview. When asked to indicate all the possible ways that test takers can obtain access to this kind of information, thirty-one respondents indicated that test takers can simply telephone the Military Language Testing Center and twenty respondents indicated that test takers can drop by the Military Language Testing Center and learn everything they need to know about the interview. Twenty-five respondents also stated that test takers can refer to test specifications (the official document issued by the Hellenic National Defence General Staff). However, there are still twelve of the surveyed officers who seem not to be aware of any of the above-mentioned ways.

Reflecting on their experience of taking the interview, a large majority of the respondents (75%) characterized it as “positive” while the rest of them answered that they have “mixed feelings” about it (nobody opted for “negative”). Regarding their levels of anxiety before the interview, twenty-four officers answered that they felt slightly anxious, twenty-one did not feel any anxiety while ten officers reported that they felt anxious before the interview. The officers’ answers to the next question indicate that in general their levels of anxiety did not increase during the interview (62% answered “no”). However, thirteen officers opted for “slightly” and eight thought that their levels of anxiety increased during the interview.

When asked to comment on the presence of more than two examiners during the interview, twenty-four officers commented that it affects the interview positively, thirteen stated that it affects the interview negatively, the same number of officers (13) answered that it does not affect the interview in any way, while five officers did not have an opinion on it.

A clear majority (84%) of the surveyed officers found the number of questions that they were asked during the interview “sufficient” and, thus, they were able to “fully demonstrate their oral proficiency”. Only five officers had the opposite opinion while four were ambivalent and opted for “not sure”. Fifty respondents agreed that the questions were clear and only a mere handful of them (five military officers) suggested that “not all of them” were clear. Similarly, a high percentage (80%) indicated that they were given “enough time to respond to the questions and elaborate on [their] thoughts and ideas”. Eight respondents opted for “quite” suggesting that the time they were given was almost enough, while there were three of them who believed that they were not always given enough time to respond to the questions and elaborate on their thoughts and ideas. Nobody thought that the time they were given was not enough.

The next question sought to investigate the officers' perceptions on the language functions elicited by the interview. It employed the main language functions included in the STANAG (Edition 4) Speaking Descriptors at Level 3 (which were adapted accordingly) and asked participants to state whether the tasks that they were engaged in during the interview elicited the indicated eight language functions. To this end, a rating scale (*Yes-No-Probably-Don't Remember*) was used to facilitate the officers' answers. Four functions received very high ratings. More specifically, the respondents indicated that during the interview they had the opportunity to *support their opinion and justify their decisions* (95%), *participate in a discussion on a social and/or professional topic* (86%), *answer objections and clarify points raised by their interlocutors* (78%), and *hypothesize and express their opinion on a situation* (75%). Furthermore, sixty per cent, that is thirty-three officers, answered that during the interview, they had the opportunity to *respond to challenges from their interlocutors*. Twenty-five of the respondents were of the view that during the interview they also had the opportunity to *defend and state policy*. However, fifteen had a different opinion and opted for "no", eight could not decide and opted for "probably" and seven did "not remember". With regard to *eliciting information and opinion from their interlocutors*, a meager majority, twenty-one officers, opted for "yes", while fifteen officers answered "no", eleven chose "probably" and eight did "not remember". Finally, the respondents were torn on whether they were given the opportunity to *deliver a monologue* during the interview; nineteen stated they were, while some other nineteen officers thought they were not, twelve opted for "probably" and five did "not remember".

Regarding the duration of the interview, the officers widely agree (82%) that it was as long as it should be (six thought that "it was rather long", two thought that "it was rather short", one opted for "it was too long" and another one for "it was too short"). In addition, most officers (30) found the interview to be "quite relevant" to the language requirements and communication needs in the NATO work environment and ten officers thought of it as being "very relevant". However, fourteen officers were of the view that it was "not very relevant" (only one opted for "not relevant at all").

When asked to predict how they would do if they retook the interview, most officers (29) stated that they would do better, eighteen indicated that they would do the same, eight were undecided, while nobody opted for "worse". With regard to their score on the interview, the majority of the respondents (66%) believed that it was what they had expected to get, followed by thirty-one per cent who reported that it was lower than what they had expected to get and four per cent who thought that their score was actually higher than what they had expected to get. In this context, twenty-nine officers indicated that their score on the interview probably reflects their performance on it while sixteen officers stated that their score does reflect their performance (and opted for "yes"). On the other hand, six officers hold the view that their score probably does not reflect their performance while four officers maintain that it does not (and opted for "no"). Similarly, twenty-seven officers believe that their score on the interview probably reflects their overall speaking proficiency. However, the numbers resulting from the dichotomous yes/no answers are reversed here compared to the ones in the previous question. In other words, the number of officers who believe that their score does not reflect their overall speaking proficiency (and opted for "no") has increased (13) while the number of those who support that it does (and opted for "yes") has decreased (9). The number of officers who chose "probably no" has remained the same (6).

Subsequently, the officers were provided with a list of six language functions and were asked to rate them in terms of their importance for officers working in NATO. These language functions are part of the STANAG (Edition 4) Speaking Descriptors at Level 3. However, this was not stated in the questionnaire. The officers were asked to rate the given language functions using a *Very Important – Quite Important – Not Important – Not Sure – Don't Know* scale. More specifically, the great majority of respondents (75%) indicated that it is “very important” for officers working in NATO to be able *to participate effectively in formal and informal conversations on practical, social, and professional topics*. Regarding officers’ ability *to discuss particular interests and special fields of competence with considerable ease*, the respondents were torn between “very important” and “quite important”; forty-seven per cent opted for the former and forty-nine per cent chose the latter. A very high percentage (78%) believes that it is “very important” for officers working in NATO to be able *to use the language to perform a series of common professional tasks, such as answering objections, clarifying points, justifying decisions, responding to challenges, supporting opinion, stating and defending policy*. Furthermore, sixty-nine per cent rated officers’ ability *to demonstrate language competence when conducting meetings, delivering briefings or other extended and elaborate monologues, hypothesizing, and dealing with unfamiliar subjects and situations* as being “very important”, while twenty-six per cent opted for “quite important”. Fifty-eight per cent think that it is “very important” for officers working in NATO to be able *to reliably elicit information and informed opinion from native speakers or from highly competent English language speakers* (thirty-six per cent opted for “quite important”). Finally, regarding officers’ ability *to convey concepts in discussions of such topics as economics, culture, science, technology, philosophy as well as his\her professional field*, forty-seven per cent think of it as being “quite important”, thirty-eight per cent consider it to be “very important”, and nine per cent of the respondents, that is five respondents, dismiss it as being “not important” (the only time that the “not important” option was chosen by more than one respondent and the only time that the “don’t know” option was ever chosen by any of the respondents in this question – here two respondents opted for it). It is feared that the reference to *culture* and *philosophy* must have somehow discouraged respondents from giving higher ratings to the importance that they actually attach to this particular language function.

The last question asked participants to put forward their suggestions for improving the quality of oral assessment at the Military Language Testing Center. Only twenty-five officers expressed their opinions on the matter. A small number of the answers were deemed to be irrelevant to the purpose of the question as they addressed issues relevant to other sections of the examination or simply offered positive remarks on the existing model of oral assessment. The remaining suggestions essentially addressed issues relating to interview topics and tasks. Regarding the former, it was suggested that additional (but not too specific) focus be given to NATO-oriented topics, such as policy, operations, communications, intelligence, or other military-related topics. In a similar vein, some respondents called for more questions on a wider variety of topics (without mentioning what kind of topics these should be). Regarding the latter, I was pleasantly surprised to find out that a number of suggestions concerned the inclusion of role plays as part of the interview (role play ideas/scenarios were also provided). Other suggestions put forward involved the use of discussion prompts in the form of a short newspaper/magazine article or a paragraph from a book and the creation of a pool/list of discussion topics from which the examinee will be given the opportunity to choose the one s/he will feel most confident to talk about. The need for candidates to become more familiar with

the speaking descriptors, which will in turn foster a better understanding of the requirements of the interview, was also mentioned while it was pointed out that the official document issued by the Hellenic National General Staff, which is the test specification document in effect, should be more analytical and contain more details on the objectives and grading criteria of the interview. There were also occasional comments on the presence of too many examiners in the room during the interview (characterized as “stressful”, “distracting”, even “inconvenient” as the examinees have to “turn their head from one direction to another all the time”). In fact, one of the respondents went so far as to suggest that the furniture in the examination room be rearranged in such a way so that the examiners are seated closer to each other “in a more compact scheme”. Finally, another interesting point was put forward by an officer, who, commenting on the dynamics of the interview and the status of the participants, underlined that “the examiners should not be biased by their military rank but should judge the examinees solely on their language skills and not their personal opinions on the topics discussed during the interview”.

INTERVIEW RESULTS

All five officers who took part in the follow-up interviews have been awarded a Level 3 in Speaking after taking the interview as part of the English language examination at the Hellenic Foreign Language Testing Center during the academic year 2015-2016. Furthermore, three of them hold a C1-level certificate and the other two hold a C2-level certificate and they are all male.

The interviews were conducted in English. The interview guide consisted of ten questions. All ten questions were asked during each interview but not in a fixed order. The purpose of the interview was briefly stated before each interview began. Below the ten questions are presented in the order in which they appear in the interview guide.

1. What is your overall opinion on oral language assessment in the Hellenic Armed Forces?

As an introduction to the main body of the interview questions, the very first question asked for the interviewees’ opinion on oral language assessment in the Hellenic Armed Forces. According to two of them, the fact that there is a language assessment mechanism in place which can effectively assess officers’ oral language skills prior to any NATO posting using the same standards and criteria set by the STANAG is really important because in this way it is ensured that the officers posted abroad meet the oral English language requirements for these posts. It was also indicated by a third officer that oral language assessment in the Hellenic Armed Forces has improved significantly over the last few years and has become “competitive” and “challenging” (judging from the context in which the adjectives were used, it is felt that the adjectives were meant to convey the interviewee’s positive feelings on the interview and emphasize the high level of oral English language competency that test takers need to exhibit in order to be certified as Level 3 speakers) while another one also mentioned that it is “challenging” and “reflects the difficulties that one may encounter during his/her deployment”. However, one of the officers that I interviewed took a rather critical stance on the issue and stated that oral assessment is “at its early stages” and “there are some things that need to be adjusted in order to make sure that the officers who are selected to be posted abroad have a very good level of English”.

2. What is your overall opinion on the interview?

The interviewees' overall opinion on the interview can be characterized as positive. Subsequently, they were asked to mention some of the positive and negative aspects of the way the interview is conducted. Not all officers offered comments on both aspects as asked. On the positive side, it was mentioned that the interview is conducted "in a friendly atmosphere which makes candidates feel comfortable", "gives candidates the opportunity to show what they know", the questions were "accurate" and "well-aimed" and "the examiners are well-prepared and well-equipped to meet the challenges of the various English language levels they may come across". On the minus side, an interviewee pointed out that the presence of so many examiners, who are, in their majority, officers, can "increase candidates' levels of anxiety" and can be "a bit awkward because other officers are present". After being probed to reflect on the issue, he went on to say that the officers-examiners can in fact be viewed as "an audience" simulating a typical NATO work environment where officers need to be able to express themselves, support their opinions, etc. in the presence of others. In this context, he added that the experience from the interview can actually help officers "overcome stage fright" and give them an idea of what it feels like having to "answer demanding questions in English asked by different people". Finally, the officer who expressed more moderate views on the previous issue suggested that the interview become "more standardized" as this "would make the examination fairer and bring out the most realistic language knowledge of each candidate". When asked to explain how in his view the interview can become "more standardized", he commented that "all candidates should be given topics of the same level". I briefly pointed out to him that during the interview candidates are asked questions of different difficulty in order to establish and confirm their level so if a candidate cannot handle, for example, Level 3 topics and questions, then s/he is taken back to Level 2. Subsequently, I asked him to tell me how fair he thought the interview as a means of assessing officers' speaking proficiency was and he replied "quite fair but there is always room for improvement".

3. In your opinion, is the interview relevant to the language requirements in NATO?

In general, the interview was deemed to be relevant to the language requirements in NATO as it basically "assesses the necessary language functions that officers should be able to perform in NATO", with the exception of one officer, the one who had previously pointed out that the interview needs to be further standardized, who stated that he is "not entirely convinced that [the interview] is very relevant" to the language needs in NATO. When asked to elaborate on the matter, he rushed to respond that "This is just how I feel about it!", adding, after a short pause, that "more research into the language needs of officers who are not native speakers of English needs to be done".

4. Do you think that the interview should be oriented towards more military-related issues?

All five officers unanimously agreed that "there is no need to include more military topics, given the interview time limits" as these are already "sufficiently covered". In fact, one of the interviewees drew attention to the fact that we must be very careful what kind of military issues we choose to talk about in the context of an oral language examination because "quite

often military issues have political implications and, without realizing it, we may end up having a political conversation instead”.

5. Does the interview effectively assess speaking proficiency at Level 3?

Four officers responded positively to this question. In an attempt to summarize their views on the issue, it can be deduced that these officers are of the opinion that the interview effectively assess speaking proficiency at Level 3 because “it assesses the necessary language functions that officers should be able to perform in NATO … these language functions are in accordance with STANAG”. The fifth officer stated that “probably it does” adding that “further standardization will help towards this direction” and referred back to his answers to questions 2 and 3.

6. Do officers need to be familiar with the STANAG Level 3 Speaking Descriptors?

There is a general consensus among the interviewees that officers should be familiar with the STANAG Level 3 Speaking Descriptor prior to taking the interview, though their answers exhibited varying degrees of enthusiasm (“it would be helpful”, “they can help them understand the requirements of the examination”, “they definitely need to know about them before they take the examination”, “absolutely … in order to be adequately prepared …”). Furthermore, it was pointed out that the STANAG is easily accessed, so “if someone is really motivated, it is really easy to find out what the speaking descriptors are about”. When asked if they had read through the speaking descriptors before they took the interview, three of them said they had.

7. In your opinion, what kind of language functions should a speaker of English at Level 3 be able to perform?

The following list of language functions was compiled from the officers’ answers:

- To be able to have conversations about social and professional issues
- To be able to give presentations
- To be able to talk about issues on an academic level
- To be able to comprehend nuances and important notions
- To be able to communicate and carry out a conversation with native and non-native speakers of English
- To be able to have a conversation about abstract topics and elaborate on his/her ideas
- To be able to talk about general and military issues fluently and confidently and with grammatical and syntactic accuracy
- To be able to talk about professional issues in detail and in depth
- To be able to talk about political, economic and social matters fluently and without mistakes
- To be able to argue in a civilized manner and convince the audience with logical and well-developed arguments
- To be able to use military terminology correctly

- To be able to express his/her opinion on his/her country's policy and interests
- To be able to express himself/herself accurately, especially under stressful conditions

8. In your opinion, do the STANAG Level 3 Speaking Descriptors reflect the language requirements in a NATO work environment?

All five officers unequivocally agreed that the STANAG Level 3 Speaking Descriptors do reflect the language requirements in a NATO work environment. In general, it is felt that “the descriptors are quite indicative of the language functions that officers should be able to perform at Level 3”. However, one of the officers reaffirmed his view that “more research into the language needs of officers who are not native speakers of English needs to be done”, a point made earlier (see Question 3), in order to have more realistic expectations of them.

9. Do you think that you are a Level 3 speaker?

Based on their scores on the interview and the way they perceive themselves as speakers of English, all five officers indicated their firm belief that they are Level 3 speakers. In fact, three of them made reference to their previous NATO-related work experience as further evidence for rightly considering themselves to be Level 3 speakers since they had “no difficulty using and understanding English” during their deployments.

10. Do you think that you meet the language requirements for NATO posts requiring Level 3 in Speaking?

All five officers promptly stated that they firmly believe that they meet the language requirements for NATO posts requiring Level 3 in Speaking and declared their readiness to take up relevant posts.

PART FIVE: DISCUSSION

SETTING THE CONTEXT OF THE DISCUSSION

At first glance, two kinds of biases can be easily detected in the officer sample. More specifically, the officers who participated in the online survey come from the three military branches of the Hellenic Armed Forces but their number is not even. The exceptionally low number of Army officers has already been accounted for in the previous chapter. However, the difference in the number of the Navy and Air Force officers who completed the questionnaire (there are more than twice as many Navy officers as there are Air Force officers in the sample although the initial email was sent out to practically the same number of officers from the respective military branches) cannot be explained in any straightforward manner; it can only be assumed that the higher number of Navy officers can be attributed to the fact that this study is conducted by a colleague of theirs in the Navy, so they must have felt a more direct connection with it and a stronger obligation to contribute to it. It should also be pointed out that a significant part of this study was conducted during the summer months which made it even more difficult to track potential participants down either because they were on summer leave or transferred to a new post or department. Finally, regarding the gender of the respondents, the

sample is obviously biased. In a (not so) male-dominated field such as the military, this kind of bias can be perceived as “understandable” by many. The truth, however, lies somewhere in the middle; the majority of female officers have not yet reached the military ranks which would make them eligible for a NATO post (the situation is expected to change in the next few years) while for those (mainly Supply/Logistics officers) who already hold the required military ranks, the number of respective posts is already significantly limited (irrespective of gender). As for the reasons why female officers might not decide to apply for a post abroad as easily as their male colleagues usually do, these go beyond the scope of this study.

Undoubtedly, the officers’ opinions on the interview have been shaped by their education background (including their English language proficiency), their previous test taking experience (of English and Greek examinations) as well as their work and life experience. A great number of the participants hold graduate degrees or have received graduate level education and training either in Greece or abroad in an English-speaking environment. Similarly, the majority of them are highly competent in English as they hold a C2-level certificate. However, the fact that even a handful of them stated that they hold a B1-level certificate or do not hold an English language certificate at all is problematic in itself and raises a number of questions since the basic language requirement for all candidates, which is stated explicitly in the official document issued by the Hellenic National Defence General Staff, is that they should hold a B2-level certification in order to be eligible to take the English language examination at the Military Language Testing Center. A final observation concerning the participants’ background is that many of them have previously worked in NATO or in NATO-related environments, so it is assumed that they know firsthand the true language and communication needs in a NATO work environment.

In this context, the officers have been called upon to give their opinions and make their judgments about a number of interview-related issues despite the fact that they lack any subject-matter expertise. No matter how enlightening and informative these judgments can prove to be, they must be treated cautiously before any final conclusions are drawn as they are likely to be subjective and carry emotional overtones.

Given all the above, I now turn to the discussion of the findings in relation to the three research questions.

RESEARCH FINDINGS VIS-À-VIS RESEARCH QUESTIONS

1. What do test takers think of the content of the interview and the way it is conducted?

The respondents’ views on the content of the interview and the way it was conducted were indicated mainly through their answers to the following questionnaire items:

- Were you familiar with the content and purpose of the interview before you took it? (Question 12)
- How would you characterize your overall experience of taking the interview? (Question 13)
- Did you feel anxious before the interview? (Question 14)
- Did your anxiety increase during the interview? (Question 15)

- What do you think of the presence of more than two examiners in the room during the interview? (Question 16)
- Were you asked a sufficient number of questions which enabled you to fully demonstrate your oral proficiency? (Question 17)
- Were the instructions clear? (Question 18)
- Were you given enough time to respond to the questions and elaborate on your thoughts and ideas? (Question 19)

The majority of the respondents were superficially familiar with the purpose and content of the interview prior to taking it though it is generally accepted that information on the purpose and content of the interview can be easily accessed in more than one way (Question 11). It is surprising that quite a few officers not only were they completely unaware of the purpose and content of the interview before they took it but they also did not have a clue as to how this kind of information could be accessed. Brown (1993) urges that “[p]otential test takers need to be educated as to the purpose of the test if they are to accept it as a suitable assessment instrument” (p. 295) and suggests that “adequate information on the content and format of the test [be] provided before the test administration” (p. 296).

Overall, the interview is described as a test-taker friendly experience which does not seem to induce or add to test takers’ anxiety. This view is reinforced by the interviewees’ favorable comments on the way the interview is conducted (see Interview Question 2). In addition, the respondents hold the view that the interview allows test takers to fully demonstrate their oral proficiency and express and elaborate on their thoughts and ideas through a sufficient number of questions posed by the examiners in a clear and comprehensible way. It can be said then that officers consider the interview to have face validity. Building on Alderson, Clapham and Wall (1995), who acknowledge the importance of face validity in testing, it can be said that face validity is particularly important in military testing as it can enhance the credibility of the testing instrument in the eyes of military officers, who may not trust or have confidence in the test, and reduce potential face threat – after all, the concept of “face” (Brown & Levinson, 1987; Goffman, 1967; Thomas, 1995) is crucial in the military. As Alderson et al. (1995, p. 173) point out, “tests that do not appear to be valid to users may not be taken seriously for their given purpose”. On the other hand, “if test takers consider a test to be face valid, … they are more likely to perform to the best of their ability on [it] …”.

One of the issues that I have been particularly interested in investigating in the context of this study concerns the presence of more than two examiners during the interview and how it can potentially affect test takers’ performance. In most well-established oral examinations there are two examiners (e.g. an interlocutor and an assessor) present in the examination room or even one (in both capacities). At the Military Language Testing Center the test taker is confronted with four or five examiners who are usually military officers. Not all examiners are obliged to participate in the interview but they all have to give a mark in the form of a score for each candidate at the end of each interview session. According to the questionnaire findings, the majority of the respondents (though not a high one - 44%) indicated that the presence of more than two examiners affects the interview positively. Taking a closer look at the rest of the responses, it can be assumed that a number of officers chose to take a neutral stance on the issue either by indicating that it does not affect the interview in any way or by not offering an opinion on it. On the other hand, many of those who were of the view that it affects the interview negatively voiced their concerns quite intensely in their comments to the final open-

ended question. Undoubtedly, the officers-examiners bring to the interview their previous work experience and knowledge on military issues which can add authenticity to the tasks (Green & Wall, 2005) and give candidates a more realistic idea of possible language challenges in a NATO work environment (see officer's relevant comments to Interview Question 2 in the previous chapter). However, it can also be speculated that the respondents, who are officers and were asked to comment on the presence of other officers, did not want to appear disrespectful or challenge the status of the examination committee in the context of military chain of command.

In the context of the above discussion, it can be deduced that the officers who participated in this study have positive feelings both about the content of the interview and the way it is conducted.

2. Do test takers think that the interview can effectively assess their speaking proficiency in English for interoperability purposes at Level 3?

The majority of the respondents found the interview to be quite relevant to the language requirements and communication needs in the NATO work environment, while most of the interviewees hold the view that it effectively assesses speaking proficiency at Level 3. However, it would be interesting to find out why a number of the participants think that the interview is not very relevant to the language requirements and communication needs in the NATO work environment since none of them commented on it in any way in the space provided at the end of the questionnaire.

The language functions elicited by the interview (Question 20) have been shown to correspond to a large extent with some of the language functions which are part of the STANAG (Edition 4) Speaking Descriptors at Level 3 (Question 27) and which the respondents rated mainly as being "very important" and "quite important" for officers working in NATO. One of the proposed language functions included in Question 20, that of *delivering a monologue*, was shown not to be successfully elicited by the interview as indicated by the participants' answers. It can only be assumed that the word *monologue*, though of Greek origin, must have confused the respondents and consequently must have been misinterpreted as *delivering a monologue* is in essence giving an extended answer in which you *support your opinion* in the context of *a discussion on a social or professional issue* given the time constraints of the examination, two language functions which are claimed to be successfully elicited by the interview as the questionnaire findings indicate a high agreement among respondents. With regard to *stating and defending policy*, a central concept in the definition of interoperability, it is felt that it is probably not as adequately elicited by the interview as it should be because the respondents appear to be somehow divided (despite the fact that there is a small majority who responded positively on the issue). In fact, one of the comments to the open-ended question addressed this issue by calling for additional focus on NATO-oriented topics, such as policy, operations, communications, intelligence, or other military-related topics. However, the interviewees unanimously agreed that military-related topics are sufficiently covered in the interview which typically should give candidates the opportunity to state and defend policy. Finally, the fact that the respondents appear to be largely undecided as to whether the interview did or did not give them the opportunity to *elicit information and opinion from their interlocutor(s)* can be attributed to the absence of role plays, which would have allowed them more easily to have this kind of exchange. In addition, a number of

respondents have suggested that role plays be included in the interview. It becomes apparent then that role plays can significantly help improve the assessment of military officers' speaking proficiency in English for interoperability purposes at Level 3 by making the interview more standardized and the assessment possibly more accurate and fairer.

One final point should be made regarding the familiarity of test takers with the STANAG Level 3 Speaking Descriptors and how this can affect their perceptions of how effectively the interview can assess their speaking proficiency in English for interoperability purposes. As it was pointed out in the previous chapter, the surveyed officers seem to have a rather intuitive knowledge of what the Speaking Descriptors are about while some of them stated that they know nothing about them. In fact, very few of the surveyed officers appear to be truly familiar with the Speaking Descriptors although there seems to be a shared belief among officers that being more knowledgeable about the Speaking Descriptors prior to taking the interview can help candidates gain a better understanding of its requirements which can in turn benefit their performance on it. In addition, knowledge of the Speaking Descriptors can help officers develop a better understanding of the language requirements in the NATO work environment as it has been pointed out by the interviewees. Regardless of their extent of familiarity with the Speaking Descriptors at Level 3, the officers have in general acknowledged the importance of the language functions included in them (Question 27). In fact, the interviewees came up with a number of language functions which reflect the language functions included in the Speaking Descriptors quite accurately. It can be assumed that the officers' work experience, professional knowledge and language background have helped them develop an implicit understanding of what the Speaking Descriptors are actually about.

In the context of the above discussion, it can be deduced that the officers who participated in the study think that the interview can satisfactorily assess their speaking proficiency in English for interoperability purposes at Level 3.

3. Do test takers think that their scores on the interview reflect their linguistic readiness for NATO posts requiring Level 3 in Speaking?

Commenting on their scores on the interview, the majority of the surveyed officers stated that they actually got what they expected to get. Since officers are required to be Level 3 speakers in order to be eligible for any international posting, it can be deduced that the majority of the surveyed officers managed to achieve Level 3 in Speaking. This is not very surprising taking into consideration the high level of language proficiency of the majority of the surveyed officers (Question 6). In fact, the number of the officers who hold C2- and C1-level certificates is roughly equivalent to the number of the officers who stated that their score on the interview was what they expected to get (Question 24). In a similar vein, the majority of the surveyed officers were of the view that their scores on the interview probably reflected their performance on it (Question 25), followed by those who were positive about it. In other words, most of the respondents believe that they probably deserved the score they received on the interview. These findings seem to reflect to a certain extent the officers' answers to the previous question. In addition, the majority of the surveyed officers indicated that their score on the interview probably reflects their overall speaking proficiency (Question 26), followed by those who had a negative opinion on it. A few things are worth noting here. To begin with, the fact that the majority of the respondents (49%) opted for "probably yes" in Question 26 somehow contradicts the overwhelming majority of the respondents (84%) who unequivocally stated in

Question 17 that during the interview they were asked a sufficient number of questions which fully enabled them to demonstrate their oral proficiency. Regarding Question 25, the total number of officers who opted for “probably yes” and “yes” is equivalent to the number of officers who responded positively (and opted for “yes”) to Question 17. However, the total number of officers who opted for “probably yes” and “yes” in Question 26 is much lower than the respective number in Question 25 (and consequently in Question 17), not to mention the fact that the second most popular answer to Question 26 was “no” as opposed to the second most popular answer to Question 25 which was “yes”. It can only be assumed that Questions 25 and 26 being quite similar in their content (and probably in the way in which they were expressed) must have somehow confused some of the respondents, who might have also grown fatigued. According to Dörnyei and Taguchi (2010, p. 9), fatigue, known as the *fatigue effect*, is “more likely to influence responses toward the end of the questionnaire”.

In the context of the above discussion, it can be deduced that the majority of the officers who participated in this study think that their scores on the interview reflect their linguistic readiness for NATO posts requiring Level 3 in Speaking.

CONCLUSIONS

I believe that this study has shown that when test takers are given the opportunity to voice their opinions and concerns about language assessment practices, they are in fact able to make some really insightful and perceptive comments despite the fact that they lack subject matter expertise or at times may come across as rather emotional or too confident about their true abilities.

In an attempt to demystify the construct of the oral proficiency interview which is taken by all officers of the Hellenic Armed Forces prior to any staff appointment within NATO, a qualitatively-oriented study was conducted which focused exclusively on test takers’ perceptions of the issue under examination. The qualitative orientation of the study was dictated by the fact that this is the first exploratory research project in the field of language testing in the Hellenic Armed Forces which also put the test takers of this particular professional group at the heart of it. In this context, a qualitative approach to data analysis was adopted because it was deemed to lend itself to the purposes of this study as it is inherently language-based and helps the researcher to establish patterns (Dörnyei, 2007) by “tap[ping] mental processes that may be suggestive of some particular characteristics not easily detected in a purely quantitative study” (Winke, 2012). In addition, the qualitative orientation was further dictated by the fact that the collected data were largely biased and for this reason no correlations could have been carried out; almost all the respondents were male, the number of officers of the three military branches was disproportionate, and the number of C2-level certificate holders was disproportionately higher than the rest (C1, B2).

The discussion of the research findings indicated that the research questions, and by extension the validation questions which map onto the respective inferences in Shaw et al.’s (2012) framework, were answered quite satisfactorily. However, this should not lead those involved in the administration of the interview to be complacent since “there is always room for improvement”, as one of the military officers so rightly pointed out.

It was established that test takers need to grasp a better understanding of the Speaking Descriptors which will reinforce their existing intuitive knowledge of them. By becoming more familiar not only with Level 3 but also with Level 2 and Level 4 Speaking Descriptors, test takers will be able to compare and contrast the development of speaking proficiency per level and form a clearer and more realistic picture of the interview language requirements as well as of their own speaking abilities. Crossey (2005) calls it an understanding of what represents a “professional” level of foreign language knowledge. To this end, online tutorials can prove useful, effective and test taker friendly means of instruction.

Regarding the interview structure, roles plays should be adopted as level checks and probes. In this way, the interview will become more standardized and will be in full accordance with the Oral Proficiency Interview (OPI) structure endorsed by the BILC. Moreover, it is hoped that a wider range of language functions as described in the STANAG will be elicited through role plays. For this reason, it is important that a list of possible role play topics and scenarios be compiled so as to be subsequently trialed before they are incorporated in the interviews. It is also important that all members of the examination committee are familiar with conducting role plays with a view to eliciting ratable speech samples and have received appropriate training.

Sireci (2007, p. 477) points out that “[e]valuating test validity is not a static, one-time event; it is a continuous process”. It is therefore imperative that this work be followed up and its scope be expanded to include both qualitative and quantitative studies from different perspectives employing different data collection methods. Future follow-up studies can address the “Scoring” and “Decision-making” inferences in Shaw et al.’s framework (2012) which were not addressed in the context of the present study or look into interrater reliability, an issue which calls for careful and special consideration given the number of examiners who conduct and score the interviews.

In addition, this study has attempted to raise military officers’ awareness of the importance of language assessment in the NATO context and call their attention to the importance of linguistic interoperability as within the NATO there has been “a perceived dominance of English language native speakers in decision-making in its command structures” (Crossey, 2009, p. 151). As a result, “non-native speakers may effectively find themselves cut out of key processes” which can undermine their sense of self-worth and reduce the influence of national delegations (Crossey, 2005). This has obvious political implications as the NATO aims at fostering cooperation between nations, not creating, even unwittingly, an impression of “cultural discrimination”, Crossey suggests, who draws attention to the fairness and transparency of national language testing practices and systems.

For all the above, directly or indirectly related to this project, I hope that this study, besides paving the way for future research, will help to enhance the status of language testing in the Hellenic Armed Forces and lay the basis for more active involvement and collaboration of all interested parties in the implementation of military language testing policy.

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THE ROLE OF AGE IN SECOND/FOREIGN LANGUAGE ACQUISITION

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Abstract. Age is considered to be a significant factor for language learning, and its effects on second/foreign language acquisition are accompanied by voluminous research extending decades back. The main focus of research so far has been on natural second/foreign language learning contexts and not on instructed second/foreign language learning contexts. The differences presented in the parameters between natural second/foreign language learning contexts and instructed second/foreign language learning contexts make the outcomes and the processes of the former not able to be generalized to the latter. Existent research and hypotheses concerning issues relevant to the role of age in language learning are used, and the function of age as a factor for learning both in natural second/foreign language learning contexts and instructed second/foreign language learning contexts is presented. It is deduced that the earlier a person starts learning a second/foreign language (henceforth written as “L2”), the better in terms of L2 attainment, provided that there is significant exposure to L2.

Keywords: Affective, Age, Acquisition, Analytical Ability, Attainment, Cognitive, Coordinate Bilingual, Compound Bilingual, Critical Period Hypothesis, Exposure, Factors, Foreign Language, Immersion, Instructed Language Learning Context, Input, Instructed Learner, Metalinguistic Awareness, Motivational, Natural Language Learning Context, Naturalistic Learner, Neurological, Sensitive Period Hypothesis, Sensory Acuity, Second Language, Storage

REVIEW - DISCUSSION

The effects of age on L2 acquisition have been researched extensively “in natural settings where the immigrants’ level of proficiency in the target language has been examined on the basis of their age of arrival in the L2 community” (Muñoz, 2010, p.39). The findings support that the younger the learner is immersed in a natural L2 setting, the better this is for L2 learning. Age of acquisition is established as an important factor for acquiring a native-like mastery of L2 (Patkowski, 1980), thus asserting the Sensitive Period Hypothesis, which resembles the Critical Period Hypothesis (CPH) but exclusively refers to L2.

Contrastively, the influence of age on L2 acquisition in a classroom setting has not attracted the same degree of attention and “research findings have not appeared to be so consistent” (Muñoz, 2010, p.40); both the outcome and the process of learning a second language in a natural setting have been generalized to the situation of foreign language learning (Muñoz, 2010, p.40-41). Since parameters differ extensively between natural and instructed L2 learning contexts, findings concerning age and L2 acquisition in the former should not be applied to the latter.

CRITICAL PERIOD HYPOTHESIS – SENSITIVE PERIOD HYPOTHESIS

Concerning L1 acquisition, the Critical Period Hypothesis suggests that “the processes by which the realized, outer structure of a natural language comes about are deeply-rooted, species-specific, innate properties” (Lenneberg, 1967, p.394) which serve to acquire language at specific times in life and that there is a critical period for language acquisition. According to the Critical Period Hypothesis, language acquisition may be incomplete and imperfect and “automatic acquisition from mere exposure to a language may disappear after puberty” (Lenneberg, 1967, p. 176). According to the Sensitive Period Hypothesis, there is a period up to a certain age during which learners can acquire L2 easily and achieve native-like competency (Patkowski, 1980). L2 acquisition becomes more difficult and is rarely entirely successful after a certain period, the Critical/Sensitive Period, a phenomenon for which Selinker coined the term “fossilization”. L2 learners’ failure to achieve L2 competence results in them forming their individual internalized rule system, which is called “interlanguage” (Selinker, 1972).

Research supports that the termination of the L1 Critical Period and the L2 Sensitive Period coincide at puberty (Birdsong, 2006). However, other researchers differentiate the termination of the Sensitive Period on the basis of the area of L2 acquisition. More specifically, it is supported that the Sensitive Period is terminated at a younger age regarding phonology and pronunciation (Long, 1990) and at an older age such as 18 years old concerning grammar, morphology and syntax (Bialystok & Hakuta, 1999). Thus, there may be multiple Critical/Sensitive periods for different aspects of language. Finally, “It is possible to acquire a second language after the Sensitive Period”, but not “to the extent of attaining native-like proficiency and thus being able to pass for native”(Patkowski, 1980, p.449).

Age obviously should be regarded as a significant factor affecting the possibility of attaining native-like proficiency in L2. However, the learning difficulties involved are differentiated on the basis of the similarities and differences between native language (henceforth written as “L1”) and L2 and also on the basis of existent contexts; learners may reside either in the countries where L2 is spoken as an everyday, native language by the majority of the population, or, contrastively, in their countries of origin, where L2 remains just a foreign language learnt through instruction, not through everyday immersion in a natural context.

DEGREE AND LENGTH OF EXPOSURE TO L2 IN NATURAL LANGUAGE LEARNING CONTEXTS AND IN INSTRUCTED LANGUAGE LEARNING CONTEXTS

Broadly speaking, the degree of exposure to L2 is significantly restricted in an instructed L2 setting in comparison to a natural setting, for various reasons. Firstly, instruction is usually limited during lessons. Secondly, the teacher is likely to resort to learners' mother tongue minimizing L2 use (either as part of the teaching approach or due to limited L2 teacher fluency). Thirdly, L2 is neither the language used among classmates, nor the language used outside the classroom (Muñoz, 2010, p.41).

In Muñoz's study (2010) remarkable findings are both that the average number of hours in which a naturalistic language learner has access to L2 input after 10 years of residence is more than 50,000 and that the distribution of this amount of hours into weeks with 4 one-hour periods of instruction results in more than 200 years. This comparison compellingly reveals the enormous magnitude of the difference in the quantity of input received between naturalistic and instructed learners.

There are also striking differences in the quality of input between natural and instructed L2 learning contexts regarding discourse, situations, topics, speech acts (Muñoz, 2010, p.45); in instructed L2 learning contexts, children are not supplied with the input quantity or quality that can be processed by their implicit learning mechanisms (Muñoz, 2010, p.46), whereas this happens in natural L2 learning contexts.

Additionally, length of residence and language learning in a natural context is not a criterion for L2 attainment after an initial period (Patkowski, 1980), whereas amount, and not length of instruction is connected to L2 attainment in instructed L2 learning contexts. More specifically, in classroom settings, length of exposure to L2 may not necessarily mean more exposure to L2, because in some cases the hours of L2 lessons may be scattered more sparsely than in other cases (Lightbown and Spada, 2017, p.98).

If the objective of L2 learning is L2 proficiency, the learner should "be surrounded by the language as early as possible" (Lightbown and Spada, 2017, p.97), and this is easier in a natural setting in comparison to a classroom setting.

ADVANTAGES RELATED TO AGE

Ellis (1994), researching into age and L2 acquisition, reached conclusions in the areas of sensory acuity, neurological factors, affective/motivational factors, storage, input, and cognitive factors. Regarding sensory acuity, the earlier the learner is exposed to L2, the better the perception and segmentation of L2 sounds and the more native-like the pronunciation (p.494). Concerning neurology, brain ageing and loss of plasticity affect both negatively L2 grammar acquisition and pronunciation (Ellis, 1994, p.494). Regarding affective and motivational factors, younger L2 learners in natural settings bear a stronger and possibly unconscious motivation to communicate with natives and be integrated linguistically into the native culture, whereas adults' conscious motivation (possibly for survival reasons) may lead to greater anxiety, hindering L2 acquisition (Ellis, 1994, p.494). Younger learners have more opportunities to hear and use the language in informal language environments.

Concerning younger learners in such environments, Lightbown and Spada's study (2017) found the following:

"they do not experience strong pressure to speak fluently and accurately from the very beginning. Furthermore, their early imperfect efforts are often praised, or at least accepted. Older learners are more likely to find themselves in situations that demand more complex language and the expression of more complicated ideas. Adults are often embarrassed by their lack of mastery of the language and they may develop a sense of inadequacy after experiences of frustration in trying to say exactly what they mean. Such experiences of frustration may affect their motivation and willingness to place themselves in situations where they might need to use the new language" (p.93).

Regarding cognition differences between younger and older L2 learners, children use their language acquisition device, while adult learners rely on inductive learning abilities (Ellis, 1994, p.494). Concerning inputting language information, children input it more efficiently than adults, who may utilize more negotiation of meaning (Ellis, 1994, p.494). Young children store L1 and L2 information separately, becoming coordinate bilinguals whilst adult learners store L1 and L2 knowledge together, becoming compound bilinguals (Ellis, 1994; p.494). "Coordinate bilinguals can use both languages automatically whilst compound bilinguals cannot" (Matsuoka and Smith, 2008, p.34).

Moreover, in natural L2 learning contexts, older starters learn L2 faster in the first stages of the L2 learning process, whereas younger starters are slower during the first stages of the L2 learning process, but in the long-term they achieve a higher proficiency than older starters, sometimes a native-like one (Muñoz, 2010, p.41-42).

However, in instructed L2 learning contexts, younger learners' final attainment will emerge later than in natural L2 learning contexts, due to the smaller volume of exposure to L2 (Singleton and Ryan, 2004). Also, research in instructed L2 contexts leads to the conclusion that L2 older learners' higher attainment in the first stages of learning exists, especially concerning measures based on metalinguistic awareness or analytical ability (Muñoz, 2006, p.32). Older learners' advantages mirror their ability to employ more explicit approaches to L2 learning thanks to their greater cognitive maturity (Muñoz, 2010, p.46). Contrastively, in foreign language instruction, if time is limited and the curricula do not include L2 immersion, younger learners may not have enough time and exposure to benefit fully from the advantages of implicit learning (Muñoz, 2006, p.33). However, no differences in proficiency are to be expected when differences in cognitive development also disappear with age (Muñoz, 2006a).

In natural or natural-like learning contexts, the age of acquisition is the beginning of significant exposure, or the start of immersion in the L2 context (Birdsong, 2006) and can be a criterion for final attainment. In instructed L2 learning contexts, age of first exposure to L2 is not a criterion for final L2 attainment (DeKeyser R., 2000), as it provides mostly insignificant exposure (White and Genesee, 1996). Thus, the age when one starts to learn a L2 should be replaced as a criterion by the whole age range during which learning occurs, and, in instructed language settings, by the volume of exposure to L2 during each and every age.

CONCLUSIONS

More research has been carried out concerning age and L2 acquisition in natural language learning contexts and less research in instructed language learning contexts;

generalizing the outcomes and processes of L2 learning from natural language learning contexts to the instructed language learning contexts is not functional. Also, research supports the Critical/Sensitive Period Hypothesis for L2, after which period it becomes more difficult to acquire L2, and the final outcome is seldom successful. Additionally, research supports the fact that there may be differing Critical /Sensitive Periods for different aspects of L2 acquisition. In natural L2 learning settings, exposure to L2 is much greater in comparison to classroom settings concerning quality and quantity, and such exposure facilitates children's L2 acquisition through their implicit mechanisms of learning, motivation, encouragement, whereas it may cause to adult learners a feeling of inadequacy due to lack of fluency where there are expectations of it. Exposure to instructed language learning contexts over time is conditioned on the basis of the amount of hours learners are exposed to L2, which may vary according to the given curriculum, and, if not satisfactory in amount or in frequency, may not activate a fast rate of L2 learning among young learners and lead to discouragement. Older learners show greater attainment in the first stages of classroom learning thanks to their greater cognitive maturation. Early L2 learning start in a classroom setting does not necessarily lead to higher attainment, which is a "crucial age-related difference between a foreign language learning setting and a naturalistic language learning setting" (Muñoz, 2010, p.44). The earlier one starts learning L2, the better in terms of L2 attainment or proficiency, on condition that there is significant exposure to L2.

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The Battle of Artemisium: The Naval Component of the Defense of Greece in 480 BCE

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Abstract. This paper commemorates the 2500th anniversary of the Battle of Artemisium by combining epigraphic and archeological findings (such as the ram of an ancient warship that was retrieved from the Straits of Artemisium a few years ago) so as to integrate the specific naval battle in a comprehensive Greek strategy against King Xerxes' Persian invasion.

Keywords: Military History, Ancient History, Persian Wars (490-479 BCE), Naval Battle of Artemisium (480 BCE), Ancient Naval Technology, Marine Archaeology.

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PRELIMINARIES AND OPENING MOVES

The Persian campaign of the year 480 BCE against Greece that unfolded under the direct leadership of the Great King Xerxes himself (1) is well known, so that it is superfluous to enter here into much detail. Suffice it to say that it was the culmination of the attempt of a global empire -Persia- to expand westwards and subjugate Greece. This boundless empire, that extended from Thrace and Egypt to the West up to the gates of India in the East, and from the Danube, the Caucasus and the Caspian Sea to the North to Nubia (modern Sudan) and the Arabian Peninsula to the South, stretched for more than 3.000.000 km² and was inhabited by up to 35.000.000 people (2). In other words it was the single superpower of its age. This huge empire sent a correspondingly huge army made up from contingents sent by all the then known nations of Western Asia, which the ancient sources number in the hundreds of thousands of warriors (3), to march mostly along the eastern coast of northern Greece and reach the Pass of Thermopylae in the apex of the Maliakos Gulf (4). There this massive force stopped in front of a Greek infantry force of between 5,000 to 11,000 men led by one of the kings of Sparta, Leonidas (5).

Along with the land army of the Persians, came a huge fleet that was recruited in the same way from all the naval nations of the eastern Mediterranean basin which were subordinate to the Persian king. The fleet's main mission was to supply the numerous Persian army by sea — it was so numerous in fact that the rivers in its path dried up when the men quenched their thirst and the poor Greek land was unable to sustain it during its southwards march. The other task of the fleet was to overcome any Greek naval forces that barred its path and bypass any Greek land army, like that of Leonidas, by disembarking marines to its rear so as to trap it between them and the advancing main army. Faced with this fleet, the Greeks deployed their own fleet, about level with the Pass of Thermopylae and based on the beaches south of the cape of Artemisium in Northern Euboea (6).

Although the Battle of Thermopylae has now passed into the universal subconscious as the deliberate sacrifice of the few free versus the many who want to enslave them (7), in fact the original design of the Greeks should not have been so. This is evident because, along with the few thousand infantry led by Leonidas, the Greeks risked their fleet that was manned by about 70,000 men — for such was the numerical strength of the crews of the Greek fleet in Artemisium as will be shown below. Therefore, it was by no means a 'suicide mission' (8).

On the contrary, it seems that King Leonidas honestly believed that the position of Thermopylae was impregnable. He did not know of the existence of the *Anopaia hodos* (or *atrapos*), the parallel path to the main coastal road that Ephialtes betrayed to Xerxes, and the Persians followed to get to the rear of Leonidas' army. The Spartans learned of its existence as soon as they arrived at Thermopylae, when it was too late to change their plan, as reinforcements had already been dispatched from the Peloponnese as a follow up to Leonidas' vanguard (9).

Therefore, it seems fairly certain that the plan of the Greeks was to stop the Persians in front of the pass of Thermopylae, and bar their way to Southern Greece indefinitely. When the Persian host was immobilized before the pass, the lack of supplies and pestilence would do their job and decimate the hungry Persian troops (10).

In this plan the contribution of the Greek fleet would be definitive: it would exclude the Persian fleet from keeping in touch with the army and thus prevent it from resupplying it (11).

It should be noted that both a previous as well as the subsequent plan of the Greeks after the defeat at Thermopylae were quite similar.

A few months before Thermopylae, the Greeks had sent an expeditionary corps of 10,000 hoplites to the pass of Tempe that separates Thessaly from Macedonia. An accompanying fleet was positioned around cape Artemisium. This plan was abandoned when the Greeks learned that there were more passes leading from Macedon southwards and they retreated to the South. This move, while safe, led to the surrender of the Thessalians to the Persians when they crossed into Thessaly (12).

The same hold true for the aftermath of the Thermopylae campaign. While the Greek land army manned the fortified Isthmus of Corinth, the Greek fleet fixed and eventually defeated the Persian fleet in Salamis (13). The defeat and departure of their fleet and their stalemate inside devastated Attica eventually forced the Persians to retreat to the relatively unplundered Thessaly and then obliged King Xerxes to withdraw a major part of the army back to Persia leaving behind a remainder, under general Mardonius, that was eventually defeated by the combined Greek army at the battle of Plataea next year (479 BCE). Yet even the reduced army that Xerxes attempted to lead back suffered so much from lack of provisions that most of the men died of starvation and disease, never returning to Asia. From the eventual success of the

Greek strategy in 479 BCE one gets a hint of what the original strategy at Thermopylae had been. In fact it was an early example of the strategy that a later day ancient general, Gaius Julius Caesar, explained in detail. Caesar used to say that he followed the same policy towards the enemy as did many doctors when dealing with physical ailments, namely, that of conquering the foe by hunger rather than by steel.

C. Caesar dicebat idem sibi esse consilium adversus hostem, quod plerisque medicis contra vitia corporum, fame potius quam ferro superandi. (Sextus Julius Frontinus, *Statagems* IV.vii.1) (14)

But that would happen in the future.

THE NAVAL BATTLE OF ARTEMISIUM

Along with the battle at Thermopylae, the naval battle of Artemisium was taking place simultaneously. The opposite fleets were numerically unequal. The Persian fleet traditionally numbered 1207 triremes and many more merchant roundships or horse-transports (15). But now the gods, or Fortune, intervened to even the odds. Shortly before the naval engagement began in the strait to the north of Artemisium, a sudden storm caused the sinking of one-third of the Persian warships (about 400) near Sepias Acra on the Thessalian coast across the island of Sciathos (16).

Then, from the main body of the Persian fleet, a squadron of 200 ships was dispatched to circumnavigate Euboea and encircle the Greek fleet by cutting off their escape route through the straits of Euripus. A few days later, however, these ships also met with a storm in the ‘Coela of Euboea’, probably the coast between modern day Kyme and cape Caphereus, and were also wrecked on the rocks of the Euboean coast (17). Thus, the approximately 600 Persian ships that remained after these twin disasters (18) were faced by a maximum of 324 Greek triremes (as some Greek squadrons joined their fleet only after the naval battle had begun) of which about half were Athenian.

The naval battle took place over three days and each phase had separate tactical features (19).

On the first day of the naval battle, probably in the afternoon of September 16th, 480 (20), the two fleets met head on inside the strait. The Greeks were formed in a circular formation and the Persians surrounded them. During the battle that followed, the Greeks defeated all Persian attacks and captured 30 Persian ships. In some modern accounts of the battle, the Persian ships appear to be larger and bulkier than Greek ones (21). This certainly makes the naval battle even more agonizing and heroic. The few who are smaller/weaker versus the many that are bigger/stronger! But, is that so?

The historian Herodotus (8.60) clearly states:

[οἱ Ἑλλῆνες] νέας ἔχουσι βαρυτέρας καὶ ἀριθμὸν ἐλάσσονας

[The Greeks] have fewer and heavier ships

I have argued elsewhere that one must believe Herodotus; otherwise no modern account of the

Persian Wars can stand (22). However, some scholars recognize in the ancient Greek word **baryteras**/“heavier” the quality “slower” (23). That is, they predicate that the Greek ships were of the same or smaller size to the Persian (especially the Phoenician) ships, but inferior to them is speed. And this poor quality has been attributed to the untrained Greek shipbuilders (after all the Athenians did not know of the trireme as a ship type just 20 years before [24]); or the lack of maintenance in the Greek Fleet (the ship’s keels had not been cleaned recently, therefore the friction between a ship’s bottom and the water during the cruise was greater and the ship rowed slowly). A careful review of the data, however, allows us to read the word for what it is: heavier means just that; a ship with thicker wooden walls and therefore stronger during the impact with an opponent (25). First of all, subsequent Byzantine naval warfare textbook authors attribute weight as characteristic of larger ships (e.g., Emperor Leo VI the Wise, *Naumachica*, 77) and lightness as a characteristic of small fast-moving vessels useful in reconnaissance or for attacking the enemy by surprise (Emperor Leo VI the Wise, *Naumachica*, 54) (26). The weight of the ships is attributed to the thick walls which make the ships more resistant to the collision with the enemy ships (e.g., Nicephorus Uranus, *Tactica*, 54.3 [*peri thalassomachias*]) (27).

As is clear from the circular formation adopted by the Greeks during the first day of the naval battle, with the ships’ rams pointing outwards and the sterns inward, they had confidence in the strength of their ships during a frontal impact, with the bows first. It is precisely the formation of heavy horned animals (e.g., buffaloes) pitted against lighter but faster carnivores (e.g., a wolf pack or a group of lions). It would not make sense to adopt such a formation if the Greek ships were smaller and weaker than the Persian ones, because then the Persians would smash them with their weight and mass in a direct attack; something that they patently failed to achieve during this or any other naval battle. Finally, the Greek way of fighting on land was that of the heavy and powerful infantry phalanx that invited a frontal clash and decisive hand to hand combat (28). It would be at least strange for the same people to choose a different way of war-fighting at sea, based on maneuvering and smaller craft. Surely, 50 years later, the Athenians during the Peloponnesian War had developed their naval skills to such an extent that they would execute quite complicated maneuvers with their triremes (they would pass through [**diekplous**] or encircle the enemy battle line [**periplous**] among other fleet maneuvers) but that would happen to them in the future (29). These are not typical tactics either of Artemisium or Salamis (30). And, in any case, the rest of the Greek crews, both then and later, could not imitate them and continued to fight at sea as on the shore, colliding frontally with opposite ships and capturing them after their marines jumped onto the decks of the enemy and won the hand to hand combat that followed (31).

On the second day of the naval battle, the Greeks attacked and destroyed the ships from the Cilician squadron, who may have been stunned by the waves due to a new major storm that struck the area.

On the third day of the naval battle, the fleets faced each other frontally and fought stubbornly incurring heavy losses on both sides. Probably as many as half of the Greek ships suffered lesser or greater damage and many of them were either sank or captured. It seems that the Persian losses were similar or heavier. Finally, when it became known that the Thermopylae position had fallen and King Leonidas was dead, the Greek fleet withdrew through the Euboean Gulf to the Saronic Gulf, where it would eventually engage in the final victorious naval battle against the Persians at Salamis.

The naval battle of Artemisium, though, as well as the subsequent battle at Salamis, signifies more than just the defeat of the Persian invaders and the preservation of the freedom of the

Greeks: These victories strengthened and consolidated the power of the common people - the **demos**. By participating in the naval war either as sailors or as rowers the landless Athenian citizen (the **thetes**) made their presence more than felt. That is, while the infantry army – the phalanx of citizen-soldiers – involved only the wealthiest citizens (the pentakosiomedimnoi [those who produced 500 measures of grain per year], hippeis [horsemen, owners of expensive horses] and zeugitae [oxen owners], i.e. the three upper classes of Athenian citizens), in naval warfare the rowers of the triremes (the **eretai**) were recruited from the landless but free **thetes** – and there were 170 rowers per trireme as opposed to only 10-14 marine hoplites and four (perhaps non-Athenian) archers (32).

The magnitude of popular participation in the battles of Persian wars is evident from the comparison of the men involved.

TABLE a). First of all, the Athenians just before Xerxes' attack were known to have:

Battle	Strength
Strength of the Athenian army in the Battle of Marathon (490 BC):	9,000 men
Strength of the Athenian fleet built by Themistocles with the proceeds of the silver mines of Laurium and was ready for Artemisium and Salamis ten years later (480 BC):	[200 triremes x 200 crewmen =] 40,000 men

TABLE b). Again in the simultaneous expeditions of Thermopylae and Artemisium (480 BC) the same phenomenon is observed:

Battle	Strength
Strength of the Greek land Army at Thermopylae:	5,200 (minimum) - 11,200 (maximum) men (33).
Strength of the Greek fleet at Artemisium:	[324 triremes x 200 crewmen) + (9 pentecontors x 70 crewmen) =] 65,430 men

Therefore, the naval battle of Artemisium (and after it Salamis, Mycale etc.) not only saved but also consolidated Athenian democracy. It made the whole people responsible for the victory – and not just the privileged classes (34). In fact it cemented in place and enhanced the widespread sense of Greek and especially Athenian uniqueness and superiority. Moreover, the battle of Artemisium provided both the basis for the mighty Athenian fleet as well as for the Athenian Alliance (Delian League), and therefore introduced chronologically the golden age of Pericles, Plato and Socrates - in short the classical culture to which we are so proud of since it forms the bedrock of modern Western culture (35).

This is also evidenced by what the Athenian aristocrats thought of it. As the philosopher Plato informs us in his *Laws* (D, 707c), the Lacedaemonians (in this case the Spartan Megillus) and the aristocrats of Athens (who in this dialogue are represented by the Athenian Xenus – who is in fact Plato himself) thought that the Greeks were saved during the Persian wars by the land battles. However, the Athenian democrat Clinias objects and insists that they have been saved by the naval victories of Artemisium and Salamis. According both to the conservative Spartans and the Athenian aristocrats, the naval victories made the Greeks worse ("no better") since the simple people decisively participated in them and therefore tasted of an unprecedented social and political power (36).

The ancient Athenians themselves as a people, however, obviously had a different opinion from the aristocrat Plato regarding the quality of their victory at Artemisium and dedicated monuments to the sanctuary of the goddess Artemis (Proseoa) on the modern hill of St. George near the village of Pefki, so as to honor their victorious participation in the naval battle of Artemisium.

On the trophy there was an inscription, as related by the later author Plutarch in his life of Themistocles (8.3):

Nations of all sorts of men from Asia's boundaries
coming,
Sons of the Athenians once, here on this arm of
the sea,
Whelmed in a battle of ships, and the host of the
Medes was destroyed;
These are the tokens thereof, built for the Maid
Artemis. (37)

And the poet Pindar wrote justly enough of the Battle of Artemisium, that:

There the sons of Athens set
The stone that freedom stands on yet. (38)

THE TRIREME AND THE RAM FROM ARTEMISIUM

The main ship of the era that took part in the naval battle and in the numbers mentioned above was the trireme. It was a ship with three rows of oars on each side and had a total crew of 170 rowers and 14 marines/passengers. This ship could sail with its sails, but during set piece naval battles the sails were dismantled and left behind on the beach so that the ship became lighter, faster and more maneuverable.

The qualities of the trireme can be better studied today, since in the year 1987 the Greek navy constructed as faithfully as possible to the ancient ship type the modern trireme "Olympias" (39).

From the battle tactics of the ancient trireme, the one that arouses the interest of the contemporary audience is ramming. According to this tactic, the trireme smashes the enemy ship with the bronze ram that is attached to its bow. The ram pierces the hull of the enemy ship and then as the trireme retires by rowing backwards, the hole is exposed and the enemy ship is flooded and sinks.

The ram, made of good quality bronze, was mounted as a sort of metal holster around the long beams of the ship's keel, who are called **zosteres**. In the slide above the ram appears the smaller **proembolion**.

However, there is also a relatively recent archaeological find from Artemisium that is connected with triremes and, by extension, with the naval battle of Artemisium. In 1996, the businessman Vasilios Kállios made a gift at the Archaeological Museum of Piraeus of a bronze ram from an ancient trireme that had been brought to the surface from the sea near the cape of Artemisium. This, according to the donor's statement, had been originally given to him by a

local diver who had spotted it during his underwater diving. This ancient ram is the first of its kind to be discovered in the Greek seas (40).

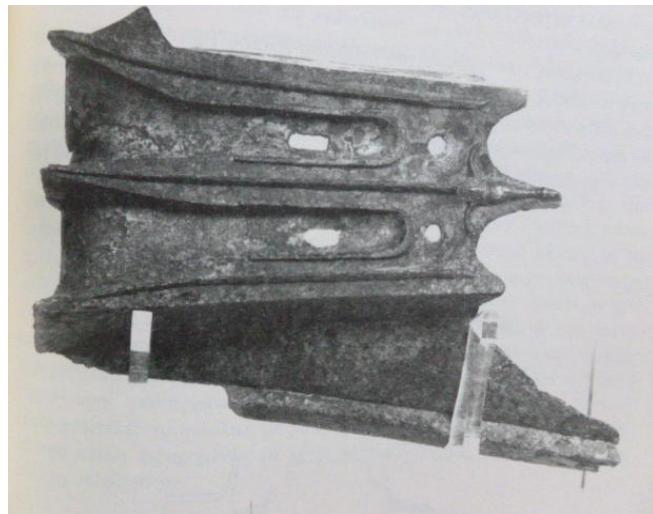


FIGURE 1. The Ram of Artemisium as displayed in the Archaeological Museum of Piraeus
(with the kind permission of Dr. Georgios Steinhauer)

Its dimensions are: length 74 cm, preserved height 54 cm and weighs 36.4 kg. Because its remaining part is less than half of the original as the other side and the upper part are missing, the total weight would initially exceed 80 kgs. On the outer side of the ram is depicted a beautiful trident of Poseidon, decorated in its middle by a sword-like lance, emerging from the bud of a plant (**calyx**) together with two thorny (**akanthos**) leaves. From the cutting off at the side and top of the ram we deduce that our ram was violently detached from the warship to which it was attached, probably as a result of ramming during a naval battle.

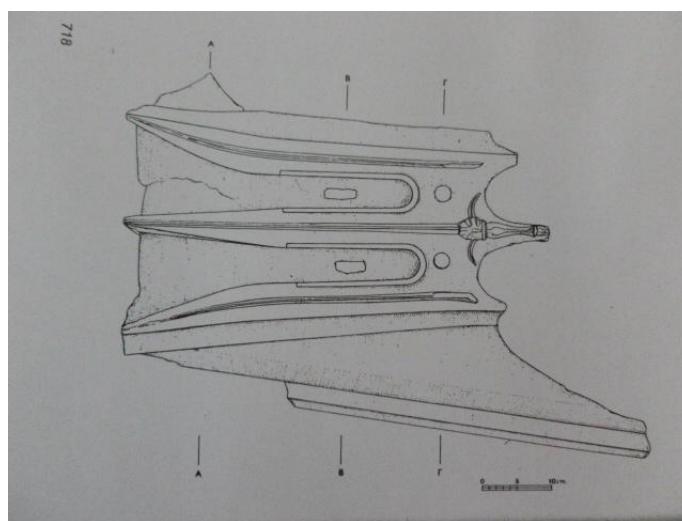


FIGURE 2. The Ram of Artemisium (with the kind permission of Dr. Georgios Steinhauer)

We have no photos or other documentation on how the Artemisium ram was found at the bottom of the sea. However, as recently as 2008-2012, ten rams of ancient Carthaginian or Roman ships were discovered immediately to the west of the island of Sicily that belonged to shipwrecks of the last great naval battle of the First Carthaginian War, that is the battle of the Aegates Islands (241 BCE) (41). These rams were found sitting on the bottom of the sea: the wooden ships to which they have been attached have now completely disappeared, but the bronze rams were found relatively intact (42).

From the comparison of the Artemisium ram with other ancient rams found in the Mediterranean, in particular the so-called Athlit ram from the shores of present day Israel (43), it appears that our ram is probably dated to the end of the 4th century BCE, so it may be related to the subsequent battles of Artemisium in the years 322 and 312 BCE, between the Macedonian and Athenian fleets, rather than the Greek-Persian naval battle of 480 BCE. In any case, however, this ram belongs to a trireme (the three-times as big ram of Athlit belongs to a Hellenistic quadrireme - a later type of heavier warship - weighs 465 kilos and was built in Cyprus between 204 BC and 164 BC, on behalf of either Ptolemy V Epiphanes or Ptolemy VI Philometor, that is Macedonian Kings of the Ptolemaic dynasty that ruled Egypt after Alexander the Great) (44).

In any case - whether it is classical or later - the ram of Artemisium, now exhibited at the Piraeus Museum, is indicative of the rams attached to the ships of the Greek and Persian fleets, since the trireme rams do not appear to have changed much between the 5th to the 2nd centuries BCE.

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2. Wiesehöfer 2009, 77.
3. For a useful overview of the Persian numbers see Flower 2007.
4. For the geomorphology of the pass see Kraft – Rapp – Szemler – Tziavos – Kase 1987 and Vouvalidis – Syrides – Pavlopoulos – Pechlivanidou – Tsourlos – Papakonstantinou 2010. On the ancient topography in relation to Herodotus see van Rookhuijzen 2019, 118-169.
5. For the military history of the Persian Wars see among many: Burn 1984²; Lazenby 1993 (esp. 117-150 for the battles of Thermopylae and Artemisium); Strauss 2001 (esp. 11-30 for the battle of Artemisium); Green 1996 (esp. 109-152 for Thermopylae and Artemisium); and Rahe 2015 (esp. 202-240 for Thermopylae and Artemisium). For the battle of Thermopylae, see: Bradford 1980 and Cartledge 2006. For a semi-revisionist re-interpretation of Xerxes' invasion see Cawkwell 2005, 87-125. For the discrepancy in Greek numbers, see note 33 below.
6. Lazenby 1993, 117 & 125.
7. As discussed or depicted in innumerable texts and works of art since antiquity. For an eloquent and recent depiction of this, see the 2006 American film '300' and its sequel '300: Rise of an Empire' (2014). For an informed commentary on this see Levene 2007 and Bridges 2007.

8. See most recently and convincingly Matthew 2013. The ‘suicide mission’ concept has its origins in ancient tradition that presents the battle as sacrifice (the equivalent of the Roman *devotio*) of the Spartans to the gods. For this strand see Flower 1998 and its recent re-interpretation in van Wees 2019 and in Bakker 2019.
9. Green 1996, 111-112. On the nature and (rather limited) means of military intelligence in Ancient Greece see Russel 1999.
10. See Matthew 2013, 76-83: ‘Food as a Weapon’, ‘Water as a Weapon’ and ‘Illness as a Weapon’.
11. This function of the Persian fleet has been recently challenged. For this see Lazenby 1993, 116. However, see now for the opposite view that reinstates supply as a major function of a fleet in Strauss 2007.
12. Robertson 1976.
13. Lazenby 1993, 155-163.
14. ‘Gaius Caesar used to say that he followed the same policy towards the enemy as did many doctors when dealing with physical ailments, namely, that of conquering the foe by hunger rather than by steel’ (translation by C. E. Bennett). For the effect of supplies in the conduct of a campaign by an ancient army, see Erdkamp 1998 and Roth 1999.
15. For plausible reduction of these numbers to a maximum of 664 triremes see Bowen 1998.
16. On the topography of the coast in relation to the storm see Bowen 1998 and van Rookhuijen 2017.
17. On the ‘Coela of Euboea’ of Euboea see Bowen 1998, 361-363.
18. Wallinga 2005, 32-46.
19. Lazenby 1993, 138-150. Green 1996, 144-148. Strauss 2001, 24-30.
20. Sacks 1976, 245.
21. See for example the recent (2014) epic Hollywood film ‘300: The Rise of an Empire’ (a sequel to the original ‘300’), where the Persian ships are shown literally towering over the smaller Greek ones.
22. Christodoulou 2016, 99-100. If one ignores this, it can lead to rather eccentric interpretations of among others the battle of Thermopylae as, e.g., the one proposed by van Wees 2019.
23. Wallinga 2005, 34. The Greek ships are ‘heavier and slower’.
24. van Wees 2013, 63-69, *contra* the fundamentally unconvincing arguments of Schreiner 2004, 69-93, who attempts to re-date the first naval bill of Themistocles before the battle of Marathon.
25. Strauss 2001, xx, agrees with me.
26. Dennis 2010, 525, 533. Leo VI the Wise *et al.* 2005, 65 & 73.
27. Leo VI the Wise *et al.* 2005, 180-183. For the Byzantine navy of the *Naumachica* era, which seems, from the middle of the 7th cent. onwards, to have re-invented –under the guise of the *dromon*– the ancient bireme/*liburna*, see Pryor – Jeffreys 2006 and Cosentino 2007, 577-603, as corrected by Zuckerman 2005, 79-135, and Zuckerman 2015, 57-98.
28. For the make-up of the classical phalanx and its way of fighting, see now the contributions in Kagan – Viggiano 2013, *passim*. For an overview of the problems related to hoplite warfare, see now Konijnendijk 2018. For the Persian tactics on land, see Head 1992 and Charles 2011.
29. Strauss 2007, 224-228. The Athenian expertise was the result of the creation of the Athenian Alliance/Empire, with its standing fleet and the institutionalization of the salaries for rowers. On this see Evans 1969; Trundle 2016.
30. Unless one accepts that *diekplous* is not a ship but a fleet maneuver, as does Morrison 1991. According to him a *diekplous* is a breakthrough of a squadron of ships in line ahead formation through an opposing enemy squadron formed in line abreast. He believes this is what the Athenians did at Salamis, but the evidence is slim and I am not convinced.
31. This continued to be a standard practice for non-Athenian Greek navies down to the Hellenistic period. See now: Murray 2012, *passim*.
32. Strauss 2001, xix-xx.

33. The difference between the maximum and minimum power of the army at Thermopylae is mainly due to the controversial calculation of the force sent by the Opuntian Locrians to Leonidas. Some ancient sources count only 1,000 Locrians, while others number them up to 6,000. For a discussion of the numbers, see: Lazenby 1993, 134-135; Matthew 2013, 65-67.
34. On this aspect of the Persian Wars, see Rawlings 2007, 108-117.
35. *Pace* Rowe 2007, 103.
36. ‘Athenian: Why, yes; and that is an opinion which is widely spread both among Hellenes and barbarians. But Megillus and I say rather, that the battle of Marathon was the beginning, and the battle of Plataea the completion, of the great deliverance, and that these battles by land made the Hellenes better; whereas the sea-fights of Salamis and Artemisium-for I may as well put them both together-made them no better, if I may say so without offence about the battles which helped to save us.’ Plato, *Laws*, D, 707c (translated by B. Jowett). Rowe 2007, *passim* elaborates on Plato’s views. On the empowerment of the lower classes see also Plutarch, *Themistocles* 19.4.
37. Translated by B. Perrin.
38. An epigram/encomium quoted in the previous passage of Plutarch’s life of Themistocles (8.2). Translated by J. Dryden.
39. See now the three volumes on ‘Olympias’: Morrison – Coates 1989; Morrison –Coates –Rankov 2000²; Rankov 2012.
40. For the Artemisium ram and the story of its discovery, see Steinhauer 2002.
41. For the finds see the contributions in Royal – Tusa 2019.
42. It should be noted that, unlike the depiction in the film that was referred to at note 7 above – and also in many older epic films, such as ‘Ben Hur’ (starring Charlton Heston) or ‘Cleopatra’ (starring Elizabeth Taylor and Richard Burton), representing ancient naval battles – the ancient wooden ships that were rammed did not usually sink, because wood is lighter and floats on the water. In fact they remained as floating shipwrecks on the surface of the sea to be towed by the victor, who could salvage them, have them repaired, and later incorporate them into his own fleet.
43. Murray 2002, 49-52.
44. Murray 2002, 52 (fig. 2.12) and 57; Steinhauer 2002, 713-714.
45. For the periodical abbreviations used in the References section we used the guidelines of the American Journal of Archaeology (AJA) (<http://www.ajaonline.org/submissions/abbreviations>).

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A Note on the Hellenic Territorial Waters Violations by Turkey: Assessment and Forecast

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Abstract: This note focuses on studying and forecasting the pattern of the Hellenic territorial waters violation incidents by Turkish vessels. Using the Weibull distribution as the one that best fits the historical pattern of such incidents ranging between 2009 and 2021, the paper argues that the activity of the Turkish vessels in the Aegean when violating the Hellenic territorial waters is strongly correlated with the corresponding Hellenic FIR violations in the area. The paper predicts that, for the next few years, the cases of the Hellenic territorial waters violation by Turkish vessels will exceed the figure of 200 on a monthly basis on average. One must bear in mind, however, that such a forecast will be affected by various geopolitical developments in the area, like the aftereffects of the Afghan crisis, the political and economic developments in Turkey and the Turkish reactions to the pronounced presence of France at the expense of that of the US in the area, following the AUKUS pact.

Keywords: Territorial Waters, Greece, Turkey, Weibull distribution, Forecast

INTRODUCTION

This note aims at emphasising on the statistical dimension of the tactics followed by Turkish vessels to violate the Hellenic territorial waters. Such tactics have been accentuated during the past several years together with the increased emigration flows from Turkey and its claims

concerning the so called, “Blue Homeland”. More specifically, we intend to focus on the extent to which such repeated violation cases of the territorial waters of Greece are random or, instead, reveal a specific behaviour model or line of reasoning. To do so, we first provide a description of the data used in the analysis, while the next section offers a brief but concise description of the prevailing geopolitical setting. We then describe the technical background attempting to fit the relevant Turkish behaviour to a statistical model which will then be used to forecast this behaviour in the future. Finally, the results and the conclusions drawn are presented in the last section of the paper.

THE DATASET DESCRIPTION

The dataset covers 13 years (Jan. 2009 up to Sep. 2021) as provided by the Hellenic National Defence General Staff and reports the six-mile Hellenic territorial waters violation incidents by Turkish fighting ships and coastguard vessels on a monthly basis¹. Thus the dataset includes 153 observations ranging between January 2009 and September 2021, as depicted in Figure 1 and Table 1.

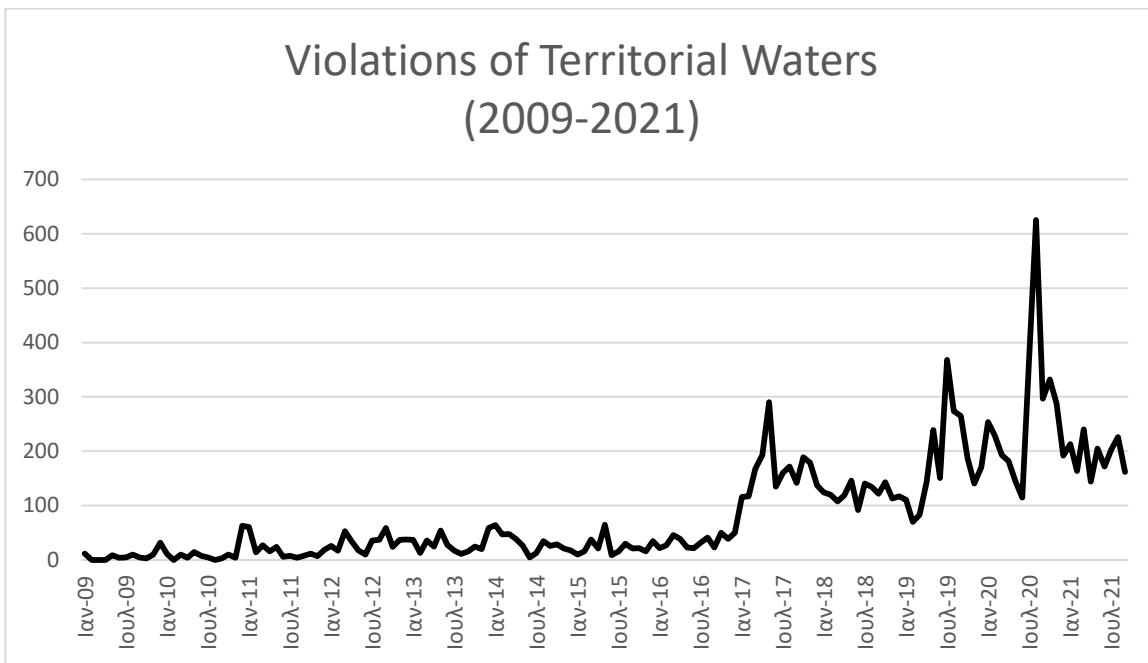


FIGURE 1. The overall picture at a glance, Source: Hellenic National Defence General Staff.

¹ <https://geetha.mil.gr/en/violations/violations-of-territorial-waters/>

TABLE (1). A brief descriptive summary of the monthly dataset, source: Hellenic National Defence General Staff. <https://geetha.mil.gr/en/violations/violations-of-territorial-waters/>

Period: Jan-2009-Sep-2021	Violation Incidents of Hellenic Territorial Waters
Total Incidents	12,869
Total Months Observed	153
Monthly Minimum	0
Monthly Maximum (outlier)	625
Second Monthly Maximum	368
Monthly Mean	84
Monthly Standard Deviation	97
1st Monthly Quartile	16
3rd Monthly Quartile	141
Interquartile Monthly Range	125

Averaging the data on a per-month basis, the following graphs (Figure 2 a, b) show a significant rise of all July and August observations of each year, obviously due to the favourable weather conditions usually prevailing during these months. This difference can be supported using statistical hypothesis testing, but we feel that this conclusion can be readily reached just by observing the per-month graphs.

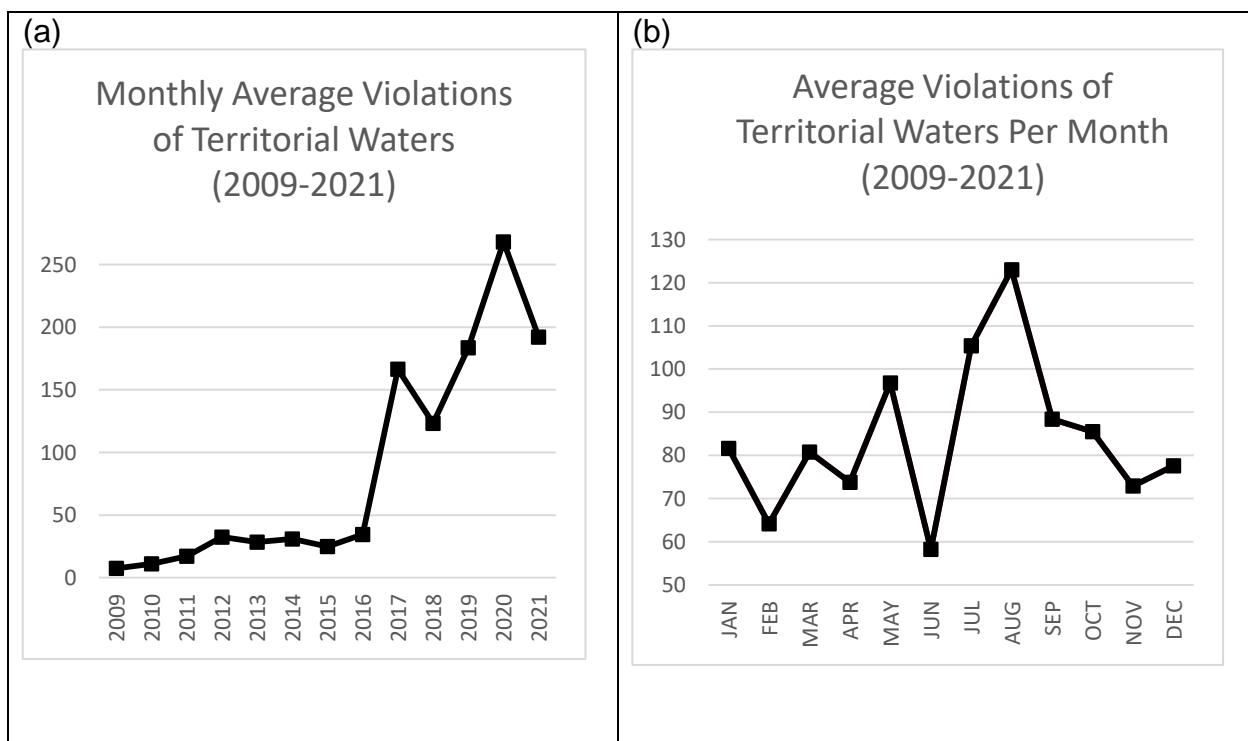
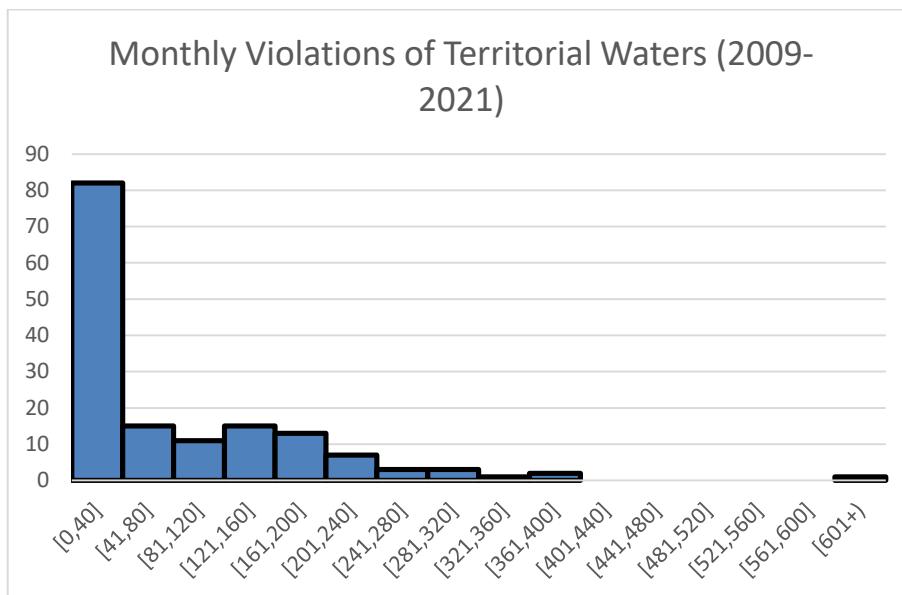


Figure 2. Monthly Averages, source: Hellenic National Defence General Staff.

A comprehensive picture of the activity regarding Hellenic territorial waters violation incidents by Turkish vessels may be provided by using a histogram (Figure 3) to depict the general distribution of the data. One can observe an extreme outlier (Aug. 2020) of 625 such incidents, the second maximum being 368.

**Figure 3.** Frequency of Hellenic Territorial Waters Violation Incidents, source: Hellenic National Defence General Staff.

TRACING THE REASONING FOR OFFENSIVE BEHAVIOUR BY TURKEY

The issue of the Turkish claims against Greece and, particularly, the way in which such claims are expressed has been a popular issue in the literature (Sezgin, 2004, Andreou and Zombanakis 2006, Katsaitis et al. 2019). The focus on the pattern of such a behaviour, though, seems to have been neglected with the conclusions derived from such a focus not appropriately assessed. Symeonidis and Zombanakis (2020) have dealt with the Hellenic FIR violations by Turkish aircraft. However, violations of Hellenic airspace is not the only form of pressure exercised by Turkey. Turkish aggressiveness has extended in the Aegean Sea in the form of violation of Hellenic territorial waters by Turkish vessels, with the latest form of pressure being the dispatch of drill-ships in the Aegean, which Turkey calls “Blue Homeland” and the eastern Mediterranean. The summer of 2020 developments in the Aegean have been indicative of the extent of the tension that can prevail in such cases. Over and above such friction incidents, however, remains a permanent, albeit equally menacing source of threat which is the massive inflow of illegal emigrants from Turkey which is expected to culminate in the next few years following the Afghan crisis.

The research question that this note aims at tackling is how long and to what extent Turkey will be able to continue indulging in such forms of pressure against Greece having already made its presence felt in several international fronts like Syria, Libya and Iraq. The reasoning of becoming involved in such expensive military exercises is directly opposed to the considerable economic problems faced by Turkey. Indeed, the Turkish economy following a period of overheated economic growth fueled by foreign borrowing, easy and cheap credit, and government spending, now faces an excessive current account deficit together with large amounts of private foreign- currency denominated debt, a strongly devalued domestic currency and a double-digit inflation rate. Despite that, the authorities insist on consumption-led growth encouraged by very low interest rates. This means that our forecasts on the aggressive behaviour of Turkey in the area of the Aegean and the eastern Mediterranean may eventually require a downward adjustment to take into account the economic aspect of this issue, an aspect which points to a further downsizing as the latest data indicates.

The extensive Greek diplomatic and political campaign during the past few years, together with the procurement of latest technology equipment has aimed at adding to the deterrence potential of the country against the Turkish expansionary tactics followed in the context of the so-called, “Blue Homeland” doctrine. The fact remains, however, that past experience leaves little room for optimistic forecasts regarding the response of Turkey in such cases and the only question pending to answer is the time and place of such a response. By contrast, we believe that the latest developments and especially the AUKUS security pact together with the France – Greece rapprochement through a recent defence agreement and the expected massive flow of Afghan emigrants will tempt Turkey to test the tolerance limits of the Greek side. Irrespective of whether the aim of the Turkish expansionary tactics is to profit from the energy resources in the Aegean and the Eastern Mediterranean, or, instead, an unobstructed access to North Africa, the pressure exercised is expected to be intense in the years to follow.

Bearing in mind the above background we feel that the mathematical and statistical model presented herewith can provide a reliable guideline for forecasting and calculating probabilities of occurrences for the Hellenic territorial waters violation cases in anticipation of the consequences of the Afghan crisis. However, its results require careful interpretation since our forecasts rely on the logistic model, which uses an exogenously determined fixed upper bound. More specifically, based on empirical and historical data, as it will be explained later on, we impose a monthly average ceiling to such incidents of 245 occurrences. This model, therefore, is especially applicable for short- and medium-term forecasts during a time-period in which the prevailing geopolitical and economic conditions are not expected to change dramatically.

THE TECHNICAL BACKGROUND

Correlation between Territorial Waters and FIR Violation Incidents

The monthly observations of the Hellenic territorial waters violation incidents show a remarkable positive correlation with the corresponding FIR violation cases for the same period (Figure 4).

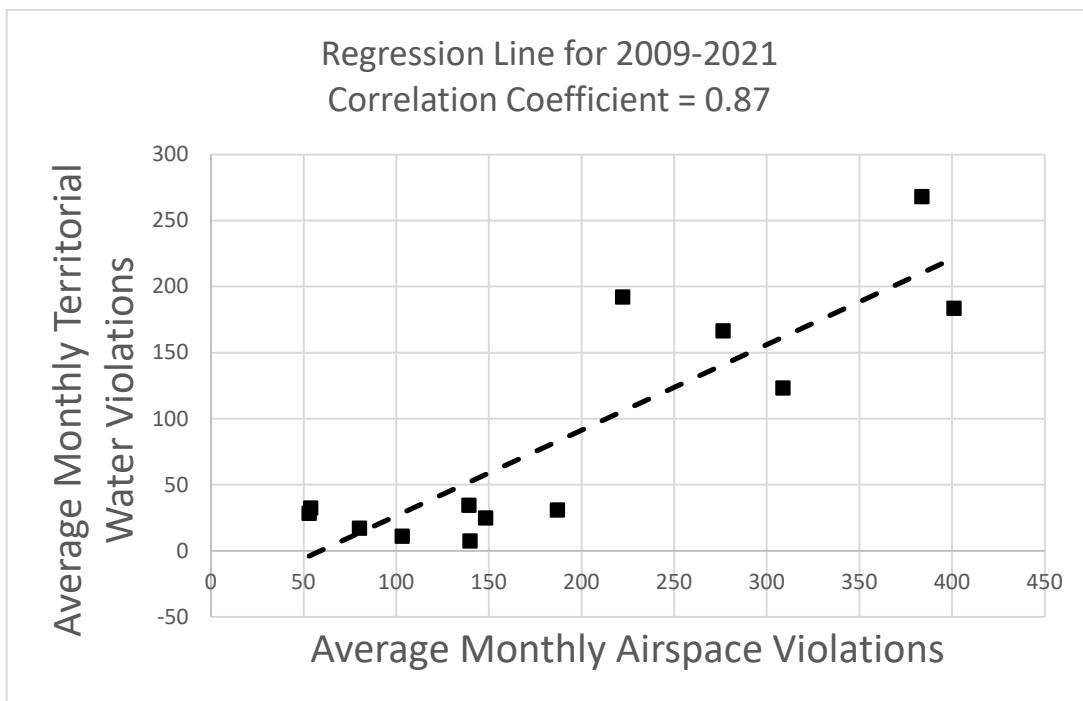


FIGURE 4: Linear regression for Hellenic territorial waters vs. FIR violation incidents for the period Jan2009-Sep2021.

The coefficient derived is $r = 0.87$, showing strong positive correlation between FIR and territorial waters violation incidents².

The Probability Model

Given that our research question is to investigate the statistical pattern of the Hellenic territorial waters violation cases and bearing in mind their strong positive correlation with the corresponding FIR cases, we use as a guideline earlier work on the latter (Symeonidis and Zombanakis, 2020). More specifically, based on the shape of the histogram presented in Figure 3 above, it is reasonable to assume that the Hellenic territorial waters violation incidents follow a right-skewed (positively-skewed) statistical distribution. Applying the statistical method of Hypothesis Testing for goodness-of-fit (Anderson *et al.*, 2018), we can show that the Weibull distribution (Weibull, 1951) is an appropriate choice for a model in this case.

The Probability Density Function of the Weibull distribution is given by

² We performed a standard hypothesis test for Pearson's correlation coefficient: The null hypothesis, H_0 , states that no correlation between the two variables exists, while the alternative hypothesis H_1 states that there is positive correlation (increasing territorial waters violations are associated with increasing airspace violations). The test statistic is: $\sqrt{\frac{n-2}{1-r^2}}$, where $n = 153$ and r is the calculated correlation coefficient. This is a one-sided H_1 , and we perform the test at a 5% significance level. Since the test statistic is greater than the critical value from a t-distribution ($5.80 > 1.80$) we conclude that there is significant positive correlation and we reject the null hypothesis.

$$f(x) = \frac{\beta}{\alpha} \left(\frac{x}{\alpha}\right)^{\beta-1} e^{-\left(\frac{x}{\alpha}\right)^\beta}$$

where α, β are positive parameters. This distribution is widely used to model time-to-failure of components (Rinne, 2009, McCool, 2012).

The null hypothesis H_0 will assume that the monthly territorial waters violation incidents follow this distribution, with the alternative hypothesis H_1 stating the opposite. To test this hypothesis we calculate the χ^2 (chi-squared) statistic with reasonable, arbitrary chosen initial parameters α, β . This statistic is equal to $\sum_i \frac{(O_i - E_i)^2}{E_i}$, where O_i is each observed value and E_i is the corresponding expected value based on the assumed distribution.

We use Microsoft Excel's Solver in order to minimise this sum, hence optimising the parameters α, β . The solution yielding $\alpha = 71.93$ and $\beta = 0.7209$ means that we cannot reject the null hypothesis at the 5% significance level.

The importance of this result in forecasting the pattern of the Hellenic territorial waters violation incidents by Turkey is illustrated as follows: To calculate the probability that e. g. in a given month we will observe a number ranging between 20 and 60 such cases, we calculate the shaded area of Figure 5 using Microsoft Excel:

`WEIBULL.DIST(60, 0.7209, 71.93, 1) – WEIBULL.DIST(20, 0.7209, 71.93, 1)`



FIGURE 5: Graph depicting the area (and hence probability) under the Weibull Distribution curve for territorial waters violation incidents.

The result is approximately 0.256, which means that the probability of such an event is about 25%. Thus, we provide a direct, hands-on, practical tool for assessing the probability of such an event based on a series of historical data.

FORECASTING THE FREQUENCY OF HELLENIC TERRITORIAL WATERS AND FIR VIOLATION INCIDENTS: LOGISTIC FORECAST WITH UPPER BOUND

Having established the strong positive correlation between the two datasets, we will first revisit the procedure followed in Symeonidis and Zombanakis, 2020). The model used in this work is the logistic growth model. Both datasets for the period Jan. 2009-Sep. 2021 exhibit rapid growth. Linear regression could be beneficial, but we feel that it does not capture the overall data behaviour³. Given this behaviour, we opt for the logistic growth model, which exhibits a rapid initial rising pattern followed by a saturation based on the maximum possible cases that can be expected on a monthly basis. We, therefore, resort to a logistic least-squares fit for the average monthly data for each year. We calculate the squared differences of the actual minus the predicted values from the model and use Microsoft Excel's Solver to minimise the sum by varying the parameters in the exponent. The maximum number for the monthly incidents is an upper bound or “carrying capacity”, based on empirical and historical observations.

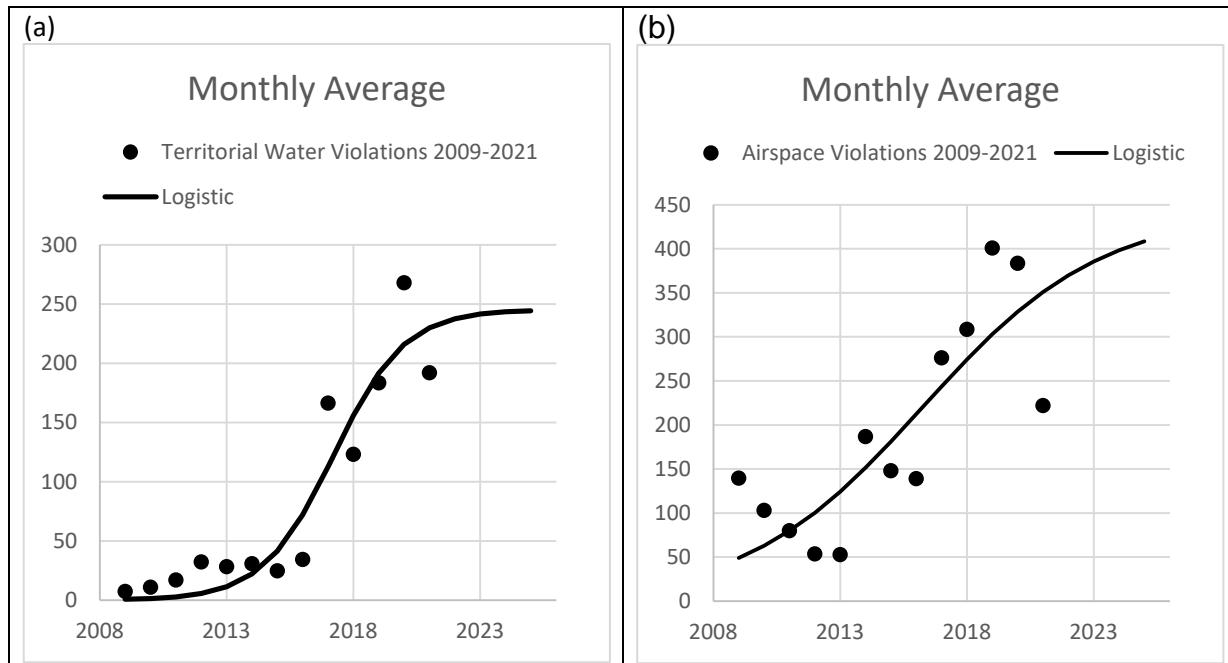
$$\text{Logistic Growth Model } (k, t \text{ positive parameters}): \frac{\text{Upper Bound}}{1+e^{-kt}}$$

In this work we will follow a rule-of-thumb for determining the upper bound for both datasets. We will assume that the upper bound in the average monthly violation incidents can be approximated by $\frac{2}{3}$ of the historical maximum. The selection of this value as an upper bound comes as a compromise between our assumption regarding the saturation of the observations through time, and the expected consequences of the Afghan crisis in the next few years on the emigration flows pressure exercised on the Greek borders. This means that (a) for the Hellenic territorial waters violation incidents we will neglect the extreme outlier⁴ of 625 and we will assume an upper bound for the model equal to $\frac{2}{3}(368) = 245$ and (b) for the Hellenic FIR violation cases we will assume an upper bound for the model equal to $\frac{2}{3}(663) = 442$. This adjusts the maximum that was used in Symeonidis and Zombanakis, 2020 in the light of recent developments in the region of Eastern Mediterranean.

³ Although an exponential model for such increase would be appropriate for the initial part, it is probably too emphatic in terms of growth (MacKendrick *et al.*, 1912, Edelstein-Keshet, 1988, Allen, 2007). Such an option may not reflect reality due to the limited property and human resources (such as available vessels, personnel, logistic support etc.).

⁴ This is a value recorded during the August 2020 crisis between Greece and Turkey and is must therefore be considered as an outlier under normal circumstances.

The models and the corresponding graphs for forecasting until 2025 are shown in Figure 6(a,b).



$$\text{Monthly Territorial Waters Violations Incidents} = \frac{245}{1 + e^{-0.718 \times (\text{Year} - 2017.225)}}$$

$$\text{Monthly Airspace Violation Incidents} = \frac{442}{1 + e^{-0.286 \times (\text{Year} - 2016.279)}}$$

FIGURE 6: Forecasting until 2025 (a) territorial waters violation incidents, and (b) airspace violation incidents, using an upper bound.

An example of the forecast works as follows: For the year 2023, the model predicts that on a monthly basis, the Hellenic territorial waters violation incidents will amount to an average of

$$\text{Monthly Territorial Waters Violation Incidents} = \frac{245}{1 + e^{-0.718 \times (2023 - 2017.225)}} = 242$$

DISCUSSION AND CONCLUSIONS

The aim of this note has been to study and forecast the pattern of the Hellenic territorial waters violation cases by Turkish vessels. Following specific criteria we have concluded that the historical data of such incidents since 2009 tend to fit the pattern of a Weibull distribution and are highly correlated to the pattern of the Hellenic FIR violation cases by Turkish aircraft. Based on this finding we can now provide a tool that contributes to calculating any frequency distribution of such occurrences in the future. More specifically, we predict that, in monthly average terms, the Hellenic territorial waters violation cases will be of the order of 200 per month, or even higher. Such a forecast, however, must take into account, not just the technical aspect of model, as this is provided by the specific distribution chosen, but also, the expected geopolitical developments in the area. In particular, a great deal regarding the pressure expected to be exercised on the Hellenic sea borders will depend on the Afghan crisis after-effects and especially, on the increase in the number of emigrants pushed towards the Hellenic territorial waters. To a very large extent, such a pressure will also depend on the political and economic developments in Turkey and the response of this country to the pronounced presence of France at the expense of that of the US in the area, following the AUKUS pact.

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Online - distance learning and the changing role of a teacher

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Abstract. The main purpose of this paper is to unfold the experience regarding the changing role of teachers. This study displays at first the parameters of online and distance learning in order to contribute to an accurate and comparative consideration regarding them and the traditional methods of teaching. Focusing on the differences and similarities between these pillars of education will help us understand the significant impact of the new era of e-learning by distance in the conventional education and explore the current dimensions of the new and always changing role of teachers.

Keywords: *Online-distance learning, education, changing role of teachers.*

1. Introduction

The educational process is a "cultural invention", in the sense that individuals prepare themselves for integration into society based on cultural goods and social values. Within the educational environment individuals prepare themselves to join society by developing themselves, their knowledge, abilities, and skills, but always in relation to the external environment. At the same time, they encounter mechanisms of acceptance and rejection, while they also become familiar with processes of receiving and memorizing information useful for the future (Σοφός et al. 2015, p. 14), a process which is the basis of every form of learning (Τρύπαχου 2015, p. 127). However, in modern society the learning process, as well as a lot of our activities, is now influenced and unfolded within the grid of the dominance of digital technology. This flood of smart devices and internet has as a result the eruption of an "intangible interaction", which can be demonized - and often not unjustly - with features of coldness and isolation, but in times of economic and health crisis could offer perhaps the only possibility of a low cost communication (Σαντορινάϊος et al. 2015, p. 14).

Focusing on these parameters, this paper will investigate the impact of distance education on the conventional one, with a view to upgrading the changing role of teachers.

2. Conventional and Online Education

Education has not always had the current form that we know, appreciate, and accept. In periods when the learning process was not institutionalized - e.g., in societies with simple structures, such as those of hunters - knowledge took place simply through imitation or control based on prejudice and ritual and through processes, such as demonstration and narration. In more developed societies, where teaching had the meaning of organized process, the educational framework was characterized by face-to-face teaching, however based on dialogue. The existence of different structures of society has caused a differentiation of the institutional organization of education based on criteria, such as age, type of school, curriculum and has driven, therefore, the appearance of a special type of distance. Within a classroom of many learners there are a lot of different opinions and this difference of point of view among the students creates surprisingly a huge need for a lecture-based education. And although we are talking about a learning environment with physical presence, we observe a different kind of distance (Σοφός et al. 2015, p. 15).

At this point, however, attention must be paid to the role of the instructor during the learning process. The teacher takes the role of tutor-facilitator, who is responsible for the curriculum. However, he does not provide sterile knowledge and intervenes in a coordinating manner. The aim is to support learners and to enhance the learning process through strategies that help students acquire knowledge and develop their skills. For this reason, the need for a student-centered and problem-based learning is more than ever obvious and this must be reflected in both the educational work of the teacher and the curriculum (Τριάρχου 2015, pp. 138, 142).

Related to aforementioned facts, a careful observation of the evolution of education in relation to space and time leads to the conclusion that education and distance are two concepts inextricably linked. However, this point of view is not easily understood. One should be aware of the evolutionary course of teaching, as well as the parameters of distance besides the physical presence. In education the element of distance is not being observed only related to the lack of physical presence. Distance in an educational environment can be communicative, social, or even psychological. In addition, distance is created when the structures of an educational institution or an educational process do not allow interaction. Two-way communication, interaction with others and educational material, as well as learning needs are factors which could eliminate distance and vice versa. From a pedagogical point of view distance can be therefore created even in environments with physical presence and put in danger the educational process (Σοφός et al. 2015, p. 16).

A typical example is an educational environment where the central role is played by the instructor and not the learner, a fact that does not allow interaction between individuals and

undermines the learning process by preventing a deeper understanding of knowledge and focusing exclusively on memorization (Τριάρχου 2015, p. 141), while another kind of example, is the choice not to take seriously the potential learning difficulties that some students have. Not every learner learns in the same way and when a student cannot learn in the usual ways, it does not mean that there is no other way for this to happen. At this point, technology and teaching strategies can effectively contribute to overcoming obstacles (Τζιβινίκου 2015, p. 17).

In modern society, education is characterized by the so-called didactic square - learner, teacher, content, media (Σοφός et al. 2015, p. 16) - and our goal is to reduce the negative impact of any distance during the learning process by utilizing technology in traditional or distance learning. "The architectural construction of digital media enables the space-time distance and at the same time its impairment, reconnecting the individual with the creators of ideas through modern electronic environments, recovering so and restoring the media-mediated interaction between individuals" (Σοφός et al. 2015, p. 16). In fact, digital technology has often a complementary effect with amazing results on the traditional form of education and a typical example is the electronic-digital libraries, a tool that is now universally accepted. This is not the case with virtual libraries, but of a combination of physical and digital ones. The physical library still exists, but some of its services and collections are also offered electronically through a repository of digital objects enhancing its efficiency and expanding the possibilities of its utilization (Δημητρούλια & Τικτοπούλου 2015, p. 128, Παππάς et al., p. 127).

Therefore, we must now focus on a general and more comprehensive prism of educational processes and take into consideration all the parameters and not only the physical presence. During the perpetual confrontation between traditional and online education a scientific dialogue or debate has been developed. Advantages and disadvantages of both forms of education are contrasted and depending on the conditions and circumstances educational organizations must choose between conventional learning method and its online counterpart, always based on the benefit of the students (Σοφός et al. 2015, p. 16).

We live in a society where digitalism has taken over much of our lives and our communication. The relevant reflection is not temporary, the impact of New Media on our lives has been hotly debated since the appearance of personal computers during the 80's (Δημητρούλια & Τικτοπούλου 2015, p. 11). However, in the educational framework it is important to identify the reasons why these different learning environments were created.

Conventional teaching takes place in an environment that supports face-to-face communication between learner-instructor, learner-learner and the interaction between them and facilitates cooperation, teamwork, relationship development, while the specific spaces which protect against external noise and promote the teaching and learning process of this form are perceived as closed spaces isolated from the external environment and create conditions for the connection of individuals with each other and with the environment (Σοφός et al. 2015, pp. 31-33).

The digital learning environment eliminates many of the aforementioned features and, depending on its form, can support modern teaching and interaction, but in other forms and

under restrictions, without the immediacy and many of the advantages mentioned above. However, it facilitates the participation of people with physical distance due to health, professional or other reasons, expands the conditions of monitoring, offers access to a huge variety of educational material, promotes skills of self-control and self-discipline, and is distinguished by flexibility.

It's more than obvious that both environments were created out of the need to provide the appropriate teaching and learning environment according to special conditions and restrictions and this conclusion should be taken into consideration by both the proponents and the opponents of the aforementioned forms of education.

3. The new and changing role of teachers

During the period of the COVID-19 pandemic, education at several institutions was taking place in the form of e-learning by distance. More specifically, courses were carried out by the method of distance education, following literally the timetable during the traditional teaching, supported however by specific platforms of both synchronous and asynchronous education. By the implementation of this mixed form of the two kinds of education, which was being applied to cover the needs of the learners, the most significant role was being played by the teachers. It is of great importance to point out the new characteristics of teachers regarding the so-called blended education model, because these elements significantly continue to contribute to the current form of the educational process.

The experience gained from this sudden and not easy transition to the digital learning environment has many positive results. The most important one is the changing role of teachers. The role of teachers is no longer limited to the instructional dimension, which we already knew and were used to, but has acquired other equally important dimensions.

Teachers should contribute to the transmission of knowledge, answer questions, clarify issues of their subjects, and provide guidance to learners; however, this teaching dimension (instructional role) is enriched with skills of creating or finding educational material and sources and directing learners towards an autonomous learning.

In addition to the above-mentioned dimension, a new dimension is now clear, that of providing support (supportive role). Teachers support and help learners in matters that affect the learning process and that may not be related to it. They cultivate a good relationship with them, maintain regular communication, support them, and encourage them to continue their effort. Empathy, empathetic listening and communicating empathy are crucial for their supportive role.

For this communication with learners to be effective, the roles between teachers and learners must remain distinct. Teachers should also develop skills that will help them manage their relationship with others as well as themselves.

The administrative dimension of the teachers' role is complemented by the facilitative dimension, since teachers, in addition to psychological support, provide help, advice, information and are the intermediate link between the educational institution and the learners.

Furthermore, to be an efficient teacher, one should be characterized by components such as integrity, adaptability, flexibility, cordiality, enthusiasm, humor, organizational and technological communication and interactions skills, fair judgment, deep knowledge of his subject and, of course, one should be an inspiration for learners (Παπαδημητρίου 2014, p. 109-118 & Παπαδημητρίου 2015, *passim*).

4. Conclusions

Distance education is defined by the distance of space or time between teacher and learner and requires specially designed educational material, while e-learning and online education are characterized using digital technology as resource and form of communication (Σοφός et al. 2015, p. 22).

This paper tried to focus on the investigation of the impact of distance education in the conventional one, with a view to upgrading the changing role of teachers. By presenting the main characteristics of these forms of education, this study aimed to highlight the new and always changing role of teachers. It pointed out that the integration of online and distance learning methods in the traditional educational practices was so effective that catalyzed the conventional role of teachers.

Teachers are the key to the future of education and their role is significant. Considering the elements that differentiate online-distance learning from the traditional one and the catalyzed impact of the first on the second one, this paper described these new characteristics of teachers by emphasizing the numerous roles they have adopted: the instructional role, the supportive role, the administrative role and the facilitative role.

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A Contribution to the Changing Female Role of the 19th Century:

L. von Sacher-Masoch's *The Divorced Woman*

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Abstract. The encoding of Femininity in the work of Sacher-Masoch is interesting for the impact it had to the developing female role of that time. This article aims to show how the female characters of Sacher-Masoch's novel *The divorced woman* (1986) might be related to the author's psycho-pathological background, but also contribute to the changing female consciousness. After a short mention to Sacher-Masoch's literary female patterns, and a summary of the novel, it will be shown, how these patterns represent different kind of needs: regardless if they expressed in the first place the writer's unconscious desires, they also met the contemporary feminist request for autonomy and self-determination.

Keywords: female role, femininity, masochism, 19th century, romanticism.

Sacher-Masoch's Place in the Literary Scene

The main literary thematic of Leopold von Sacher-Masoch's work centers upon the same pattern, which completely justifies his name's use for the description of the masochistic perversion by Krafft-Ebbing in his book *Psychopathia sexualis*¹. Nevertheless, Sacher-Masoch's contribution to the history of literature does not only keep to the lickerish and lascivious adventures he used to write in order to make a living. The quality of his work comes both from the fact that he meets all literary criteria and from the way he assimilates and reproduces the intellectual movement of his time, namely Romantism.

In Sacher-Masoch's case, the limits between fiction and reality are vague, as he mostly applied the literary scene, which he created and directed, in his own life. He actually led that

¹ cf. Krafft-Ebbing 36.

literary scene up to its realization conditions.² The only exemption is his novel *The divorced woman* (1986), where rather the exact opposite is taking place: the primary raw material is experience, and directing comes second. That novel deals mentally and literary with his first love experience with Anna von Kotowitz³.

If we assume that the value of a literary text is measured based upon the number of projection possibilities⁴, some of these are required to be decoded in this particular novel: its perception creates projections in both sexes, since, in this literary work, we recognize elements of the romantic point of view concerning a life stance guided by the intellectual background of that period. Especially during Romantism, but also in the *The divorced woman*, special emphasis is given to interpersonal relationships. In consequence, readers are also invited to become emotionally involved, since they project existing or unsatisfied experiences, fears, desires, inhibitions and idealized obsessions. Since the notion of love imposes some specific codes of behavior in each period of time,⁵ within the frames of romantic love, we are able to observe in this novel, the main character behaving in a distinctively romantic way, while the female standard is separated into three figures, each of whom is conformed to an aspect of the conflicting needs of the female sex. Since, in the 19th century, the female sex is in a crossroad fighting against its different roles, we are about to watch the historical evolution of the beginnings of the feminist movement, as it is imprinted on the novel's female figures.

Probably, in other writers, the interpretation of the main characters' behavior allows a workoriented interpretation of the material, but in the case of Sacher-Masoch the interpreter's task becomes more complicated just because of the writer's psychopathological background imposing the dependent interpretation. In other words, the interpreter should take into account the reasons for which the writer creates specific female standards, although in this presentation the psychoanalytic illustration of Sacher-Masoch's psychosynthesis will be avoided.

This is why we will refer to Deleuze who encoded the female forms in the work of Sacher-Masoch; then, we will analyze the model of the main female character as the dreadful woman, based on Treut's study (1982). After presenting a short summary of the novel *The divorced woman*, the feminist aspects of Sacher-Masoch's perversion will be stressed out.

Sacher-Masoch and the Women

While initially one is under the impression that the whole of Œuvre of L. von Sacher-Masoch, is elaborately surrounded by a mysterious vale, the truth is that the writer remains sincere and true to his imaginary wish, which concerns his life as much as his work. In his world, a fur, a whip, the vivid colors and the intense incept of nature comprise a masochistic scene.⁶ His literary, personal myth is characterized by the repeated pattern of this fanciful myth, where the woman occupies a central position. The reason for that does not only lie with the fact that she incorporates his passion object, but also with the common acknowledgement that it is an important 'ingredient' of the heterosexual, individual and social cosmos. Sacher-Masoch

² cf. Farin 33.

³ cf. Tsivavou 13.

⁴ cf. Tsivavou 61

⁵ cf. Luhmann 5.

⁶ cf. Koschorke 47.

may project his sexual fantasies on the leading female, thus depending his sexual satisfaction completely on her, but he goes on to describe other secondary, female types, trying to justify his choice: he compares many different women types, which are set as an example for avoidance, or constitute the exact opposite to the woman of his choice. Therefore, he creates an alibi and justifies his action, in order to cover the asocial element of his abnormality. By accounting to society for his actions, in this way, he attempts to gain social favor and goodwill, and thus social acceptance.

Beyond the deeper causes of the female figures' description,⁷ Deleuze believes that Sacher-Masoch creates female role models based on Bachofen's work *The maternal law*.⁸ As Deleuze summarizes,⁹ there are three types of women, namely the uterine, the oral and the oedipal. The first type is the multi-religious, the courtesan, who is represented by Aphrodite, the goddess of love and death. She symbolizes the primal, uterine mother, who lives for love, beauty and pleasure. She is sensual and gives in to each lover. Often, the goddess refers to the independence of women, to the short-term relationships and to the equality of the two sexes. She criticizes all social, moral and religious standards and thinks of them as male-made 'inventions'. This picture contains the fear of man towards female sex, who knows no fear or physical or social boundaries when it comes to the true power of love.¹⁰

Athena, the goddess of wisdom and spirit, is the exact opposite pole. She incarnates the third type of masochist female and, at the same time, represents the oedipal mother. She appears as an Imago of the female love and plays the role of the victim or of the sadist father's co-conspirator. It is true that she tyrannizes and pesters, but the cause of that is always a man, whose victim she may become. Often we have the intervention of a third party pulling her away and distracting her from that sadistic behavior. That female type's ideal is love without pain.¹¹

The ideal female standard according to Sacher-Masoch is the second type: Demeter, the goddess of land, the fertile and lethal goddess. She symbolizes the oral mother who shows understanding, who is mild, caring and sensitive. Although she is friendly and pleasant, she shows strictness and coldness and is the dame of torture. Demeter is the symbol of law, culture and stability, while the existing contrast among these components operates in the following way: motherhood competes against sexuality, but it is the "oppressed unity in the bipartition courtesan – mother" (Treut 181). We should stress that a masochist has great need of the mythical symbols and the myth in order to name the "eternally standing" (Deleuze 222) and this way it is explained why the writer refers to the ancient goddesses.

Demeter, on the other hand, incarnates all characteristics that Sacher-Masoch attaches to his heroine: cyclothymic, arrogant and heartless, a powerful female who knows exactly how to dominate and rule over male, how to subdue, humiliate and underestimate him to such an extend, that his life as well as his comfort depend utterly on her moods. That power of hers is given to her by the male, and thus it can be definite only ostensibly as an absolute one. In this game of power, the masochistic aspect is an attempt to rule over pain, which is spontaneous, and thus under control, which also constitutes a hint for the sadistic aspect of that phenomenon.¹²

⁷ cf. Tsivavou 119-190.

⁸ cf. Deleuze 169.

⁹ cf. Deleuze 206-215.

¹⁰ cf. Deleuze 206.

¹¹ cf. Deleuze 207.

¹² cf. Deleuze 208.

The trinity of the masochistic ideal can be: coldness - motherhood - strictness, or else, chilliness - sensitivity - terror. Sensuality is replaced with ultimate sensitivity, instead of warmth there is coldness, while disorder is replaced with a strict order. The cold nature of the ideal masochist woman rejects sensuality while, in her own sensitivity there is an impersonal element. The function of the third aims at the triumph of sensitivity against coldness, since cold oppresses sensuality.¹³ Thus, the existence of sensuality is questioned and rejected, which results from defense. Cold outlives sensuality. This sensitivity presents the basic principle of the life-giver as a specific form of fear and anger. Otherwise said, cold functions as a cocoon and at the same time as a propeller force: it protects the excessive sensitivity by interiorizing it, while it is exteriorized as anger and strictness.¹⁴

While the writer attaches the leading actress to specific attitudes, he uses intellectual fabrications, -such as the theory of the romantic period-, that give him a social alibi and help him maintain control and be emotionally remote. From a psychoanalytic point of view, he uses various mechanisms of defense (such as intellectualization, sublimation and idealization),¹⁵ while, in his relation with the leading actress there are elements of an unresolved oedipal complex.¹⁶ In this way, the dreadful woman constitutes the most important element for the completion of the masochistic and masochic universe.

Demeter is indeed a 'dreadful woman', as characterized by Treut's research bearing this title. There, she stressed that the symbolization of the 'dreadful woman' stimulates the creation process, which weakens systematically her primal, semantic material, thus blocking and freezing fantasy. This results in the removal of the subject from its impulse needs and the coeval transfer of satisfaction to an unclear and uncertain future. Consequently, the dreadful woman distracts the readers' attention, so they will not focus on the causes that drive the hero/writer to such a behavior.¹⁷

The divorced woman: Summary

The above described procedure and these specific women types turn out especially in the novel *The divorced woman*. Regarding the plot of this work, the story starts with the appearance of a mysterious woman, who the writer meets accidentally and immediately starts looking for her. An old friend of him, Katinka, gives him most of his information but after she has already commented on the nature of the woman. When the narrator locates Anna, she tells him all about her love affair with Julian. Having decided to experience the ultimate love, the two lovers leave their partners - he leaves Eliza, and she leaves her husband and children. After a while of bliss, the relationship starts to consume away, to fade, as Anna is not able to correspond to the role of a dreadful woman, imposed on her by Julian. Then he starts losing interest gradually, but he carries on supporting her financially, until Anna cheats on him. That was the end of that relationship.

¹³ ib.

¹⁴ cf. Deleuze 209.

¹⁵ cf. Tsivavou 122.

¹⁶ cf. Tsivavou 150.

¹⁷ cf. Treut 157-173.

Work-oriented Interpretation

Like in most pieces of Sacher-Masoch, the presence of a terrifying female figure as well as his voracious wish to reinstate the relation to the mother and at the same time his nameless fear towards intimacy, are the main characteristics.¹⁸ The writer presents all three female types in the course of his narration, but nevertheless they are always in an indirect relation to his heroine: Katinka, Eliza and Anna.

At the beginning of the novel, we recognize Aphrodite in the figure of Katinka: she is a sensual courtesan, who gives her heart and body to anyone she ever likes. She fights for independence, equality and an equal treatment for women. She would gladly keep control over the male population. Then later on the play, we have Eliza, who owns a secondary part in the novel and has none of the maternal characteristics of Demeter. What she definitely lacks, is Demeter's spiritual sensuality as well as her supersensory sensibility.

Eliza appears in some critical moments of the play just to stress her temporary, compassionate and asexual worthiness. In this way, she covertly incriminates sexuality as a source of hardship, anxiety and moroseness. Eliza is Julian's oasis, his own sanctuary. She is the only woman who does not stress the hero, as she is full of understanding and feels with her motherly instinct the boundaries of herself and also of the relationship, allowing Julian to develop and act freely.

A momentum characterizes Anna's role in the novel: initially, she gives the impression of the perfect courtesan, meaning a hedonist courtesan. Then she tries appearing as a dreadful woman. Julian works hard in order to fabricate and create the image of the dreadful woman, who strictly follows a masochistic role model. Nevertheless, Anna cannot and will not follow these instructions. She needs love, intimacy, communication and understanding - things she does not receive from Julian. Besides, she cannot ignore the physical dimension of her nature as a courtesan. As soon as the first difficulties come on the scene, her maternal instincts come to light, thus ignoring Julian and their passion.

In Anna's inability, Bang sees the cause of Julian's reaction:¹⁹ the stubborn behavior of a masochist who wants to punish Anna with his absence since she does not meet his wishes and demands. He is in pain by the fact that Anna has the potency of becoming a dreadful woman without wishing to make it real. At the end of the erotic story, she becomes a real sadist as she cannot stand his indifference and she treats him in a cold, indifferent, insensitive and emotionless way. We observe Anna changing roles quite often: at the beginning, she looks more like Demeter, but has also elements of Aphrodite. When she feels that she is being observed like an object, that she is forced to pretend someone else, that her feelings are not being considered, she realizes that she has crossed the borders of an intimate relationship. At that time she recognizes that Julian has given her a role not in a game, but in its fantastic play. As soon as Anna becomes conscious of that fact, she cannot live without having an emotional contact to Julian and therefore she crosses the borders of the dreadful woman, turns into Athena and has no mercy of her lover. But Julian retreats because he has no need of a sadist: he could not have her under control and he would have no authority on her. The dreadful woman is his ideal just because she is his own construction, since he can set the parameters, the limits and thus maintain dominance. If one takes into account the fact that the idealistic images are a

¹⁸ cf. Tsivavou 133.

¹⁹ cf. Bang 126.

reflection of the psychoanalytic notion of ego,²⁰ the presumptions about Sacher-Masoch's psychogram are indirectly confirmed, namely that he suffered from his unresolved oedipal complex which constituted the source of defense for his impulses.²¹

As we integrate this novel in the social and cultural frame of that time, which is characterized by the romantic movement, we realize that the romantic way of viewing life, as a work of art, is expressed in Sacher-Masoch's work as much as in his life: his main attempt in that novel is to create the ideal conditions for love to grow and blossom, and to find fertile ground for his masochism. During this attempt, he is using an elaborate costumery material; he stresses nature's effect as an environment as well as part of human nature. However, his basic 'weapon' is intellectual. By using different kinds of evasions and maneuvering, he manages to use romantic love as an alibi in order to sanctify his instincts.²² Thus, he connects rationality with spirit and emotion. Besides, that is what romanticism demands. The romantic demand for assimilation of contrasts is reflected in the fact that Sacher-Masoch does not describe just a female type but three ones with different characteristics that complete each other. In these figures, he assimilates the intellectual and social tradition, demonstrates the women's effort for self-determination and, finally, questions the social conventions.²³

Although the writer's fantasies as well as those of the collective unconscious are projected on the above described women, we can also detect men's ambivalence towards the alteration of the female role. While the romantics realize that, certain freedoms must be granted to women, they meet the application of that idea with puzzlement, reservation and intimate fear. Within the environment of creating different - often contradictory - trends and dispensatory sensualism, the voice of women is no longer suppressed. Women exploit the fertile ground, they become united and create the feminist movement which expresses their right to equality.²⁴ Sacher-Masoch does not literarily condense the multi-level female role into one corresponding figure, but breaks it down to several ones in order to show the heredity, the present and the evolution of the position of woman as well as the effects on intersexual relations.

The description of the three women in the novel *The divorced woman* outlines indirectly the sexual roles that correspond to the near past, the present and the future of that time. Eliza, Anna and Katinka personify these roles, thus signaling the evolutionary phases of the woman. Eliza represents the traditional female role model, who lives in her husband's shadow. Her role is projected on the model of a knightly beloved, who starts as an object of passion and afterwards fulfills herself by becoming a mother. She has no opinion of her own and is full of understanding and compassion. She depends indirectly on Julian financially; she is unprofessed and does not intend to claim such thing. The description of that woman brings out the polarization of all sexual characteristics, supported by the conservative bourgeoisie of that time: passivity, sensibility and devotion are some of the core characteristics of Eliza, that create the impression of a classical female, while Julian is expressed through energy, independence, logical coherence and professional orientation.

The fact that during the romanticism period it was the first time when freedom of speech was gradually granted to women, and a slight broadening of their activities became

²⁰ cf. Anna Freud 111.

²¹ cf. Tsivavou 149.

²² cf. Ehrich-Haefeli 77.

²³ cf. Kluckhohn 9.

²⁴ cf. Düding 87.

noticeable,²⁵ is clearly witnessed by Anna's character. She incarnates the woman's prototype of the romantic period, who develops herself within her husband's sphere and environment. Consequently, we observe that the predominant female role model does not release itself from the patriarchic commandering and from the sexual role of its past. The only thing that is different is that the female is given mythical proportions and her sensuality is considerably stressed. In this play, Anna owns the place of the sensual lover, who is at the same time a spiritual companion. Yet, her spiritual role is restricted, as Anna has not yet developed autonomous thinking, but she only reproduces and asserts the male mind. In that case, we can discern the romantic aspect of the female, who, as a natural being, is seen as a complete 'plant', but is a static existence, excluded from the interminable development.²⁶ The man's secret wish to keep the woman in a subordinate position, under his control, becomes indisputably clear through that model for the reason that his is actually in fear of confronting her.

According to the spirit of that time, Anna focuses on the first objective of the feminist attempts for emancipation, which concerns the equality of women within the frame of "equal worthiness, but differently"²⁷. At the same time, that point of view propagandizes the patriarchic, sexual roles. Initially, during the course of the 19th century, the feminist movement accepted the polarization of sexual characteristics according to the patriarchic norm. That can also be detected in the determination of its goal. The claims and demands are not based on the idea of equality, but contain the image of an equal but 'different' woman, who would fulfill herself through her job as a house-wife and a mother.²⁸ The right to a profession was the very first feminist claim: the feminist movement intended to turn housework into a profession for women, so as to be able to earn a living for themselves, though the financial interest was not among their top priorities. So, we observe Anna orienting towards that, a fact that justifies the assumptions that she personifies the contemporary feminist demands of that time.

The dialogue between the emancipated Katinka and the narrator centers upon marriage, the woman's role and, indirectly upon sexuality. Katinka pays great regard to employment of women and indirectly to her obtainment of independence from men. She is well aware of the fact that the patriarchic structure defines the rights of women and therefore their free development. The demand for right to equality, political rights and education come to light, but at the same time the deep roots of patriarchic mentality reveals itself: the polarization of sexual characteristics (man as the energetic being and woman as the passive one). The reference to the self-fulfillment of women is a secondary issue, but it always relates to the feminist claims and demands. According to this point of view, we are able to comprehend the women's claims for self-determination, autonomy, independence, education and equality. Katinka is setting an example for the future female role model, because she embodies all requests of the women's movement, developing at that time. Katinka's monologue is very characteristic of the spirit of that period: it combines the women's claim for their right to education, a claim that became even more intense especially during the last years of the 19th century.

²⁵ cf. Brockhaus 496.

²⁶ cf. Beutin 207.

²⁷ cf. Gestrich 6.

²⁸ cf. Gestrich 7.

Author-oriented Interpretation

At this point, if we change our perspective and we focus on the author-oriented interpretation, instead of analyzing the writer's work result, we will detect the writer's decisive contribution: it is not Katinka talking of course but Sacher-Masoch through her. In Katinka's views we see the male way of thinking: it is the patriarchic view that sexual characteristics are rooted in the biological substance of sexes, a view that was enforced by various medical research of that time. Taking Masoch's studies on history into consideration, we can explain why he besets many moments of his life with a veil of history.²⁹ In that way it is showed that he had the necessary sensitivity to realize all social and cultural changes of his time, part of which is also the feminist movement. In other words, he was in a position to grasp the historical importance of feminism and to process it intellectually within the frame of romanticism. Moreover, that was his way to satisfy his role as an 'accuser' of all amiss conditions of that time, who reprehends the rotten moral and supports progress and change. The writer was strongly opposing to any kind of social injustice, and the feminist approach offered him a good cause for that attitude. Therefore, it is not a casual event that Sacher-Masoch indirectly dedicates this novel to that revolutionary movement, maintaining that, this play is a "contribution to the natural history of women"³⁰, a claim which is finally justified. Indeed, the three female figures symbolize women's inner struggle to handle their redefined sexual role and to fulfill their selves on a social and a personal level.

Sacher-Masoch brings forward all women's claims as a focal point, but he also stresses a further side of the issue: he warns women not to undermine and mine their sensuality and sexuality. Although these two elements are not the decisive ones for the nature of women, the writer focuses on these in order to support the priority that personal needs should be given. Seeing from that point of view, that play contains elements of a fictional novel. On the other hand, it stresses the important influence of the cultural superstructure, which obtrudes regression (for example: social demand for conformity), thus it represses and stamps out personal development. In Sacher-Masoch's case, the sexual factor is also involved, which renders the satisfaction of needs as well as the social acceptance even more exacting. This sensitizes him and makes him support the weak who, in his case, are the strong, as the female sex is the one from the authority of which he tries to break free. By partially identifying himself with the woman, he identifies with power and acquires a temporary control over his oedipal complex: thus, he manages to restrain the attraction exercised on him by the female sex and the fear of castration, while he identifies with the father without experiencing feeling of envy and rivalry. Nevertheless, in this effort, he shifts between desire and terror for the independent woman. Surely, this does not underestimate the contribution to women's movement: regardless of the motives and the choice of its subject, he acknowledges and indirectly supports women's rights to equal treatment and fulfillment of their personal needs.

Summary

Summarizing, Deleuze's model emphasizes the psychoanalytic dimension of the three-women-pattern and justifies the roots of repetition. All the same, the female readers have the

²⁹ cf. Farin 21.

³⁰ cf. Sacher-Masoch 3.

chance to identify with one of these three female role models and observe the dynamic progress of their sex's role. Therefore, the play functions as the precursor of women's new place in the society of that time. Regardless from his choices and motives, the writer keeps on believing in his High love, sensuality and sexuality, thus incarnating the spirit of romanticism which actually sets the ground for the development of Psychoanalysis. Consequently, Sacher-Masoch may seem to be reactionary, as far as his personal sexual choice is concerned, but at the same time he appears to be revolutionary due to his contribution to women's maturing during their fight for equal treatment, equality and equal rights.

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Comprehensive Study

Comedy in American World War II Fiction

Mister Roberts

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Abstract. The following article on the subject of war and comedy is a comprehensive study of the distinctive and of the identifiable themes of Thomas Heggen (1918-1949), the American novelist who was actively involved in World War II. The writer, whose exposure to some of the events of the war influenced his writing, related caustic observations about the Second World War, receiving the admiration and the approval of the public and the support of the contemporary literary critics who described him as a realist, using clever humour to attack politics and social mores and employing fantasy to criticize the horrors of armed compact. The novel comprises all the composites of the ugliness of armed fighting, like the decadence of the soldiers and the officers and the atrocities that were committed all over the world, shocking the international community, while retaining serious undertones about the glory of war. *Mister Roberts* (1946) concentrates mainly on the adaptation of the individual to military life through humorous situations, but its defining feature, comedy, in the form of political and social satire, fully examined here, justifies not only the popularity of the novel but also the influence it exerted on modern war fiction. The various war themes included in *Mister Roberts*, like the glory of the war (duty, comradeship, patriotism and sacrifice) and the horrors of the war (death, futility and loss), are carefully examined here in order to aid the reader in discovering more about the novelist's implications and his indirect suggestions and mild criticism concerning warfare as it became increasingly technological. (Words: 257)

Key words: compliance, boredom, ennui, tedium, disappointment, disobedience, loss of life.

Author Biography

Thomas Heggen was an editor for the American consumer's magazine *Readers' Digest*. Upon the attack of the Japanese Air Force on Pearl Harbor, on 7 December 1941, Heggen joined the US Navy and was commissioned a lieutenant. For the duration of the war, he served as assistant communications officer on supply vessels like the USS *Virgo*. During the fourteen months that



he spent on *The Virgo*, he wrote short stories based on his experiences, like the daily routine aboard the ship, the boring Pacific Ocean islands that the crew visited, and his disappointment at and bitterness of having been left out of the war and what was happening in it. He repeatedly requested to be transferred to a destroyer but he had to face his Captain's denial. Heggen endured the monotonous life on *The Virgo* until the end of the war in December 1945 after which he returned to New York City, rewrote the pieces, changing them into a novel, and gave them to his publishers. The book sold over one million copies and made him the centre of the New York City literary scene. He had

transformed his personal wartime experiences into a comical, realistic and understanding portrait of life aboard a cargo ship sailing in the back areas of the Pacific Ocean during World War II, emphasizing that while the soldiers were fighting on the front, being physically and emotionally traumatized by the horrors of the armed combat, he, and men like him, experienced the war only through the news.

Plot

The story, an entertaining account of routine life aboard USS *Reluctant* in the Pacific, involves a strict captain, some unconventional characters, like the ship's doctor, a noisy and disorderly crew, and a beloved officer by the name of Mister Roberts. When the reader is introduced to *The Reluctant*, the ship is anchored in a bay of one of the back islands of the Pacific Ocean. It is 1945 and the day is nearing when the Allies will declare peace. *The Reluctant*, however, is far from the theatre of operations.

Now, in the waning days of the Second World War, this ship lies at anchor in the glassy bay of one of the back islands of the Pacific. It is a Navy cargo ship. You know it is a cargo ship by the five yawning hatches, by the house amidships, by the booms that bristle from the masts like mechanical arms. You know it is a navy ship by the color (dark, dull blue), by the white numbers painted on the bow, and unfailingly by the thin ribbon of the commission pennant flying from the mainmast. In the Navy Register, this ship is listed as the Reluctant. Its crew never refers to it by name: to them it is always "this bucket". (p. vii.)

In the early morning of April 1945, the ship's deck is deserted and the officer-of-the-deck is not yet awake. On the dock, the natives are moving about, but on *The Reluctant* the crew is sleeping. In the West, it is seven o' clock at night and the Allies are working their way, slowly but steadily, toward Berlin. In the East, on the island of Okinawa in Japan, the US Army is

about to finish Operation Iceberg, the largest amphibious assault in the Pacific Theatre of War. The Battle of Okinawa (April 1945-June 1945) is still going on with kamikaze attacks from the Japanese defenders and the fierce fighting on the part of the Allies.

As a naval auxiliary, *The Reluctant* is not involved in ferocious fighting. It is six-thirty but not a man is stirring on the deck. Reveille is at six-thirty but the chief master-at-arms, Johnson, who makes reveille, is drinking coffee. In the armory six men are discussing a poker game while the rest of the crew is dreaming not of battles fought or imminent, but of girls scantily clad.

One would say that this is an unconventional naval conduct. However, since *The Reluctant* operates in the back areas of the Pacific, carrying food, toothpaste, dungarees and trucks, staying "on its regular run, from Tedium to Apathy and Monotony and back" for months on end (p. x), having shot no enemy planes, having fired no enemy ships and having sunk no enemy submarines, the crew's indifference to the war is not surprising.

And yet there is an officer, a young man of sensitivity, perceptiveness and idealism - attributes worthless and even harmful to the Captain of the ship - who is capable, efficient and committed. He has geared himself to the needs of the ship and he has made the adjustment with patience, courage and fortitude. He shows up at six-thirty sharp only to find a deserted deck. No wonder he is the crew's favourite officer although he has not been given his chance to be a hero - for physical heroism, Heggen writes, is very much a matter of opportunity or a matter of a reflex.

Apply the rubber hammer to the patella tendon and, commonly, you produce the knee jerk. Apply the situation permitting bravery to one hundred young males with actively functioning adrenal glands and, reasonably, you would produce seventy-five instances of clear-cut heroism. (p. xi.)

Lieutenant Robert knows that the person responsible for his hard luck is Captain Morton, a Lieutenant Commander that is vigorously disliked by the crew. He is difficult, hard to please and to convince, and more interested in having his men clean the deck than in having the cargo discharged. There is a rift between the Old Man and the crew and in this rift the Captain stands alone opposite one hundred and seventy-eight officers and men. His authority is unquestionable although the crew knows that the Captain is vulnerable. He is not terrifying despite the fact that he is detestable. Affronts appear in chalk from time to time on gun mounts and cigarette butts, an obsession of the captain's, are secretly inserted in his cabin.

Captain Morton ignores the men's mischief. He is a stout, middle-aged man, who is considered stupid and incompetent. He is unable to understand the simplest message and carry out the simplest order from his superior officers. His persecution of the disobedient men haunts the crew and his prohibition of gum-chewing angers them, although they have forgotten whether the captain created this situation or whether it is the result of their need for a pastime.

Chief Johnson looks at his watch and picks up his whistle: "Hit the decks," he shouts, but no one stirs. He stumbles back to his bunk: the men know what to do, he thinks; everyone will be up by eight o' clock to eat breakfast. Nonetheless, Mister Roberts, the First Lieutenant of the ship, responsible for the ship's maintenance, is present to supervise the work of the men. The crew worships, obeys and respects this twenty-six year-old, slender, blond man who is a born leader.

He was the sort of leader who is followed blindly because he does not look back to see if he is being followed. For him the crew would turn out ten times the work that any other officer on the ship would command. He could not pass

the galley without being offered a steak sandwich, or the bakery without a pie. At one time or another perhaps ninety per cent of the crew had asked him for advice. If it had been said of him once in the compartment, it had been said a hundred times: "The best son-of-a-bitch in the goddamn Navy". (p. 3.)

Roberts is friends with every man on the ship. His special friends, however, are Ed Pauley, a sociable fellow, Doc, the doctor of the ship, and Ensign Pulver, the hero's admirer. The First Lieutenant's only enemy is Captain Morton. The Old Man is jealous of his officer's skills and afraid of his competence and efficiency. Although Roberts has repeatedly saved the ship from imminent collisions (caused by the captain's incompetence), the Old Man has repaid him by calling him names.

Roberts had been aboard *The Reluctant* for two and a half years, longing to be transferred to the front. He has repeatedly asked the Captain for transfer, but he has refused him on the grounds that he is indispensable to the ship and the crew alike. One movie night, Roberts, out of spite, shoots a ball at Morton. The Old Man is so shocked that he sounds the alarm, sending the crew to the battle stations. Nothing happens and forty-five minutes later the crew hears the Captain shout at the top of his voice on the P.A. (Public Announcement) system: "All right, now by God, we'll just stay right here at General Quarters until the smart son-of-a-bitch who did that comes up here and owns up! We'll stay right here, by God!" (p. 12.) The crew fails to understand the message and the men go about their business. Roberts pretends that he is ignorant of the incident (he is even heard asking the men what happened) before he joins Ensign Pulver for a beer on such a special occasion as this.

As the story progresses, the reader is introduced to some of the other members of the crew. Ensign Keith is described as a lonely man with formal manners. Life aboard *The Reluctant* contradicts what he was taught at midshipmen school and he feels confused. "Almost everything he saw and heard, contradicted, refuted, ignored or scorned one of the impregnable Truths he had learned so well." (p. 18.) Keith's roommate, Ed Pauley, does not get up at seven o'clock, when an officer should, but sleeps until noon; he does not shave as an officer should; he is growing a beard. What is more, his fellow officers lounge all day in the wardroom, their hats on their heads and their feet on the tables. None of the men seems to do any work and none of them uses the title "sir" when addressing a superior officer. Extramarital exploits are discussed openly at the dinner table and most of the officers, like the ship's doctor, drink alcohol - all violations of naval etiquette.

In addition, Keith hears the men speak in a seditious way about the ship, the captain and the US Navy. One day, when a crew member, Dowdy, the boatswain's mate, brings beer aboard the ship, Keith loses his mind. He punishes the whole crew, making the young men emotionally distressed. Roberts attempts to rescue the men from Keith's wrath, but the stern Ensign, concerned with details and minor errors, refuses to change his mind and rescind the order. He does not believe in familiarity, he tells Roberts, because it breeds contempt. No wonder Keith becomes the object of hatred, spoiling the comfortable atmosphere that exists between the men and the officers. Usually the officers on *The Reluctant* let the men alone and the men let the officers alone so that they could all focus on the Captain. When one night Ensign Keith finds the men gambling and drinking on the bridge, he feels insulted. Nonetheless, he finally joins them in a glass of "fruit juice". It is ten o'clock when he leaves the bridge and eleven when he fails to report for duty to his superior officer. The men find him in the armory, arms flung about his mates, singing an obscene song. As a result of his disorderly conduct, he never gives the boys trouble again, turning into a good-natured young man. (p. 30.)

The doctor aboard *The Reluctant* is unpredictable. He usually has very little to do, but when there is an outbreak of an epidemic, he gets really busy.

The contradictions were the face and the man – the satanic little mustache, the wide, unblinking eyes that were simultaneously cruel and compassionate, and the shockingly soft voice that never quite concealed the steel beneath. Among the crew he seemed to inspire two antagonistic feelings in equal degree: fear, and a rather boundless admiration. Anyone who had ever drawn the wrath of his sharp little tongue had good cause to hold the Doc in respect, but on the other hand there were many whose relations with him had been of the friendliest sort imaginable. (p. 32.)

The day Lindstrom, a farm boy from South Dakota, visits the doctor to confess that he has the clap, the doctor is surprised. How can a man on one of the remotest islands of the Pacific and on a womanless island manage to get the clap? (p. 35.) It makes no sense, he says, and refuses to treat Lindstrom on the grounds that the young sailor is a distinctive case in an area as vast as the Pacific Ocean in which there are millions of men but very few women. He is the only fellow in this god-forsaken place with the clap, the doctor argues. So, why cure the clap? Lindstrom should consider himself lucky. The sailor, amazed but insistent, manages to get the doctor to treat his disease. When Lindstrom leaves the doctor's office, he is confused and baffled, believing the medical man to be wrong and himself to be right.

A funny scene takes place when Mister Roberts stands watch with Dolan, the twenty-one-year-old Second-Class Quartermaster. The two men have stood watches together before, since their first day on the ship, and they often confide in each other. This time Roberts learns that one of the men, Dowdy, told the Captain once, when he called him about something that had to do with the boats, that the crew thought he was a prick.

Dolan, an incorrigible gossip, supplies Roberts with information about his life by recalling his conquests in San Francisco. He confesses that he likes women and goes after them whenever he can. Roberts, who does not seem to believe that women are everything in life, recalls how he enlisted after Pearl Harbour, having left Medical School and hoping for some action. Upon the end of the watch, the Lieutenant returns to his cabin, feeling that he is missing something. He enlisted taking for granted that he would be sent to the front, but instead he ended up on a cargo ship in the Pacific. He keeps asking himself: "What have I lost?" and "What am I looking for?" until he finally falls asleep.

Ensign Pulver's tendency to mischief is known to the crew. He is amicable although he is vain. He likes liquor and he is lazy. True, a metallurgical engineer like him has little to do on a cargo ship like *The Reluctant* - so on an average day Pulver spends eighteen hours in bed.

His bunk became to him a sort of shrine, and but for his meals and other undeniable functions, he was seldom out of it. It was an unusually well-equipped bunk. At the foot Pulver had rigged a small fan which wafted cool breezes over him on the hottest nights. At the side was attached a coffee-can ash tray, a container for cigarettes and another for a lighter. Pulver liked to smoke in bed while he was reading. Books were stowed in the space between the springs and the bulkhead. Beer was kept there, too, and it was possible to open a bottle on the reading light on the bulkhead. (p. 61.)

Pulver reads the books that Lieutenant Roberts reads. He admires Roberts and thinks that he is the greatest guy he has ever known. He wants to avenge his friend and he is up to a plan to

make the Old Man suffer. One day he lights a firecracker, causing the crew to think that a torpedo has hit *The Reluctant*. Nothing happens, except that Pulver burns his eyebrows, hair and part of his face. Unfortunately for the Ensign, the Old Man is not aboard the ship to scream “Prepare to abandon ship,” although when he returns, Pulver becomes his object of ridicule and contempt.

The next quarrel between Lieutenant Billings, the communicator, and Lieutenant Carney, the first division officer, ends in rupture. The two men, friends and roommates for fifteen months, have a serious fight over a can of coke. Their usual, everyday quarrel focuses on the process of Billings arising at noon and Carney getting up at eight one day out of four. Billings is usually dangling an arm or leg over the side of his bunk and Carney is ordering him to get it where it belonged. Then, they usually invite each other to a fight which usually ends in the wardroom over a game of cards.

A new quarrel begins in the morning of the day the ship is unloading at a remote, green island, swarming with flies, mosquitoes and long sharks that patrol the area, preventing the men from swimming. The hot, humid weather and the message Billings reads, ordering the Old Man to remain at the God-forsaken island for a week, depriving the men of their leave, cause Carney, sitting with Billings in the wardroom, to offer Pulver a Coke. Billings objects to such treatment. He is Carney’s roommate – why does Carney want to buy Pulver a Coke? When the quarrel starts, Pulver is quick to rise to the occasion and stop it. The two men are friends again and the rain, which falls all night, enlivens them. They feel happy, especially when they find out that a new Rita Hayworth movie is scheduled for the evening.

Several days later, *The Reluctant* anchors at another back island and Becker, a signalman, examining it from the deck with the ship’s binoculars, spots two blonde nurses that look like real movie stars.

One of the many anomalies of our ponderous navy is its ability to move fast, to strike the swift, telling blow at the precise moment it is needed. There were accessible in the wheelhouse and charthouse seven pairs of binoculars; on the flying bridge were two spyglasses and two long-glasses, and the ship’s telescope; and on the platform above was the range-finder, an instrument of powerful magnification. Within a commendably brief time after Sam had sounded the alarm, somewhere between fifteen and twenty seconds, there were manned six pairs of binoculars, two spyglasses, two long-glasses, of course the ship’s telescope, and the range-finder. (p. 83.)

The men’s spyglasses and long-glasses verify Becker’s discovery and very soon the crew discovers that the nurses work at the base hospital and take a bath every evening after their shift. Awe-struck, some of them having last seen a woman fully-clothed fourteen months ago, the men spy on the nurses every day, feasting their eyes on their naked bodies. Every day the girls’ bath is witnessed by Sam, three quartermasters, the officer-on-deck and several other seamen. A couple of days later, during “watch,” Sam spots a birthmark “down there,” observing at the same time that the feast “is too good to last”.

Sam’s omen comes true when Lieutenant Longston, the gunnery officer, goes to hospital to have his eyes examined and returns accompanied by the two beautiful women. The officers admire them at the mess hall, and the men greet them as Langston gives them a tour round the main deck, the offices, the galley and the sick bay. The crew is happy, the nurses too, until Sam’s shrill voice is heard revealing to everyone on the main deck that one of the nurses is the

woman with the birthmark on her bottom. The girls realize that the men have been spying on them and the following day they keep their bathroom curtains shut.

The funny scene is followed by a serious one which takes place when Captain Morton refuses to sign Roberts' transfer papers, causing a fierce reaction from the Lieutenant. The young man verbally attacks his superior officer and then asks for his punishment. The Captain, acting wisely, avoids the issue as Roberts would have asked for a transfer which he would not have avoided.

The brawl between Big Gerhart, the gun captain, and Red Stevens, a sailor, is a rather serious one. Gerhart's taking off his shirt on a very hot day and easing his burden on the ship's dog right below the Captain's eyes, results in his severe punishment by the Old Man. Exasperated, Gerhart picks on young Red, standing watch near him, calling him a cuckold. During the ensuing fight, Gerhart is hit on the head with a fork spanner losing his senses. The culprit, Red, is punished (the sum of \$ 25 is to be deducted from his monthly pay check) and Gerhart, alone now, realizes that his watches go slower than ever up on the ship's three-inch gun.

The Reluctant sails to Elysium in the Limbo Islands, a British colonial town of a 30,000 population near the Equator. The men buy prophylactics at the local canteen and ask the natives for the local brothel only to find out that there no such thing on the island. Overwhelmed by the news, they break into the French Consul's house and tear it down. Then, they spot a girl and hide her in their cabins, letting her ashore three days later. Upon departure, they invent love stories about their ventures to compensate for some really miserable days ahead of them.

The voyages of *The Reluctant* are almost over as the war in Germany has ended. The Germans have surrendered and the people in London, Paris, Rome and New York are rejoicing. There are snake dances through the streets of Rome and in London pubs are jammed. Flags and bunting have appeared in every building, ticker-tape has rained from Wall Street windows and parades celebrate the joyous occasion in New York. Roberts feels depressed. He wanted to be part of the celebrations and he feels "left out". He knows that the casualties are great, he tells the doctor, but he would rather he had taken part in the war and be celebrating now.

"I wanted in that war, Doc. I wanted in it like hell. Does it sound stupid?"

"No," said the Doc, "but it is rare." He lighted a cigarette. "You never did satisfactorily explain to me how come you're all-fired anxious to fight this war."

"I don't know that I could," said Roberts. "I don't know how you go about explaining a compulsion. That's what it is, of course."

Roberts had a crooked smile. "Did I ever tell you," he went on, "what a long and consistent record I have as a frustrated anti-fascist?"

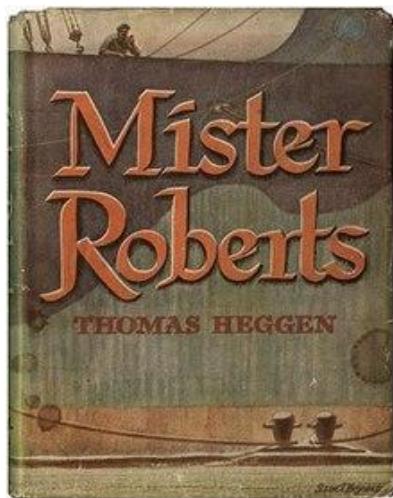
The doctor shook his head and exhaled smoke. "I think you omitted that." (pp. 137-138.)

Roberts recalls how he quit Medical School to join the RAF in Canada; how he was thrown out on malocclusion; and how in 1941 his application to join the Air Corps was rejected for the same reason. He then admits that the Navy was the only corps that accepted him, but he is interrupted by Doc who attempts to rationalize with him by saying that he gives "this war a lot". War is a necessity, Doc says. Any ideology attached to it is incidental or even accidental. Roberts replies with terms like "war against fascism," "holy war," "crusade," "the forces of good and evil," and so on. When he is finally over, Doc reprimands him for dropping out of

Medical School. In his cabin, however, Roberts can still think of the shouting and the laughing and the drinking and the lovemaking in the big cities of Europe.

At the same time he can recall an article in *Life*; his knowledge of the war comes from a magazine, he realizes, and a photograph of a field in France with a farmer harrowing his field beside the mounded grave of a British soldier. “Our honoured dead,” is his next thought, “... poor dead bastards ... [who] gave their lives” though not necessarily voluntarily, he thinks.

The war demanded the lives of two million men. These men were chosen and piled high at Austerlitz and Waterloo and Ypres and Verdun and Aachen and Dunkirk and Anzio. The soldiers who participated in the fields of battle were “good enough to fight the war”. Soldiers consigned to ships like *The Reluctant* were the ones who were not good enough to fight the wars because they were inadequate. Take the Old Man and Pauley and Keith and himself and Carney and Billings and the others, the hero reasons. As sleep is out of the question, Roberts walks to the captain’s wing and throws one of his potted palm trees over the side making a lot of noise on his way to his cabin. The next morning the crew is delighted to hear the news when the Old Man threatens to send to court martial the man responsible. No one actually knows who the culprit is, except Dolan, who tells the men. The crew is reasonable enough not to be afraid of the Captain and present Roberts with a handmade medal of honour.



ORDER OF THE PALM
TO LIEUT. D. A. ROBERTS, FOR ACTION AGAINST
THE ENEMY, ABOVE AND BEYOND THE CALL OF
DUTY,

ON THE NIGHT OF 8 MAY 1945 (p. 153.)

The ceremony over, the men side with Thompson, the radioman, and his serious, urgent problem: his son has drowned in the ocean. His presence is required at the unfortunate man’s funeral. It is Wednesday and the funeral is on Saturday. Thompson asks the captain for emergency leave

but Morton replies that he gives no emergency leaves on his ship. Thompson thinks of deserting his post but he finally accepts his fate and goes into the mess hall to play Monopoly with the men.

A message comes through ordering Roberts to return to the United States for reassignment. A gourmet dinner is organized and Roberts and his friends gather in Doc’s cabin to drink and talk about the mores and morals of American womanhood. “Regional differences in the sexual habits and aptitudes of women were carefully probed” in Pennsylvania, the Middle West in general, and Chicago in particular, depending on the men’s exposure to events and people in their region. (p. 169.) Doc is the last one to speak and notes that the world is embarking on a new era in the history of sex as women have discovered sex during the war and have passed from passivity to aggressiveness. Nothing much is added after this but the men invite Roberts to a party in which they toast their departing comrade. As the lieutenant leaves the party, he removes the captain’s palm trees from their pots.

The next morning Roberts departs having no feelings for the ship, although he spent two and a half years on it. His friend and admirer, Pulver, misses him. Captain Morton easily understands that Roberts is responsible for destroying his plants. He knows that the Lieutenant was the man who held the ship together. Roberts was friendly, worked hard, had humour,

tolerance and humility. The crew trusted him, obeyed him and turned to him for advice and counsel.

The hero's departure causes Pulver to change. He becomes disagreeable and edgy. When he receives his friend's second letter, he has already heard of his death. A friend of his, who is on the same ship with Roberts, Pulver tells Doc, wrote to him that Roberts was killed when his ship was attacked by kamikaze airplanes. All he hears from Doc, however, is "that's what he wanted". Feeling the pain, Pulver throws the Old Man's four remaining palm trees over the side. Then he goes to Captain Morton's cabin and tells him about it.

Commentary

Roberts' untimely death catches the reader by surprise. He expects the hero to get his share of action in the Pacific, go home after the end of the bitter fighting, and relate his heroic exploits to his friends and family. An adventurous officer, Roberts is willing to undertake some risky mission and complete it successfully. But adventure implies risk and in risk there is always the chance of something going wrong. Risk, as the reader knows, involves the possibility of harm, which is exactly what Roberts gets as soon as he is transferred to the destroyer.

It is rather difficult to believe that the hero is looking forward to his own death. What he wants is the excitement of the engagement and the satisfaction of victory. He was enlisted right after Pearl Harbor, having quit his studies at Medical School, looking for revenge, consumed by the desire for retaliation. His ill-fated end is the result of his personal vanity, the vanity of human achievements.

Roberts is competent, skilful, appreciated by the crew. He seems to be certain of having the ability and judgement needed to succeed in his new bold undertaking but he overestimates himself while, at the same time, he underestimates the Japanese. He has been with the *Reluctant* for two long, boring years and lacks the necessary experience for combat. Although he was trained to fight, he has had no direct involvement in or exposure to the war. So, when the kamikaze pilots strike, over confident Roberts loses his life.

The hero dies, the reader realizes that even though most of the action takes place on a backwater cargo ship that sails "from apathy to tedium with occasional side trips to monotony and ennui," the last part of the story deliberately moves very fast to take him by surprise.

Review

Most of the fun in the story is provided by the contrasting scenes which take place between the insubordinate crew and the strict captain. Since *The Reluctant* is a naval auxiliary, the sailors feel like relaxing and indulging in fantasies of the imagination.

We find our way now to the crew's compartment. You are surprised to see so many men sleeping, and so soundly? Perhaps it would be revelatory to peer into their dreams. No doubt, as you say, we will find them haunted by battles fought and battles imminent. This man who snores so noisily is Stefanowski, machinist's mate second class. His dream? ... well ... there is a girl ... she is inadequately clothed ... she is smiling at Stefanowski ... let us not intrude.
(p. ix.)

The fourteen officers (reserves all of them) are no more sensitive than the men, because they also spend their time slumbering and resting: Ensign Pulver usually dreams that he is lying on a leather couch and that there are several cases of Schlitz beer stacked all about him (p. ix); the doctor has a lot of time on his hands to engage in his favourite past time which is reading;

Lieutenant Billings and his bunkmate Lieutenant Carney never stop teasing each other every morning before going into the wardroom for a game of cards.

They lived in a little idyll in stateroom number nine. Billings who stood no watches, slept every day until noon, but one day out of four Carney had to get up at eight. The process of arising at noon and greeting the not-very-new-day was always the same: Billings, who occupied the top bunk, would dangle an arm or a leg over the side; Carney would command fiercely, "Get back in there where you belong"; Billings would comply and say meekly: "I'm sorry"; and Carney would finish off, "And stay there!" This happened three days out of four, and every day – sometimes two and three times a day – another little ritual would be acted out. One would say to the other: "Feel like getting your ass whipped?"; to which the reply was: "Think you're man enough?"; and the reply to that was: "Yes, I think so." Then the two would march to the wardroom, for this was the invitation to acey-deucey combat." (p. 63.)

Obviously the crew has been spared the atrocities and hazards of the war. The men have enjoyed a peaceful though boring service in place of the brutality and carnage of combat. And yet, there is this one time during which *The Reluctant* fired its guns.

This periscope, the lookout sighted it way off on the port beam, and the Captain, who was scared almost out of his mind, gave the order: "Commence firing!" The five-inch and the two port three-inch guns fired for perhaps ten minutes, and the showing was rather embarrassing. The closest shell was three hundred yards off, and all the time the unimpressed periscope stayed right there. At one thousand yards it was identified as the protruding branch of a floating tree. The branch had a big bend in it and didn't even look much like a periscope. (p. x.)

A clumsy mistake like this, can stir up the crew's hostile feelings. The men believe that the Old Man is incompetent and inefficient. The Captain of a commercial ship, a merchant marine officer like the Old Man used to be before the war, cannot be forgiven for making such a silly, foolish mistake. So the men invent names, calling the Captain "prick," writing affronts on the deck guns, and inserting cigarette butts in his cabin, inducing the reader's amusement.

If one adds to this the fact that the Captain is rather apathetic to his mission while more interested in imposing petty regulations on the crew, one can easily justify the men's feelings. The Old Man is inconsiderate of the conditions under which the crew work, insisting that they wear shirts on hot, humid days, and that hard soled shoes are not to be worn on deck at all times, causing the crew's reaction much to the amusement of the reader.

The Captain's interest is restricted to the ship's cargo and his potted palm trees. His explosions, on the subject of failure or insubordination regarding his obsessions, produce boisterous comedy. He makes the crew wait on deck for forty-five minutes, hoping for the rebellious man, who threw a ball at him during movie night, to own up to the incident, attaining no results but the crew's impatience and weariness. Unable to prevent the men's insubordination, he sees his plants thrown overboard, as the crew (at least Roberts and Pulver) respond violently to his stubbornness and obstinacy, generating the reader's sardonic, mocking smile.

The buffer between the hysterical Captain and the crew is Mister Roberts. He is a born leader, worshipped by his men who call him “the best son-of-a-bitching officer in the goddamn Navy”. (p. 3.) Roberts cares about the crew and organizes the ship’s work, never neglecting his duty. He acts as the mediator between the men and the officers, listens to the men’s problems and offers his advice and help. Serving an end, he is the story’s protagonist standing for integrity and supplying the balance of the story. He is for dramatic developments in the plot and his usual serious, composed behaviour pleasantly contrasts with the boisterous behaviour of the crew.

And yet this disciplined, efficient, competent naval officer is the Captain’s object of contempt. Not because he repeatedly damages the Old Man’s favourite palm trees, awarded the ship for outstanding achievements in cargo delivery, but because he is the exact opposite of Captain Morton, standing for and symbolizing the noble qualities (perseverance, patience and compassion) that the Old Man lacks.

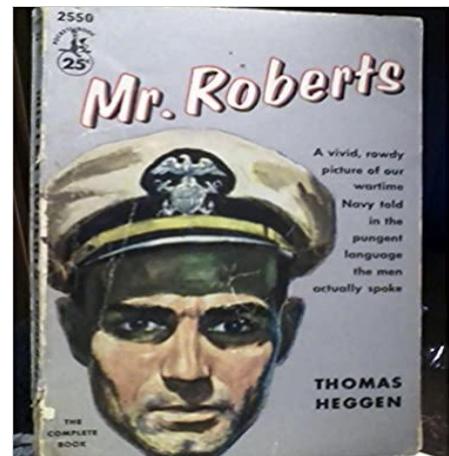
One could argue that the reason the Captain refuses to sign Lieutenant Roberts’ transfer papers is simply because he wants to protect the young man from exposure to and active involvement in the bloodshed. A middle aged merchant marine officer like Captain Morton certainly has the essential knowledge and crucial experience to realize that Roberts’ enthusiasm and eagerness to join the war are not enough to see him through the anguish of the war. The Lieutenant lacks the experience required (his essential training took place a long time ago) and the later he joins the war the better, as death is “out there” waiting for him.

Roberts confesses to Doc that he regrets not being part of the war celebrations, envisaging combat in the light of glory while failing to reflect on the hazards of large-scale fighting involving warships and Japanese kamikaze attacks. Doc is quick to underline the dangers of war and rebuke Roberts for leaving Medical School. The young man disregards his friend’s admonition, replying with theories about the ideals of the crusades, holy wars and fighting *pro patria*, firmly standing his ground. He enlisted hoping to contribute, but the war is almost over and he is not actively involved in any post-war festivities.

Whatever the reasons for Captain Morton’s cold-hearted behaviour, one thing is certain: the Old Man’s hysterical anger and fury can effortlessly originate satire in the form of irony, sarcasm and ridicule used in order to criticize his weaknesses. Morton is unsympathetic to the men’s suffering because he lacks the interest a leader should possess. The crew’s natural reaction to his despotism cannot but engender delight in the reader.

Roberts’ insubordination is left unpunished simply because the Captain understands that such an act would get the young officer the transfer he has been hoping for. Morton’s evasive behaviour does not escape the reader’s attention: the Captain is crafty and cunning, lacking straightforwardness, generating humour based on his actions of the opposite of what he actually wants his men to believe. Roberts is honest (except for the incident on movie night when he lies), kind and caring, and stands for compassion – all positive traits of a successful, popular leader.

Helping Roberts to keep his sanity is Ensign Frank Pulver, whose prime objective is keeping out of the Captain’s sight while avenging his friend. Whether singing a popular song, planning or preparing a new attack on the Captain’s palm trees, Pulver is fun: “His chest contained three



cases of beer, six quarts of bourbon, three of rum, one of gin and two of Vermouth". (p. 60.) On an average day, Pulver spends eighteen hours in bed, as his cabin is equipped with a fan, a coffee-can ash tray, a container for cigarettes and another for a lighter, several books and lots of beer.

The easy life the Ensign enjoys provides the story with its comic elements. When he is not drinking or talking with his "hero," Pulver is scheming to avenge himself against the Captain even though he has spent fourteen months on *The Reluctant* without ever meeting his nemesis.

He watched the careless, easy dignity with which Roberts met the crew, and studied the way that Roberts got the crew to work for him; and then he tried to apply this dignity and this control to his own small authority. ... Because Roberts hated the Captain, Pulver felt duty-bound to do the same; and scarcely a day went by that he didn't present to Roberts the completed planning for a new offensive. (p. 62.)

Once Pulver figured out a way to plug the Captain's sanitary system, so that the Old Man would one day be deluged. He figured out a device that would punch the Captain in the face with a gloved fist when he entered his cabin. After that he thought of putting marbles in the Captain's bedroom so that the stones would roll around at night and make an awful lot of noise – always refraining, however, from putting his ideas into practice.

Pulver did, one day, while the Captain was ashore, insert razor blades from an electric razor into his bed, believing that they would cause an itch, but the Captain "never appeared better-rested, and indeed, better-natured, than in the succeeding days". (p. 63.) He did one day attempt to cause the Captain to scream "Prepare to abandon ship" when he ignited some fireworks on deck, but he burnt his face and hair, triggering the Old Man's contempt.

As for Doc, he prescribes pills and wisdom with profound knowledge and understanding coupled with foresight and good judgment. This officer is a cynical man "described as a crazy little bastard, a son-of-a-bitch, a good son-of-a-bitch, a hell of a good medico ... and a nice guy". (p. 31.) Doc's case is humorous when he is related as "the man with the satanic little moustache, the wide, unblinking eyes that were simultaneously cruel and compassionate, and the shockingly soft voice that never quite concealed the steel beneath". (p. 32.)

Knowledgeable Doc is a funny compliment to naive and childish Pulver. Whether he is a wisecrack at sick bay or making illegal scotch with his shipmates, Doc's wit, a symbol of his experience and learning, provides amusement. Lindstrom's "only dose of clap in the whole damn Pacific" (p. 40.) gives Doc a chance to reveal how comical he can be at the naive boy's expense.

The story's other funny highlights include the men's lengthy observation of the blonde nurses, the girls becoming aware that the sailors have been watching them; the efforts by Roberts, Pulver, and Doc to mix a bottle of Scotch from Coca-Cola, iodine, and other vital ingredients; the men's bursting into the French Consul's house on one of the remote islands they have anchored simply because they can find no brothel; the crew's excessive drinking while on leave and later their attempt to bring on board an enormous variety of things including a goat; their secretly keeping aboard a girl for three days; and Mister Roberts' and later Ensign Pulver's assertion of manhood and disobedience by tossing the Captain's precious palm trees overboard.

Conclusion

These and other incidents (funny and serious) take place to give the story the right balance. *Mister Roberts* is a harmonious whole equipped with equal amounts of drama and humour, happiness and sadness, anger and goodwill, all of which touch the reader's soul on both funny and sad levels. It includes a genuine observation of the feelings of the American military men who, despite their efforts, never actually got to fight, and it provides the reader with the necessary background knowledge of life behind the scenes of war.

Like other war novelists, Heggen has women play a minor role in the world of men, which is stereotypically masculine and has the characteristic of physical strength, aggressiveness, and lack of emotional response, as in the case of Captain Morton. The blonde nurses are the object of the admiration of the crew, and a girl spends some time with the men on board, but otherwise *The Reluctant* is a man's world. Occasionally the men relate their love life during watches, and the officers in Doc's cabin discuss the American women's moral standards that have changed because of the war but that is all. Women are appreciated for their quality of being sexually attractive and not for being equal partners in combat or making an equal, significant contribution to society.

Above and beyond, in Heggen's story, a capable officer causes his superior officer's animosity while gaining his subordinates' acceptance and admiration. The fight, presented in a humorous vein, produces the reader's laughter and amusement and is largely responsible for earning the long lasting popularity of the book and for making all of us understand what practical wisdom is: knowing what is good, right, or best, given a particular set of circumstances.

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Comparative Analysis of the Two Versions of the *Όνοματολόγιον Ναυτικὸν*

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Abstract. The subject of this article is the study of the second edition of the *Όνοματολόγιον Ναυτικὸν-Naval Terminology* (1884) and its comparison with the corresponding first edition (1858). The issues explored are the similarities and differences between the two editions as well as the reasons that may have led to a second edition. The relevant investigation shows the need to expand the explanatory framework of the first edition along with the improvement of its content due to the upgrading -at institutional level- of the naval education of the time.

Keywords: *Όνοματολόγιον Ναυτικὸν-Naval Terminology, first edition (1858), second edition (1884), Koumelas, Palaskas, Ioannou.*

In the year 1856 the Minister of Marine Affairs, Athanasios Miaoulis, proposed to Queen Amalia the issuance of a decree with the purpose of authorizing the writing of a naval terminology¹. The extensive use of words of foreign origin caused by the dominance of other peoples in the Hellenic area (following the decline of the Byzantine Empire), the confusion in the use of naval concepts and the technological developments related to warships-such as the use of steam-made imperative the need to create an official “Hellenized” naval terminology². Those responsible for the completion of the project in question were, according to the decree, the Lieutenant Commanders Leonidas Palaskas, Alexandros Koumelas and the Professor Philippos Ioannou. Indeed, the project in question was completed in 1858 and bore the title *Όνοματολόγιον Ναυτικόν (Naval Terminology)*³.

In addition to this first edition, a second edition of the *Όνοματολόγιον Ναυτικὸν* was also saved. It dates back to the year 1884 and is 234 pages long. Its authors remain unknown, however, the possibility that Palaskas, Koumelas and Ioannou drafted the project is excluded as they had all died -at least- before 1880⁴.

¹ Λ. Παλάσκας, Α. Κουμελάς, Φ. Ιοάννου, *Όνοματολόγιον Ναυτικόν. Η έκδοση των 1858* (ed. Η. Τεμπέλης), Αθήνα: Υπηρεσία Ιστορίας Ναυτικού, 2021, p. 13 (henceforward, Τεμπέλης, *Όνοματολόγιον Ναυτικόν*).

² Β. Σκουβαρᾶς, «Τῆς θάλασσας καὶ τοῦ σκαριοῦ» in *Απὸ τὸ Λειμῶνα τῆς Παράδοσης: Πηλιορείτικα B'*, Αθῆναι: Αστὴρ Ἀλ. & E. Παπαδημητρίου, 1983, pp. 18-19. Τεμπέλης, *Όνοματολόγιον Ναυτικόν*, pp. 9, 10.

³ Ibid., pp. 13-14.

⁴ Ibid., p. 20.

By comparing the two versions of the *'Όνοματολόγιον Ναυτικὸν'*⁵ we find, as listed at the beginning of the second edition, the explanations of the abbreviations, the admission decree of the naval terminology of 1856 by Queen Amalia⁶ as well as Miaoulis' order to all services⁷ to apply this terminology to official documents. The first document is found only in the second edition, while the second document exists in both editions.

In total, the second edition consists of three parts. The first part, entitled *'Όνοματολόγιον Ναυτικόν*, contains the numbered chapters and nautical terms of the first edition⁸. The following examples are indicative: ΚΕΦΑΛΑΙΟΝ Α΄ ΣΚΑΦΟΣ (CHAPTER A΄ HULL)⁹, ΚΕΦΑΛΑΙΟΝ Β΄ ΝΑΥΠΗΓΙΚΑ (CHAPTER B΄ SHIPBUILDING)¹⁰, ΚΕΦΑΛΑΙΟΝ Γ΄ ΚΑΘΟΛΚΗ (CHAPTER C΄ SHIP LAUNCHING)¹¹. All the chapters are 27 (*Σκάφος-Hull*, *Ναυπηγικὰ-Shipbuilding*, *Καθολκὴ-Ship Launching*, *Διασκευὴ-Accommodations*, *Διαιρέσεις-Divisions*, *Στοιβασία-Stowage*, *Σχοινία-Ropes*, *Τρόχιλοι-Blocks*, *Σύσκενα-Purchase*, *Ίστοι-Masts*-*Κεραῖαι-Yards*, *Ίστια-Sails*, *Άγκυραι καὶ ὄρμίσεις-Anchors and Moorings*, *Έξαρτισμὸς-Rigging*, *Χειρισμὸς τῶν ἀρμένων-Handling of Ship's Rigging*, *Κινήσεις-Motions*, *Ἐφόλκια-Boats*, *Ἄτμομηχανικὰ-Steam engineering*, *Πηδαλιονυχικὰ-Steering wheel*, *Ὄργανα διάφορα-Different instruments*, *Βλάβαι καὶ ἐπισκεναὶ-Damages and repairs*, *Ναύσταθμος-Naval Station*, *Πλοῖα διάφορα-Different ships*, *Προσωπικόν-Staff*, *Υπηρεσία-Service*, *Κελεύματα-Orders*, *Τακτικὰ-Naval Tactics*, *Σηματολογικά-Signaling*) and the nautical terms 1,887¹². Both in the first edition of the *'Όνοματολόγιον Ναυτικὸν* and in the second one, each nautical concept extends from one to four lines¹³. At the beginning, the word proposed by the three-member committee¹⁴ (Palaskas, Koumelas, Ioannou) is found in italics, and then follows the corresponding French term which was probably based on the French terminology that was Palaskas' model¹⁵. Then, depending on the term, the corresponding used terms and/or a modern Greek explanation are found in upright writing and the English terms follow last in italics. The following examples are indicative: *Tὸ σκάφος*, *la coque*, *ἡ σκάφη*, *τὸ κουφάρι*, *hull*¹⁶, *Ἡ πρῷρα*, *l'avant la proue*, *ἡ πλώρη*, *head of a ship*¹⁷, *Ἡ ναυπηγία*, *ναυπηγέω-ῶ*, *la construction navale*, *κτίσιμο καραβιοῦ*, *ship building, to build a ship*¹⁸, *Τὸ διάγραμμα* (*τὸ ἐπίμηκες*, *τὸ ὄριζόντιον*, *τὸ ἔγκάρσιον*) *τοῦ πλοίον*, *le plan (longitudinal, horizontal, transversal)*, *τὸ σχέδιο*, *draught of a ship drawing*¹⁹.

The second part of the second edition of the *'Όνοματολόγιον Ναυτικόν*, bearing the title «ΑΛΦΑΒΗΤΙΚΟΙ ΠΙΝΑΚΕΣ» ("ALPHABETICAL TABLES")²⁰, includes in alphabetical

⁵ See ibid., p. 20.

⁶ *'Όνοματολόγιον Ναυτικόν*, Ἐν Ἀθήναις: Ἐκ τοῦ Ἑθνικοῦ Τυπογραφείου, 1884, p. 5.

⁷ Ibid., p. 6.

⁸ Ibid., pp. 1-86.

⁹ Ibid., pp. 3-6.

¹⁰ Ibid., pp. 6-10.

¹¹ Ibid., p. 11.

¹² Ibid., pp. 1-86.

¹³ See ibid., p. 17.

¹⁴ For the Homeric terms found in the second edition of the *'Όνοματολόγιον Ναυτικὸν* see A.N. Γιαννάκης, *Ομηρικό λεξικό ναυτικών όρων. Με αναφορά σε μεταγενέστερους του Ομήρου αρχαίους συγγραφείς*, Παιανία: Αμυτρίτη, 2013. Τεμπέλης, *Όνοματολόγιον Ναυτικόν*, p. 17 (esp. note 16).

¹⁵ See ibid., p. 17.

¹⁶ *'Όνοματολόγιον Ναυτικόν*, Ἐν Ἀθήναις: Ἐκ τοῦ Ἑθνικοῦ Τυπογραφείου, 1884, p. 3.

¹⁷ Ibid., p. 3.

¹⁸ Ibid., p. 6.

¹⁹ Ibid., p. 6.

²⁰ Ibid., pp. 87-197.

order all the ancient Greek nautical terms in upright writing which were proposed by the editorial committee of the first edition of the *Όνοματολόγιον Ναυτικὸν* with a parallel reference to the chapter as well as the numbering of each term (see appendix I). Of particular interest is the fact that in a third column of the alphabetical tables lie synonyms of the common nautical dialect of the time and explanations of the ancient Greek concepts (see indicatively ή ἄκατος=ἡ μεγάλη βάρκα (launch)²¹, τὸ ἀνεμούριον=τὸ ἀνεμούρι (vane, mast head vane),²² ὁ ἄβαξ=ὁ καθρέπτης (flat part of the stern)²³, ὁ ἄβαξ=ἡ παπαδιά (flat of the stern)²⁴, τὸ ἀκάτιον=ὁ τρίγκος (fore-sail)²⁵, ὁ ναύσταθμος=ὁ ταρσανᾶς (dock-yard)²⁶, καταβάλλω τρόπιν=ρίχνω καρένα (laying of the keel)²⁷.

Then (see appendix II), the terms written in the common nautical dialect are listed in upright writing with corresponding synonymous words of the ancient Greek language and explanations [see indicatively: ή ἄβαρία (τροφίμων ἐμπορευμάτων)=ἡ ναυφθορία (average)²⁸, ή ἀρματωσίᾳ=ἡ ἔξαρτία (masts and rigging)²⁹, δικάταρτον, μονοκάταρτον, τρικάταρτον=δίστηλον ή διάρμενον, μονόστηλον ή μονάρμενον, τρίστηλον ή τριάρμενον πλοϊον (one, two, three masted)³⁰, καλάρω νερά=ἡ διαρροή, διαρρέω (ἐπὶ πλοίου)-(leak, to make water, to leak)³¹, τὸ καμποῦνι=τὸ πρόστεγον (fore-castle)³², ή καρένα=ἡ τρόπις (keel)]³³. Therefore, nautical terms are distinguished between those of the ancient Greek language and those of the common nautical dialect of the time.

The appendices follow after the alphabetical tables³⁴. The first appendix includes in upright writing the “Terminology of weather, winds and other conditions of the course for the uniform writing of the logbook” (Ministerial Circular 21 December 1859)-«Όνοματολογία τῶν καιρῶν, ἀνέμων καὶ ἄλλων περιστάσεων τοῦ πλοῦ, διὰ τὴν ὁμοιόμορφον συγγραφὴν τοῦ Ήμερολογίου» (Υπουργική Έγκύλιος 21 Δεκεμβρίου 1859)³⁵. More specifically, the *rhombuses of course*- ρόμβοι πλεύσεως are mentioned (see appendix III), the *angles-γωνίαι* (see appendix III), the *wind strength-ἀνέμου δύναμις* (*σφοδρός-fierce*, *ρίπαλος-gusty*, *μέτριος-moderate*³⁶), the *types of wind- εἴδη ἀνέμου* (*πελάγιος-pelagic*, *νηνεμία-dead calm*, *καύσων-heat*³⁷), the *weather-καιροί* (*θάλπος-warmth*, *παγετός-frost*, *σεληνόφως-moonlight*³⁸), the *meteors and phenomena-μετέωρα καὶ φαινόμενα* (*κεραυνός-thunder*, *βροντή-thunderclap*, *άστραπή-lightning*³⁹), the *state of the sea-κατάστασις* *θαλάσσης* (*κυματισμός-undulation*,

²¹ Ibid., p. 90.

²² Ibid., p. 93.

²³ Ibid., p. 89.

²⁴ Ibid., p. 89.

²⁵ Ibid., p. 90.

²⁶ Ibid., p. 125.

²⁷ Ibid., p. 117.

²⁸ Ibid., p. 153.

²⁹ Ibid., p. 155.

³⁰ Ibid., p. 64.

³¹ Ibid., p. 164.

³² Ibid., p. 165

³³ Ibid., p. 166.

³⁴ Ibid., pp. 199-230.

³⁵ Ibid., pp. 201-203.

³⁶ Ibid., p. 202.

³⁷ Ibid., p. 202.

³⁸ Ibid., p. 202.

³⁹ Ibid., p. 202.

ἀμπωτις-ebb, παλίρροια-tide⁴⁰), the quality of the seabed-βυθοῦ ποιότης (όμαλός-smooth, ἵσος-straight, ἐπικλινής-sloping⁴¹), the types of the sea- αἰγιαλοῦ εῖδη (ἀκτή-coast, προκυμαία-quay, ἐπίνειον-port⁴²) and the reefs-χοιράδες (ῦφαλος-reef, σκόπελος-reef, βραχέα-rocks)⁴³.

The second appendix includes in alphabetical order terms of the naval artillery in English and French language: «Όνοματολογία διαφόρων λέξεων τοῦ ναυτικοῦ πυροβολικοῦ γαλλιστί τε καὶ ἀγγλιστί»-“Terminology of different words of the naval artillery in French and English”⁴⁴. First the naval term precedes in upright writing in Greek and French and then in italics the corresponding English terminology. The following terms can be mentioned as examples: πλωτὸν ναύκλαστρον· torpille flottante, mobile, floating or drifting torpedo⁴⁵, πυροβόλον μηχάνημα· inflammateur, firing apparatus⁴⁶, πυροβολέω τινά· tirer sur, canonner, to canonade⁴⁷.

At the end of the second edition of the *Όνοματολόγιον Ναυτικὸν* is found the correction of errata⁴⁸ such as σπροφὴ instead of στροφή (turn)⁴⁹, seareh instead of search⁵⁰, seeure instead of secure⁵¹ with a parallel reference to the number of the word and the page on which it is listed (see appendix IV). Beyond this, a complete table of contents is included⁵².

Essentially the second edition⁵³ aims to fill in some of the shortcomings of the first edition. The presence of numbering and alphabetical order of the terms (both of the terms of the ancient Greek language and those of the common dialect of the time) makes it easy to find them quickly.

The same happens with the existence of the list of contents and appendices. The appendices [«Όνοματολογία τῶν καιρῶν, ἀνέμων καὶ ἄλλων περιστάσεων τοῦ πλοῦ, διὰ τὴν ὄμοιόμορφον συγγραφὴν τοῦ Ἡμερολογίου» (Υπουργικὴ Ἐγκύριος 21 Δεκεμβρίου 1859], «Όνοματολογία διαφόρων λέξεων τοῦ ναυτικοῦ πυροβολικοῦ γαλλιστί τε καὶ ἀγγλιστὶ»] offer useful information. In the manuscript’s table of contents of the first edition the *Artillery* (*Πυροβολικά*) chapter, even though it is mentioned, it was not finally included in the first but in the second edition. At the same time, the terms of artillery, while missing in the manuscript, are present in the second edition under a different title as «Όνοματολογία διαφόρων λέξεων τοῦ ναυτικοῦ πυροβολικοῦ γαλλιστί τε καὶ ἀγγλιστὶ»⁵⁴. Moreover, it was deemed necessary for the

⁴⁰ Ibid., p. 202.

⁴¹ Ibid., p. 203.

⁴² Ibid., p. 203.

⁴³ Ibid., p. 203.

⁴⁴ Ibid., pp. 205-230.

⁴⁵ Ibid., p. 222.

⁴⁶ Ibid., p. 223.

⁴⁷ Ibid., p. 223.

⁴⁸ Ibid., pp. 231-232.

⁴⁹ Ibid., p. 231.

⁵⁰ Ibid., p. 231.

⁵¹ Ibid., p. 232.

⁵² Ibid., pp. 233-234.

⁵³ For references to the second edition of the *Όνοματολόγιον Ναυτικὸν* see the doctoral thesis prepared by Panagiotis Patriarcheas for Philippos Ioannou: *Οὕτω ἐδημοσιεύθη εἰς δύο ἔκδόσεις τὸ Ναυτικὸν Όνοματολόγιον, ὅπερ ἀπήλλαξεν ἐν τινὶ μέτρῳ τὴν ναυτικὴν ὑπηρεσίαν τοῦ γλωσσικοῦ κυκεῶνος καὶ συνετέλεσεν εἰς τὴν καθιέρωσιν τῆς ἐπισήμου ναυτικῆς ὄρολογίας, ἥτις, διατηρουμένη μέχρι σήμερον ἀμιγής, εἶναι ἀξία πολλοῦ θαυμασμοῦ*-So the *Όνοματολόγιον Ναυτικόν*, published in two editions, minimized the linguistic cyceon and contributed to the establishment of the official naval terminology which, preserved to this day pure, is worthy of much admiration, Τεμπέλης, *Όνοματολόγιον Ναυτικόν*, p. 21.

⁵⁴ Ibid., p. 17.

appendix to be included: «Όνοματολογία τῶν καιρῶν τῶν ἀνέμων καὶ ἄλλων περιστάσεων τοῦ πλοῦ, γιὰ τὴν ὁμοιόμορφον συγγραφὴν τοῦ Ἡμερολογίου» because, obviously, some inconsistencies would have been observed during the writing of the ship's logbook.

Also noteworthy is the addition, to the second edition, of the naval terminology's decree of 1856 by Queen Amalia, which was not listed in the first edition, but essentially confirms the approval of the compiled *Όνοματολόγιον Ναυτικόν*. Furthermore, Miaoulis' order to all the services so that they apply the terminology in question to the official documents is included, as was also included in the first edition.

Over the years, the first edition of the *Όνοματολόγιον Ναυτικὸν* was out of print and no copies of it existed in public libraries⁵⁵. Moreover, in 1884 (year of dating of the second edition) the pre-existing Naval School evolved into a Naval Cadets Academy⁵⁶. In the same year, the *Ἐγχειρίδιον σκευῆς τοῦ Μηχανικοῦ Σώματος-Equipment manual of the Corps of Engineers*, which was written by the “major of the engineer” Petros Lykoudis, was published; the terminology of that manual was since been established as official⁵⁷.

The consolidation of a common naval terminology and its practical use by seafarers was an issue about which scholars of the time, such as Skarlatos Byzantios, expressed strong concern. The reissue of the *Όνοματολόγιον Ναυτικὸν* at a time when the original edition and its impact on the maritime world was declining for reasons such as those mentioned above, came to partly assuage these concerns⁵⁸.

All the above probably contributed to a complete, augmented, easy-to-use, accurate and corrected edition of the *Όνοματολόγιον Ναυτικὸν* in the context of the effort to maintain an official “Hellenized” naval terminology. After all, even in later years there were attempts to reprint the *Όνοματολόγιον Ναυτικόν*, such as in 1895 during the ministry of N. Levidis⁵⁹.

⁵⁵ Ibid., p. 20 (esp. note 19).

⁵⁶ Ibid., p. 13 (esp. note 11).

⁵⁷ Σ.Ε. Λυκούδης, «Περὶ τοῦ παρ' ἡμῖν Ναυτικοῦ Όνοματολογίου καὶ τῆς ἐνεστώσης θέσεως αὐτοῦ», *Ναυτικὴ Επιθεώρησις* 177 (1939), pp. 20-39 (esp. p. 26).

⁵⁸ Δ. Σκαρλάτος Βυζάντιος, *Λεξικὸν τῆς καθ' ἡμᾶς Ἑλληνικῆς διαλέκτου, μεθερμηνευμένης εἰς τὸ ὄρχαῖον Ἑλληνικὸν καὶ τὸ Γαλλικόν*, Ἐν Ἀθήναις: Ἀνδρέας Κορομηλᾶς, 3rd edition, 1874, pp. μέ, μς' (esp. note 1).

⁵⁹ Τεμπέλης, *Όνοματολόγιον Ναυτικόν*, p. 20 (esp. note 19).

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APPENDIX I

Α'.

Όνοματολογία κατὰ τὴν ἀρχαίαν γλῶσσαν.

Λέξεις	Κεφάλαιον	Όνοματολογίου	
		Αριθ. λέξεως	
A			
"Αθαξ ὁ.....	Σκάφος	10	ό καθρέπτης
"Αθαξ ὁ.....	Ἐφόλκια	965	ἡ παππαδία
Αγγαρεῖαι αἱ	Τύπησεσία	1527	
Αγγελίαι αἱ	Τακτ.κὰ	1837	
Αγήματα τὰ (τῶν ἀρμένων, τῆς ἔμβολης κλπ.....)	Προσωπικὸν	1452	
"Αγκιστρα τὰ	"Αγκυραι	630	οἱ γάντζοι τῶν ἄλλων.
Αγκιλματα τὰ, ἡ αἱ κοῖται.....	Διαιρέσεις	278	αἱ κουκέταις
Αγκολη ἡ.....	Ἐξαρτισμὸς	732	ἡ τρότσα
Αγκτηριδῖω, τὸ ἀγκτηρίασμα..	Σχοινία	391	μουρσελάρω, μουρσε- λάρισμα
"Αγκύλη ἡ.....	"	375	ἡ γάσα
"Αγκύλια τὰ τῆς ἀλύσεως	"Αγκυραι	627	τὰ κλειδιά
"Αγκυρα ἡ.....	"	608	ἡ ἄγκουρα, τὸ σ'- δερο τοῦ καραβίοῦ
"Αγκυρα ἔφεδρος	"	619	ἄγκυρα παρεξαρτίου
"Αγκυρα ἐπικρεμῆς ἡ κρεμαστὴ, (ἐπι)κρεμάω-ώ	"	641	κάμνω πινέλο
"Αγκυρίζω, ἐνάπτω	Τρόχιλοι	442	γαντζόνω, κοτσάρω
Αγκυροθόλεω-ώ, βάλλω, γαλάω- ώ, βυθίζω καὶ ποντίζω ἀγκυραν	"Αγκυραι	643	φουντάρω
"Αγκυροθόλον τό	"	637	(μηχάνημα)
"Αγκυρόδεσμος ὁ	Σχοινία	362	τὸ κουλοῦρι
"Αγκυροδέται οἱ	"Αγκυραι	634	οἱ μπότσοι τῆς ἀγ- κύρας
"Αγκυροδετέω-ώ τὴν ἔλυσιν, τὸν κάλων.....	"	638	δένω εἰς τὴν ἄγκυραν
"Αγκυρόω-ώ πλοιον	"	679	ἀγκυρόνω, ἀραζώ
"Αγκών ὁ τῆς ἐπωτίδος.....	Διασκευὴ	204	τὸ μπρατσόλι τοῦ καπονιοῦ
"Αγκών ὁ	"Αγκυραι	610	ό ἄγκωνας
"Αγκῶνες οἱ	Σκάφος	355	τὰ μπρατσόλια
"Αγόμενα τὰ, ἡ ἐπιχειρία.....	Ἐξαρτισμὸς	791	τὰ σεριάρμενα

APPENDIX II

Β'.

Όνοματολογία κατὰ τὴν κοινὴν
ναυτικὴν διάλεκτον.

Λέξεις	Κεφάλαιον	'Όνοματολογίου	
		Θεωρία	Απόδειξη
Α			
'Αβαράρω	Κινήσεις	894	ἐκκλινω κίνδυνον
'Αβαράρω, λαργάρω	Ἐφόλκια	1006	ἀπωθέω-ῶ (ἐφόλκι- ον)
'Αβαρία ἡ (τροφίμων ἐμπορευ- μάτων)	Βλάσται καὶ ἐπ.	1257	ἡ ναυφθορία
'Αβαρίτος, θλαυρένος	"	1258	ναυφθορος, ος, ον
'Αγαθὸς ὁ	Ναυπηγ.	104	ὁ κανθός
'Αγάλια	Χειρ. τῶν ἀρμ.	792	ἡρέμα
"Αγκουρα ἡ, τὸ σύδερο τοῦ καρα- βίου	"Αγκυραι	608	ἡ ἄγκυρα
"Αγκουρέτο τὸ, ὁ τεσσαροχάλης.	Ἐφόλκια	994	ὁ κερκέτης, τὸ τε- πράχηλον
"Αγκύλια ἡ στραβόξελα	Σκάφος	23	τὰ ἔγκολια
"Αγκυρα ἡ, τοῦ καπονιοῦ	"Αγκυραι	618	ἐπωτίδιος ἄγκυρα
"Αγκυρα παρεξαρπίου	"	619	ἐφεδρος ἄγκυρα
"Αγκυρα μὲ δύο ἡ ἔνα ὕψῃ	"	622	ἄμφιστομος, ἑτερό- στομος ἄγκυρα
"Αγκυρα πιασμένη ἀπὸ τὸ ὕψῃ, τσιπάδα	"	665	δυνχόπλεκτος, στυ- πόπλεκτος ἄγκυρα
"Αγκυρόνω, ἀράζω	"	679	ἄγκυρόω-ῶ πλοῖον
"Αγκωνας ὁ	"	610	ὁ ἄγκων
'Αδειάζω	Βλάσται καὶ ἐπ.	1275	κενόω-ῶ τὸ σκάφος, ἀπαντλέω-ῶ τὸ ὕδωρ
'Αδράκτι τὸ	Σύσκευα	462	ἡ ἀτρακτος τοῦ ἐρ- γάτου
'Αδράχτι τὸ	"Αγκυραι	609	ἡ ἀτρακτος
'Ακατράμωτον, κατραμωμένον	Σχοινία	314	λευκὸν ἡ ἀκέδρωτον, κεδρωτὸν
'Α κόντρα	Κινήσεις	907	ἐντίπρωρα πλοῖα
'Ακράπι τὸ, τῆς καρένας	Σκάφος	20	ἡ δευτέρα τρόπις

APPENDIX III

ΠΑΡΟΠΑΜΑΤΑ

Σελίς	ἀριθ.	λέξεως	ἀντί	γράφε
18	337	mataletoge	mataletoge	matelotage
19	350	to sover (Εύρσα)		cover
19	351	mœuds (δεσμοι)		noeuds
19	359	carrick-bend		carrick-bend
25	488	of tge mast		of the mast
26	510	bavillon		pavillon
29	589	studdiw-sails		studding
30	595	amnings		awnings
39	795	kand		hand
40	820	skiver		shiver
45	908	io		to
49	1004	chaluop		chaloupe
49	1016	renter		rentrer
55	1156	gonvernail		gouvernail
56	1172	sounping		sounding
56	1195	sounth fact		south-fast
58	1213	bearinge		bearings
61	1282	faite		feire
71	1506	fllect		fleet
72	1540	trompetts		trompettes
74	1606	τιμαχόλα		τιμαχόλα
79	1750	winge		wings
82	1802	or		ou
83	1832	search		search
91	396	σραλιῶν		στραλιῶν
105	801	ἢ κάτω		ἢ κάμην
108	1173	μολυδόσχοινον		ξολιδόσχοινον
139	572	κοῦντροι		κοῦντροι
142	352	σπροφή		στροφή
206		tincer barrel		tinter barrel
208		on belle		en belle
208		bolle		halle
212		ease out		fase-out

APPENDIX IV

Παράτημα Α'.

Όνοματολογία τῶν καιρῶν, ἀνέμων καὶ ἄλλων περιστάσεων τοῦ πλοῦ διὰ τὴν ὁμοιόμορφον συγγραφὴν τοῦ Ἡμερολογίου.

(Τύπουργική Ἑγκυλίος 21 Δεκεμβρίου 1859).

Τόμοι πλεύσεως		Γωνίαι		
		ἀκριβῶς	ώς ἔγγιστα	
B.	ἡ N.	0° 0' 0''	0°	
	4/4	2 48 45	3	
	4/2	5 37 30	6	
B.	ἡ N. { 3/4 M. ἡ Σ.	8 26 45	8	
	4	41 45 0	41	
	4 4/4 E. ἡ λ.	44 3 45	44	
	4 4/2	46 52 30	47	
	4 3/4)	49 41 45	20	
MB.	ἡ ΣΒ. ἡ EA. ἡ λZ.	22 30 0	22° ἡ 23°	
	4 3/4)	25 48 45	25	
M.	ἡ Σ. { 4 4/2 B.	28 7 30	28	
	4 4/4	30 56 45	34	
E.	ἡ λ. { 4 N.	33 45 0	34	
	3/4	36 33 45	37	
	4/2	39 22 30	39	
	4/4	42 44 45	42	
M.	ἡ Σ. ἡ E. ἡ λ.	45 0 0	45	
	4/4	47 48 45	48	
M.	ἡ E. { 4/2 A.	50 37 30	54	
	3/4	53 26 45	53	
S.	ἡ λ. { 4 Z.	56 45 0	56	
	4 4/4	59 3 45	59	
	4 4/2	61 52 30	62	
	4 3/4)	64 41 45	65	
MA.	ἡ ΣZ. ἡ EA. ἡ λZ.	67 30 0	67° ἡ 68°	
	4 3/4)	70 48 45	70	
A.	ἡ { 4 4/2	73 7 30	73	
	4 4/4 M. ἡ E.	75 56 45	76	
Z.	ἡ { 4 Σ. ἡ λ.	78 45 0	79	
	3/4	84 33 45	82	
	1/2	84 22 30	84	
	4/4	87 41 45	87	
A.	ἡ Z.	90 0 0	90	