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MASTER OF DEFENCE STUDIES RESEARCH PROJECT

**THE IMPACT OF SUBMARINES IN THE PERCEIVED POWER OF MEDIUM
POWER NAVIES**

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ABSTRACT

Submarines were used for first time in the late seventeen hundreds. Since then, and as technology progressed, they evolved from simple wooden craft to hyper-sophisticated nuclear ships capable of diving several hundred meters and remaining months at sea without any external support. But although technology changed the capabilities, the principles remain the same. Submarines take advantage of a favourable environment to pose a threat to surface forces, even if those forces are –at least in theory- superior. Thus, submarines are an affordable and cost-effective weapon. This relationship resulted in the decision of of many navies, looking for power enhancement, to adopt these type of ships as one of the pillars in which their naval power is based. This article examines how some of those navies, particularly the Argentine, Canadian and Royal Australian Navies, intend to enhance their perceived power utilising submarines.

In 1996, Admiral Shankani, head of the Iranian Navy, said: “submarines will allow the consolidation of Iranian naval superiority in the entire Persian Gulf and the Strait of Ormuz.”¹ The reaction after reading such a statement could not be described as a particularly pleasant feeling for any standard western-world citizen. What would be the consequences if the Iranian Navy, with three Russian-made diesel-electric submarines, dominates the passage through the Strait of Ormuz?

Likewise, many other navies -not necessarily the most powerful ones-, following national direction could use submarines to interfere global commerce or dangerously influence international relations. In the event of a conflict in the Middle East, both the Egyptian -that possesses four Chinese-built submarines- and the Israeli-which operates three German-made submarines- navies could impede the access to the Suez Canal. The Indonesian navy with only two submarines could seriously jeopardize the maritime trade in the area of the South China Sea. Perhaps North Korea doesn't even need Weapons of Mass Destruction to blackmail the Western World. North Korea could possibly achieve this with its fleet of 49 old submarines, by establishing barriers to delay or stop maritime trade in the Sea Lines of Communication used to access Japan and or South Korea. Thinking out of the box, Cuba had the capability until few years ago, with three old Russian-made diesel electric boats, to threaten the passage across the Panama Canal.² All these scenarios are not impossible. Conventional submarines are able to deny the use of the sea, hide in the environment and stay long time in their area of interest without the need for external support.

As an Indian newspaper reported, “submarines are supreme sea denial weapons, and difficult to detect underwater. It is also a Navy's major offensive arm and can tie-up several enemy warships and aircraft in anti-submarine operations.”³ Off course they are. Submarines are excellent tools to solve one of the restrictions that middle-power navies have faced through the years. That is to minimize their limitations and maximize their capabilities, thus enhancing their power. Submarines allow medium power navies to fill the gap between the defence tasks and the resources available. Submarines are affordable and enhance the power of navies. It also permits weak parties to pose a threat to stronger adversaries. As Owen Cote says, “since the

¹ United States Navy, Worldwide Submarine Challenges (Washington D.C: Office of Naval Intelligence, 1996), 28.

² Stephen Saunders (ed.). Jane's Fighting Ships 2003-2004, (Coulsdon: Jane's Information Group, 2004). According to this source the Cuban submarines are not operational any more.

beginning of the twentieth century, submarines have been the weapon of choice for weaker naval powers that wish to contest a dominant power's control of the seas or its ability to project power from ashore."⁴ He recognizes that **submarines have been and are likely to remain the weapon with the highest leverage in a battle for control of the ocean surface.**

Notwithstanding this uniqueness, submarines also became in the second half of the twentieth century also a weapon of the strong.⁵ Their attacks are unexpected and produce such devastating effects that it earned them the reputation of the most dangerous weapon system. This reputation is unchallenged by any other weapon system, perhaps with the exception of, the nuclear arsenals. As Dr. Paul Mitchell says, "these foreboding vessels project an air of menace even if they are sitting in harbour."⁶ This reputation is one of the backing elements for nowadays' development of conventional deterrence through the use of submarines, a policy that could be qualified as **tailored for middle power navies.**

Although not capable of applying force with a wide and graduated choice of options like their surface counterparts, submarines have the possibility of operating in an environment that permits them to take advantage of initiative while protecting them from being located. This possibility makes submarines a most compelling weapon systems. Despite these advantages, following the Cold War the need for submarines as part of the naval panoply of platforms was doubted. As a weapon associated with total war, especially in the form of a massive East-West battle to control the Sea Lines of Communication in the North Atlantic, submarines were perceived sometimes as having lost their utility. Even submariners admitted that in a post-Cold War type of conflict submarines "dropped from the extraordinary position they had in war plans against the Soviets to filling narrow niches."⁷ But the idea of obsolescence did not fit well with the submarines community, neither in the peacekeeping post-Cold War operations, nor in future

³ Bidanda M. Chengappa, "Subs for Sea Power," *The Indian Express*, 20th January 1998. Accessed 10th April 2004; available from <http://www.indianexpress.com/ie/daily/19980120/02051014.html>.

⁴ Owen R. Cote Jr., "The Third Battle – Innovation in the U.S. Navy's Silent Cold War Struggle with Soviet Submarines," *Newport Papers* 16, (2003): 1.

⁵ Ibid.

⁶ Paul Mitchell, "Submarines and Peacekeeping," *Journal of Military and Strategic Studies* (Spring 2000), accessed 25th February 2004; available from <http://www.jmss.org/2000/article3.html>.

⁷ John T. Hanley, "Implications of the Changing Nature of Conflict for the Submarine Force," *Naval War College Review*, Vol. XLVI N° 4 Seq. 344, (Autumn 1993): 26. The author (a submariner) makes an analysis of the role that submarines had in the Cold War and compares that role with the relative weight that submarines have in peace keeping or peace enforcing operations.

perspectives.⁸ The US Navy's strategy "...From the Sea" views conventional submarines pose in a littoral scenario, stating "...conventional submarines operating in shallow waters pose a particular challenge." The following version of the document "Forward...From the Sea" states "...the idea that the majority of future major naval operations will occur in littorals."¹⁰

The number of conventional submarines owned by medium-power and small navies around the world¹¹ confirms the concepts expressed in "...From the con... 76001

that the Chinese submarines have the capability of controlling sea lines of communication “in and around China, Taiwan, the Spratly Islands and other areas of interest to Beijing.”¹⁶

The threat that modern non-nuclear submarines pose is not related only with the number of boats. Their capabilities are also a concern.¹⁷ To understand why submarines are a critical element of military strength, we refer to a report produced by the Office of Naval Intelligence of the United States Navy, which enunciates the submarines capabilities. The first capability is **power projection, for example landing special operations forces ashore** or cruise missiles against land objectives without being detected. The second is sea denial and regional influence. The report states “**even a nation with few relatively unsophisticated submarines can conduct sea denial and exert regional influence.**”¹⁸ The third capability is coastal defence, where “**the relatively more affordable diesel-electric is a practical choice that can hold enemy naval forces at risk while posing a difficult challenge for anti-submarine forces.**”¹⁹

This article will argue that the use of conventional submarines can enhance considerably the perceived power of medium power navies. They have done so through history and can do it nowadays through a variety of ways, conventional deterrence being one of the most important.

In order to prove the thesis, the paper will first look at the concept of power, its characteristics and its relation with sea power, deterrence and perception. Then, it will focus on deterrence and its fundamentals, because conventional deterrence is one of the most important ways in which submarines can enhance the perceived power of medium power navies. Next, it will examine different criteria for classification of navies, adopting standard requirements to explain why a navy can be considered a “medium power” one. Subsequently, it will focus on three potential medium-power navies, the Canadian, Australian and Argentine navies, demonstrating that they can all be considered medium power navies according to the adopted standard requirements. After that, the paper will enumerate some historical examples. Those

¹⁶ Ibid.

¹⁷ United States Navy, *Worldwide Submarine Challenges*, (Washington D.C: Office of Naval Intelligence, 1996), 4. The report counts 750 non-US submarines in 1985, 560 in 1995 and estimates 410 for 2005. But the percentage of state-of-the-art boats has grown from 8% in 1995 to an estimated 17% in 2005. Combining “modern” plus “state-of-the-art” against “common” technology, the percentage changes from 28% in 1985 to 55% in 1995 to an estimated of 83% in 2005. In addition, the number of submarine-producing countries was thirteen in 1996, as follows: USA, UK, Russia, France, China, Germany, Australia, The Netherlands, North Korea, Sweden, Japan, Turkey, Brazil and South Korea. Spain could be added to the list, as co-producer of the “Scorpene” class submarines. More information can be found in *ROC Navy Opens Dutch-Made Submarines to Media*, accessed 9th April 2004; available from <http://www.fas.org/news/taiwan/2000/e-06-22-00-11.htm>.

¹⁸ Ibid., 2.

examples, chosen to be applicable to medium power navies, will show how submarines enhance different navies' power through history. The essay will also show that submarines became a world wide accepted weapon. Subsequently, the essay will analyze the framework of defence of three countries that possess medium power navies (Argentina, Canada and Australia), starting the analysis from the concept of national interests. A standard way of enunciating national interests will be adopted, and used as a comparison of how national interests are enunciated by Argentina, Canada and Australia in their respective defence policies. In each case the analysis of national interests will be linked afterwards with their navies' strategies and doctrines, driven by national interests. This analysis will show that submarines are intended to enhance the perceived power in the three medium-power navies considered as examples. To strengthen even more the thesis, the article will provide some counter-examples. The importance of these counter examples is that they alter the perceived power of the medium power navies described in this essay. These counter examples are related with issues that have affected or affect the perceived power of the three medium power navies used in this paper as our case studies. They compare the theory established in defence policies with the perception achieved. The counter examples will also show that sometimes, due to temporary shortcomings, submarines may sometimes unfavourably influence the perceived power of middle-power navies. Above all, the counter examples will reinforce the thesis that conventional submarines can enhance considerably the perceived power of middle-power navies.

POWER AND SEA POWER: CHARACTERISTICS AND RELATION WITH DETERRENCE.

When addressing the way in which the strength of all principalities should be measured, Nicolo Macchiavelli wrote "whether a prince has such power that, in case of need, he can support himself with his own resources, or whether he has always the need of the assistance of others."²⁰ According to Macchiavelli's thoughts, power is a way to measure the strength of one entity²¹ in comparison to others, and its capability to act independently. Snow and Brown remark that power is applied in international relations to obtain favourable outcomes from

¹⁹ Ibid.

²⁰ Nicolo Macchiavelli, *The Prince* (London: Oxford University Press: 1935), 47-49.

²¹ In Macchiavelli's times the entities compared were principalities. Nowadays the entities are nation-states, Non Governmental Organizations (NGOs), economic groups, etc.

situations characterized by conflicting interests, aiming to convince “an opponent or opponents to accept less than they wanted in a disputed area.”²² This is applied particularly to situations that are not driven by agreements or overarching enforcing rules. Following, they define power as “the ability to get someone to do something he or she would not otherwise do.”²³ Snow and Brown amplify the definition with two distinctions. The first one is that power is a relationship and not a quantifiable attribute. The second distinction is that power is specific to particular situations and actors.

Based on the general idea of relative strength, Frischknecht also considers power as a relation characterized by dependence. He defines power as “the relation between two actors based on the dependence of one’s ends from the other’s means. Actor x will have power over y when y ’s ends depend from x ’s means.”²⁴ David Baldwin is very close to Frischknecht’s thoughts, but emphasizes that dependency can be mutual. This implies that actors will be capable of influencing both one another in some degree.²⁵ Frischknecht’s study on power defines three environments in which power is exercised. They are political, economic and military.²⁶

achieve the desired ends.²⁹ In spite of Art's remarks, among the three mentioned areas the military one is the most relevant for the purpose of this paper because it encompasses sea power.

Dr. Ken Petress defines power in a broader way. He says that power is "the ability to influence others to believe, behave, or to value as those in power desire them to, or to strengthen validate or confirm present beliefs, behaviours, or values."³⁰ The idea of considering the influence that makes others "desire" behaviours or values leads to Keohane and Nye. They make a difference between "soft" and "hard" power within the frame of what they call "behavioural power."³¹ They define soft power as the "ability to get desired outcomes because others want what you want." It relies on attraction. Hard power, in opposition, relies on coercion and is defined as "the ability to get others to do what they otherwise would not do, through threat of punishment or promise of reward."³² Military power is a way to exert "hard" power.

From the considerations mentioned above some conclusions can be enunciated. The first one is that power is a relative attribute applied to a relation within a certain context, and not a quantifiable absolute quality. The second is that in such relation some entities influence others, either for attraction or for compulsion. The third is that relations of power take place in defined environments. Those environments can be grouped as political, economic and military. The fourth is that the more favourable an entity's power is, the lesser its dependence will be. Taking into account all these conclusions, power will be considered for the purpose of this paper as the capability that an entity has to influence others (either in an active or passive way) to behave in accordance to its desire, within the frame of a bi or multi-lateral relationship that takes place in the political, military and/or economic arenas. Because it mentions influence and the military area, this concept is the gate that this paper will use to get to sea power.

Particularizing in the military arena, sea power determines the degree in which a nation-state will be capable of supporting its interests from the maritime perspective. Sea power -as addressed by Richmond- is the result of "a form of national strength capable of giving wealth to

²⁹ Robert J. Art, The Use of Force: Military Power and International Politics (Lanham: Rowman and Littlefield Publishers Inc., 2004), 13. Art addresses two important issues. The first one is that military power can be used in two ways. The first one, so-called "peaceful" is limited to intimidate or threaten. The second use of military power is referred to as "forceful," and it's the effective waging of war. The second issue addressed by Art is that military power on its own is not a guarantee of success, even when it is exercised in relative superiority.

³⁰ Ken Petress, Power: Definition, Typology, Description, Examples and Implications, accessed 24th February 2004; available from <http://www.umpi.maine.edu/~petress/power.pdf>

³¹ Robert O. Keohane and Joseph S. Nye, "Power, Interdependence and the Information Age," Conflict After the Cold War – Arguments on Causes of War and Peace (Washington D.C: Richard K. Betts, 2002): 550.

³² *Ibid.*, 550.

national policy.”³³ Mahan highlights the supreme importance of sea power. His opinion is that wars have been “greatly modified in their conduct and issue by the control of the sea.”³⁴ Colin S. Gray goes deeper in the belief of the importance of sea power in particular, when he says that the link between “the repeated success of great sea powers over great land powers defies dismissal as mere chance.”³⁵

This paper will adopt the following definition of sea power: “the influence which a nation can exert to secure its rights and uphold its interests on the seas and oceans of the world not only in war but also in peace.”³⁶ The relevance of Drage’s definition for this essay is explained in two ways. First, it puts emphasis on the word “influence”, a significant word in the definition of power adopted in this article. Second, it particularly mentions the states of war and peace. In war, conventional submarines enhance power in a variety of ways, being sea denial the most important. In peacetime, they enhance a middle-power navy –among other reasons- exercising conventional deterrence to prevent any attempt to change the *status quo*.

Having defined power and sea power, this paper will now analyze the components of power, for two reasons. First because they have an effect on the design and purpose of naval forces, and, of course, submarines. Second, because this analysis will lead to the concept of deterrence.

David Jablonsky³⁷ identifies as the generators of power general groups of features that he calls “determinants,” which are grouped in natural and social sets.

The natural determinants embrace geography, population and natural resources, being geography perhaps the most influential one when creating a defence policy. For example, countries like Canada and Argentina can be tempted to believe in the “fireproof house”³⁸ concept. This analogy means that geographical position on its own, characterized by protection given by surrounding oceans and long distance from unstable areas (like the Middle East, the Balkans, Central Africa or Colombia, to mention some examples), will automatically give

³³ Herbert W. Richmond, Sea Power in the Modern World (London: G. Bell & Sons Ltd., 1934), I.

³⁴ Alfred T. Mahan, The Influence of Sea Power upon History (Boston: Little, Brown and Company, 1945), 1.

³⁵ Colin S. Gray, The Leverage of Sea Power: The Strategic Advantage of Navies in War (Toronto: Maxwell Macmillan Canada, 1992), ix.

³⁶ Geoffrey Drage, Sea Power (London: John Murray, 1931), vii.

³⁷ David Jablonsky, “National Power,” Parameters – U.S Army War College Quarterly Vol. XXVII N° 1 – (Spring 1997): 38.

³⁸ Joel J. Sokolsky, Rebuilding the UN Capacity of Integrated Coordinated Responses to Hot Spots in an Era of “Fireproof Houses,” accessed 2nd March 2004; available from http://www.unac.org/en/link_learn/canada/security/rebuilding.asp.

immunity against foreign aggression. Mahan also recognizes geographical position as one of the elements of sea power, and the advantage that surrounding seas give to a nation in terms of protection from enemy attack.³⁹ The geographical feature influences the way navies pretend to enhance their power through the use of submarines. Examples of that influence regarding to navies considered in this paper are choke points like the Strait of Magellan in the case of Argentina or the Strait of Malacca in the case of Australia. Canada's navy is also influenced by its geography. Any unit deployed from one coast to the other –and this applies particularly to submarines due to their slow speed and the need to surface in the Panama Canal- needs to transit long time and under other countries' territorial waters.⁴⁰

With regard to natural resources, their availability and the control that a country exercises over them influences the way in which submarines enhance a navy's power. A good example is the control of fisheries done by the navies of Canada and Argentina to prevent illegal activities in certain areas.⁴¹

The latter determinants of power (grouped as social sets) include the military and psychological aspects. Both aspects are relevant for the purpose of this paper, because the contribution that submarines make to enhance the power of navies through deterrence is related with the perception of power. This is explained by the concepts of “power is (until it is exercised) what people believe it is”⁴² and that “reputation for power confers power to a nation; regardless of whether that power is real or not.”⁴³ Even some algorithms have been developed to measure the amount of perceived power.⁴⁴ This particular characteristic of power is very closely linked with the concept of deterrence and leads to it.

³⁹ Alfred T. Mahan, The Influence of Sea Power upon History (Boston: Little, Brown and Company, 1945), 29.

⁴⁰ In case that Canada had nuclear submarines, the geographical limitation to transit from the Atlantic to the Pacific coasts would be less important. The reason is that nuclear submarines are able to transit under the northern ice pack.

⁴¹ Canadian Department of National Defence, The Potential of a Submarine in Fishery Surveillance and Enforcement (Ottawa: CFN Consultants, 1993), 43. The report highlights that “...a submarine, on long term tasking while operating covertly, can locate, track, identify and monitor the movement of US fishermen. It can provide evidence for prosecution, against illegal fishing in the Georges Bank along the Hague Line day, night and in fog. Although not yet proven, it is considered that **submarines** operating covertly **will enhance** enforcement, **and therefore deterrence will be increased**, because fishermen will never know when they are being monitored. There is every reason to believe that the same result would occur if the submarine was employed along the 200 mile limit line through the length of the Grand Banks, or elsewhere as experience and expertise improves.”

⁴² David Jablonsky, “National Power,” Parameters – U.S. Army War College Quarterly Vol. XXVII N° 1 – (Spring 1997): 37.

⁴³ *Ibid.*, 37.

⁴⁴ Ray S. Cline, World Power Trends and U.S. Foreign Policy for the 1980's, (Boulder: Westview Press, 1980), 13. The elements included in the estimation of perceived power are population and territory, military and economic capabilities, strategic purpose and political will.

DETERRENCE: CONCEPT AND CHARACTERISTICS.

Deterrence is related with power, prevention and punishment. Deterrence is usually linked with the threat of using nuclear weapons as a massive retaliation, in order to prevent being attacked by an aggressor.⁴⁵ That is a limited interpretation referred to nuclear deterrence, “the reasonable assumption that no nation will contemplate a nuclear attack on another if such an attack inexorably brings prompt and massive destruction to itself.”⁴⁶ James Golden explains how deterrence works. He says, “...to prevent war from usurping the place of policy, the object of policy should be to avoid war. The only possible reason for the existence of armed forces would be to prevent war from breaking out-what is known familiarly as deterrence.”⁴⁷ John Mearsheimer gives a good definition when saying “deterrence, in its broadest sense, means persuading an opponent not to initiate a specific action because the perceived benefits do not justify the estimated costs and risks.”⁴⁸

The distinction between nuclear and conventional deterrence is that nuclear deterrence threatens large numbers of an opponent’s civilian population and industry. In opposition to this concept, the effects of conventional deterrence are limited to the environments of the battlefield.⁴⁹ So deterrence can also be applied by non-nuclear powers. In particular, middle-power navies can use it.

Ken Booth, in his book “Navies and Foreign Policy” differentiates “strategic deterrence” and “conventional deterrence and defence.” The former (strategic deterrence) is a capability possessed by five navies (United States, Russia, China, United Kingdom and France) that can project nuclear weapons from the sea or hold them to influence a post-exchange negotiation.⁵⁰ The latter (conventional deterrence); a reasonable and affordable policy for medium power navies like the Argentine, Canadian or Australian; is a conventional way to defend a country

⁴⁵ Thomas Boyd-Carpenter, Conventional Deterrence into the 1990s (New York: St. Martin’s Press, 1989), 5. The author refers to this differentiation within a context of mixed nuclear and conventional deterrence.

⁴⁶ Robert W. Morse, The Future of Sea-Based Deterrence (Cambridge: MIT press, 1973), 3.

⁴⁷ James R. Golden, Asa A. Clark and Bruce E. Arlinghaus, Conventional Deterrence (West Point: United States Military Academy, 1984), 7. The authors emphasize “as an object of policy, deterrence necessarily involves not only assuring a potential enemy it may not impose its will but also promising to punish if an attempt is made to do so.”

⁴⁸ John J. Mearsheimer, Conventional Deterrence (London: Cornell University Press, 1983), 14.

⁴⁹ *Ibid.*, 15.

⁵⁰ Ken Booth, Navies and Foreign Policy (Buenos Aires: Instituto de Publicaciones Navales, 1977), 28.

from its adjoining sea.⁵¹ Booth specifies, “basic maritime defence in the contiguous seas is the main mission of just under two-thirds of the world’s navies. Their objective is to extend metropolitan defence (and possibly offensive potentialities) into adjoining sea areas, thereby raising the cost of any unwelcome maritime intrusion or interference.”⁵² Furthermore, it says that one of the tasks of navies as part of the conventional deterrence and defence function is “to deter hostile intrusion into maritime frontiers.”⁵³ This is consistent with Mearsheimer’s idea of limiting the effects of deterrence to the environment of the battlefield. Conventional deterrence stands as one of the most important contributions that submarines can make to enhance middle-power navies. To be effective, it must accomplish some conditions.

To identify the above-mentioned conditions, this paper will use the definition of deterrence as “the exercise of negative power as state A influences actor B not to do x. The influence is effectively exercised because B perceives that A not only has the capability to prevent B from doing x, but the willingness to use that capability as well.”⁵⁴ This definition identifies capability, credibility and willingness as conditions for deterrence. Indirectly, (as B “perceives” something) it refers to communication, the fourth necessary condition to achieve effective deterrence.

Roger Barnett states “deterrence of whatever kind or modality requires both capability and will.”⁵⁵ Robert Jervis⁵⁶ makes direct reference to capability, credibility, and communications. Frank Zagare and Marc Kilgour⁵⁷ also identify capability and credibility as main components of deterrence. **Emphasizing that the four conditions are equally important for the effectiveness of deterrence**, this paper will focus next on political will.

Political will is one of the four basic conditions for successful deterrence. David Baldwin identifies political will as one of the means to transform what he describes as potential power into actual power. Baldwin explains with examples that the lack of political will in strong

⁵¹ Ibid., 30.

⁵² Ibid.

⁵³ Ibid., 27.

⁵⁴ David Jablonsky, “National Power,” Parameters – U.S Army War College Quarterly Vol. XXVII N° 1 – (Spring 1997): 37.

⁵⁵ Roger W. Barnett, “Information Operations, Deterrence and the Use of Force,” Naval War College Review Vol. LI N° 2 Sequence 362, (Spring 1998): 10.

⁵⁶ Robert Jervis et al., Psychology and Deterrence (Baltimore: Johns Hopkins University Press, 1985), 9, 13, 35, 1. Jervis says that monitoring others’ capabilities is the most obvious way to judge whether they pose a threat. In order to deter any potential aggressor, he identifies capability as a requisite. On credibility, Jervis says “if a state defaults on one commitment, other states will be less likely to believe in it in the future.”

countries is one of the reasons that clarify why they are sometimes over-influenced by weaker ones.⁵⁸ A good example to emphasize the importance of political will is the case of General Romeo Dallaire in Rwanda. Although his mission was described as a “confidence-building exercise designed to encourage the belligerents to get down to the serious business of peace,”⁵⁹ the real purpose was to deter opposing groups from breaking a *status quo*. As General Dallaire says, “that mission, UNAMIR, failed.”⁶⁰ Then he adds, “...as the world watched and yet could not find the political will to intervene.”⁶¹ The consequences are world-known. The conclusion is that political will is one of the four conditions for successful deterrence.

Next, this essay will consider the relevance of capability for deterrence. Capability of retaliation is one of the conditions to successfully prevent other parties from taking any action that would alter a *status quo*. According to Zagare and Kilgour, threat capability is absolutely necessary for deterrence success.⁶² They define it as the ability to hurt, and describe it as composed of two aspects, the physical and the psychological ones. The physical is related to the capacity to implement a threat. Lacking the physical capacity makes deterrence automatically ineffective. For the purpose of this paper, medium power navy-owned submarines represent this physical capacity. The psychological aspect must create in the party that seeks for changing the *status quo* the idea that the punishment will be always worst than the situation as it is.

Zagare and Kilgour’s concept that says, “if a challenger calculates that bearing the cost of conflict is less onerous than suffering the costs of doing nothing, deterrence will always fail”⁶³ clarifies this idea. Some examples given by Zagare and Kilgour are very helpful to understand the thought. The first one refers to the Second World War, when Germany did not perceive any threat significant enough to stop the invasion of Poland. The same happened when the former Soviet Union entered Afghanistan in 1979. In both cases German and Soviet leaders calculated

⁵⁷ Frank Zagare and Marc Kilgour, *Perfect Deterrence* (Cambridge: Cambridge University Press, 2000), 285-308.

⁵⁸ David Baldwin, “Power Analysis and World Politics: New Trends versus Old Tendencies,” *World Politics*, Vol. 31 N° 2 (Jan., 1979): 164.

⁵⁹ Romeo Dallaire, *Shake Hands with the Devil* (Toronto: Random House Canada, 2003), 43. There were two belligerent groups in Rwanda that had agreed to a very weak ceasefire. The UN sponsored international force (UNOMUR) should “guarantee the shaky ceasefire on which the peace accords rested.” One of the parties in dispute was a group of rebels called Rwandese Patriotic Front (RPF), composed of refugees of the Tutsi tribe that were displaced after the country’s independence. The other was the government, in which the Hutus prevailed. The presence of the UN troops should deter both parties. It should prevent them from using violence against each other. But things turned out to a massacre. The reason is considered to be lack of political will in the United Nations.

⁶⁰ *Ibid.*, 6.

⁶¹ *Ibid.*

⁶² Frank Zagare and Marc Kilgour, *Perfect Deterrence* (Cambridge: Cambridge University Press, 2000), 290.

that bearing the cost of conflict would be less onerous than suffering the costs of doing nothing. Zagare and Kilgour also highlight the importance of conducting “shows of force.” Although this paper considers that Zagare and Kilgour are right in emphasizing the value of shows of force, they are regarded in it as components of communication rather than capability. As a conclusion, capability is confirmed as a necessary condition for successful deterrence.

Let us now examine the importance of credibility. Credibility is intimately linked with past behaviour and is dependant on reputation. Jervis notes, “deterrence theory... assumes that states are –and should be- terribly concerned with their reputations for living up with their commitments.”⁶⁴ Credibility takes a long time to be built, and can be irreparably harmed with just with one wrong decision. As Jervis says, “if a state defaults on one commitment, other states will be less likely to believe in it in the future.”⁶⁵ If commitments are maintained, credibility is enhanced. As well, a coherent behaviour through time develops a country’s credibility. Credibility is linked with commitment, and together with coherence, consistency, rationality and time build up a framework that supports an effective deterrence. Barry O’Neill compares credibility with “prestige.”⁶⁶ Zagare and Kilgour also highlight the importance of credibility, claiming it is the “magic ingredient” of deterrence. To emphasize the independence of credibility as a condition for effective deterrence, they say that a threat can be capable, but even then it can be perceived as non-credible. Following, deterrence fails. As example, they mention the attitude of Argentine leaders in 1982, which did not perceive the British threat to defend the Malvinas/Falklands as a credible one. They didn’t expect the British to “go to war for such a small problem as these few rocky islands.”⁶⁷ Citing again Zagare and Kilgour’s work, “credibility emerges as the quintessential determinant of deterrence success.”⁶⁸ As a conclusion, credibility is a necessary condition by itself to achieve effective deterrence, and has equal importance as the other three ones.

Following, this paper will focus on the importance of communication as a component of effective deterrence. Any deterrent party may be capable of taking punishing actions, and, backed up by a history of coherent behaviour can achieve a high degree of credibility. The

⁶³ Ibid., 291.

⁶⁴ Robert Jervis et al., Psychology and Deterrence (Baltimore: Johns Hopkins University Press, 1985), 9.

⁶⁵ Ibid.

⁶⁶ Barry O’Neill, Nuclear Proliferation and the Logic of National Prestige, accessed 21st March 2004; available from <http://www.sscnet.ucla.edu/polisci/faculty/boneill/prestweb.htm>

⁶⁷ Frank Zagare and Marc Kilgour, Perfect Deterrence (Cambridge: Cambridge University Press, 2000), 83.

political will to deter may also be very strong. But the lack of communication may spoil the deterrent expectations. In his examination of deterrent failures, Robert Jervis concludes that participants, sometimes, never had a good understanding of each other's perspectives. He adds, "signals that are clear to the sender are missed or misinterpreted by the receiver", "actions meant to convey one impression often leave quite a different one" and "attempts to show calm strength may appear as weakness."⁶⁹ All this phenomena are a consequence of lack of communication. And communication must be recognized as one of the four components of successful deterrence, as important as the three other ones.

One of the case studies that Jervis details is the 1982 conflict between the United Kingdom and Argentina. He identifies as war-breaking causes two mutual misunderstandings. On one side, the British government believed that Argentina would not use military force to take control of the islands. On the other side, the Argentine military government perceived that the U.K. undervalued the islands and would not face the cost (particularly in human lives) of a military action to re-gain control.⁷⁰ This misunderstanding is clearly described by Rear Admiral Horacio Mayorga, in his book "No Vencidos." He mentions that in 1982 the British contingency plan conceived for the case of an escalation in the South Atlantic dated back from 1977. It contemplated the expansion of the British forces by sending a task force that would include surface and submarine units as well as troops to enlarge the local garrison.⁷¹ On the British side, the ambassador in Buenos Aires warned his superiors about the possibility of an Argentine invasion (*sic*) of the archipelago. The authorities did not understand the genuineness of the issue d 19780.843

and retire its aircraft carriers from active service.⁷² Both parties were wrong, and the escalation and following war can be found in the area of communications failures within a deterrent frame.

Kuong also highlights the importance of communication in deterrence. He says, “rational deterrence theory recognizes three essential determinants for successful deterrence, namely communication, capability and credibility.”⁷³ Later he adds, “effective deterrence relies on the ability to communicate unmistakably to the potential aggressor what actions are considered unacceptable.”⁷⁴

The Gulf War of 1990 has also been explained as a deterrence failure due to miscommunication between the United States’ government and the Iraqi leader, Saddam Hussein, in the period that preceded the Iraqi invasion of Kuwait.⁷⁵ The conclusion is that communication is necessary for effective deterrence, and as important as capability, credibility and will.

To describe precisely the concept of deterrence, this paper will emphasize its proactive inherent characteristic and its objective of

Navies can be classified according to their historical achievements, efficiency, size, capabilities or other criteria. In most cases a navy is classified according to its power projection capability in comparison with others.

Michael A. Morris has analyzed third-world countries, a group that potentially contains a large number of medium power or small navies. Morris starts comparing the number of naval units. Then he refines the results considering the modernity of the assets. A large number of outdated vessels will not necessarily match a smaller but more modern navy. To obtain even better results, he takes into consideration what he calls “supplementary naval power criteria.” This includes facts as the existence of Marine Corps or separate coastguard organizations. Eventually he adds some elements of national power to get a truly realistic picture of capabilities.

The combination of all this data and related elements ends up in a six-level naval hierarchy conceived for third world navies, but applied to some others.⁷⁷ The ranks go from 1 to 6. Ranks 1 to 5 will not be described due to their lack of application for this paper. Rank 6 navies are defined as “Regional Force Projection Navies.” They are characterized by the diversity and depth of their weaponry. This concept is wide, and includes domestic arms production, availability of supply ships, miscellaneous vessels and aircraft carriers. Rank 6 navies in Morris’ classification are well represented in all this areas and are considered multi-mission with some force-projection capabilities. He classifies the navy of Argentina as a rank 6.

Also, and contributing to the purpose of this essay, he includes other navies, belonging to countries that stand out of the third world, in his classification. According with his criteria, then, the Australian Navy is also a rank 6 navy.⁷⁸ He includes Australia in his classification because of its geographical location in a region of the world in which the majority of its neighbours belong to the third world. Morris’ classification is useful for this paper because he ranks in the same category two out of the three navies chosen as examples for this essay.

Morris attempts a realistic approach to classify navies, but some issues reduce the value of his work. Dr. Paul Mitchell points some of Morris’ weak points. Some examples of these weak points are the exclusion of maritime interests, naval doctrine and the influence of

⁷⁷ Michael A. Morris, Expansion of Third World Navies (New York: St. Martin’s Press, 1987), 47.

⁷⁸ *Ibid.*, 136.

f analysis. Others are the acquisition of
third-world navies or countries.⁷⁹

Analysis are those belonging to countries that
rd-world country's navies are truly powerful
t carriers and five submarines built in it's
ntry's navies are small and have limited

of being erroneous, this paper will add other
n will be Ken Booth's categorization,
er criteria will be Eric Grove's.⁸¹ Grove's
ts strategy for the future, published in the
0."

their capability to project power, as "Global,"
Global Navies can project power anywhere in
e undefended. Oceanic navies project their
ts that may require support or weakening of
uld be limited to operate in the proximities of
stal navies are not ocean going, do not
ly purposes. Using Ken Both as a guide, the
e ranked as "Oceanic." But using Ken
nch Navy, two leading navies in the world,

general guide, lacks nowadays of the desired
er projection was not managed exclusively by
ed to the mandate of the United Nations, in
it in a cause, in some others. As a result, the

z, accessed 10th April 2004; available from

1. The RNZN has a combat force of three frigates

units. The RNZN has capability to replenish thei.6 Tf0.0002 Tc 0.0013 T

use of navies as a means of projecting power was shaped and characterized by a variety of facts that originated the need for more precise categories.

Eric Grove envisioned a nine-category model, according to power projection capabilities –like Ken Booth’s- but with greater detail. The categories are Major Global Force (Complete and Partial) Projection Navies, Medium (Global or Regional) Force Projection Navies, Adjacent, Offshore, Inshore, Constabulary and Token Navies.⁸³ Grove categorizes the navies of Canada, Australia and Argentina as Rank 4 (Medium Global Force Projection Navies).⁸⁴

But Grove’s categorization on its own does not define what a medium-power navy is. The concept of “medium power” is an approach to define a “medium power navy.” A “medium power” is described, on the base of its behaviour, as a state that “participates with responsibility and effectiveness in world events within a partnership of like-minded states.”⁸⁵ It exists when “a number of parameters –economic, cultural, intellectual, military, geographical – all point in the same direction, towards a significant autonomy and capacity for self help in the preservation of national identity and vital interests.”⁸⁶

John R. Hill wrote about medium powers and how to define their common characteristics. Hill concludes that three big categories can be established: superpowers, medium powers and small powers. Superpowers can be defined as the ones that exercise economic, political and military power to an extent that they can preponderate on their own against any but another superpower.⁸⁷ Small powers are those vulnerable enough to make impossible to them to secure their frontiers, the security of their population, and the development of their economies or the stability of domestic situations without support from an outside agency.⁸⁸ Medium powers lie between the self-sufficient and the insufficient. As Hill defines them, they will “try to create and keep under national control enough means of power to initiate and sustain coercive actions whose outcome will be the preservation of its vital interests.”⁸⁹ Hill includes what he calls “extended vital interests” in his definition. Extended vital interests are those who are vital to

⁸³ Eric Grove, The Future of Sea Power (London: Routledge, 1990), 236-241.

⁸⁴ *Ibid.*, 238-239.

⁸⁵ Peter T. Haydon, “Sea Power and Maritime Strategy in the 21st Century: A “Medium” Power Perspective,” Maritime Security Occasional Paper N° 10, (2000): 4.

⁸⁶ Canadian Navy, Leadmark: The Navy’s Strategy for 2020 (Ottawa: Directorate of Maritime Strategy NDHQ, 2001), 29.

⁸⁷ John R. Hill, Maritime Strategy for Medium Powers (Beckenham: Croom Helm Ltd., 1986), 18.

⁸⁸ *Ibid.*, 19.

⁸⁹ *Ibid.*, 20.

betterment. If navies ranked as medium (global or regional) force projection ones are used to look after vital or extended vital interests, those navies then fulfill one of the conditions to become medium power navies.

Peter Haydon remarks that medium-power navies are also characterized by their capability of intervention in regional conflicts for the collective good or when their own interests are at risk. Haydon identifies seven capabilities: First, they seldom act unilaterally. Second, they are able to operate with **limited** freedom of action. Third, they seek to be interoperable with leading navies. Fourth, some of them are able to deploy national task groups that can operate in **support of high intensity operations**. Fifth, they are **frequently used to conduct naval presence missions and support the state's foreign policy**. Sixth, they are highly versatile and able to undertake a wide range of tasks, including domestic law enforcement in the waters under their jurisdiction. Seventh, they believe that national interests are best served by maintaining complete freedom of navigation.⁹⁰

Hill adds to this list some 3 vital elements. First, medium powers should have enough national leverage to defend their interests, although at some point alliances would come into play. Second, they should be capable of facing higher-level conflicts. Submarines will become vital assets in those cases. Third, because of their limits in reach capability and force structure, medium power navies will have limited capability of sea control, thus they will opt for **sea denial** as a solution to accomplish their mission.⁹¹ Going back to Haydon's characterization, he mentions the navies of Australia, Argentina and Canada as "medium-power navies."⁹²

The distinctiveness of being a medium-power navy will be resumed in three concepts. The first one is the possession of broad capabilities but with relative freedom of action. The second is limited sea control capability, which derives in necessity of sea denial aptitude as an alternative and a complement. Submarines play their role mainly in response to this need. The third is participation in world events in support of national policy. These will be the criteria adopted by this essay.

⁹⁰ Peter T. Haydon, "Sea Power and Maritime Strategy in the 21st Century: A "Medium" Power Perspective," Maritime Security Occasional Paper N° 10, (2000): 77.

⁹¹ John R. Hill, "Maritime Forces for Medium Powers," Naval Forces Vol. 5 N° II, (1984): 26-32.

⁹² Peter T. Haydon, "Sea Power and Maritime Strategy in the 21st Century: A "Medium" Power Perspective," Maritime Security Occasional Paper N° 10, (2000): 77.

Next, the navies of Canada, Argentina and Australia will be examined against the above-mentioned criteria. This will confirm that, as Peter Haydon and Eric Grove explicitly said, they can be considered “medium power navies.”

Canada’s navy possesses 16 frigates, 4 submarines, 2 ocean-going replenishment ships and 12 coastal patrol vessels. The air assets belong to the Canadian Air Force (CAF), but apart from numerous helicopters, the CAF operates about 20 long-range maritime P-3 aircraft.⁹³ The Canadian Navy accomplished a huge participation in the Second World War. It also participated in the Korean War (UN Police Action), preventive deployment for peace support off Egypt (1956-57), peace support post-Bay of Pigs (1961), the blockade of Cuba in 1962 and STANAVFORLANT since 1965, among others. In the post Cold War, its presence in the Gulf War in 1991 (Operation Friction), Somalia (Operation Cordon – Operation Deliverance), Haiti (Operation Bandit), East Timor (Operation Toucan), and the war against terrorism (Operation Apollo) among other peace keeping or enforcing missions are clear evidence of the its responsible and effective participation in world events.⁹⁴

The Royal Australian Navy (RAN) force includes up to 10 frigates, 6 submarines, 2 amphibious transports, 2 replenishment ships, 14 fast patrol boats and other mine countermeasure and auxiliary vessels for surveying or training cadets. The RAN operates its own helicopters, as an integrated part of its ships’ combat systems or attached to a task group.⁹⁵ The Royal Australian Navy participated in both world wars, the Korean War⁹⁶ and, going even further in its partnership with like-minded states, fought along with the U.S Navy even in the Vietnam War.⁹⁷ Australia has a formal alliance with the U.S (the ANZUS treaty) since September 1951.⁹⁸ In the post-Cold War times it was present in the Gulf War 1990 (Operations Desert Shield/Storm and Maritime Interception Force), Somalia (UN Operation in Somalia I & II and Unified Task Force Somalia 1992-94), Bougainville (South Pacific Peace Keeping Force, 1994), East Timor (International Force East Timor, 1999) and the Solomon Islands International Peace Monitor Team (2000), among others.⁹⁹

⁹³ Canadian Navy web page, accessed 4th March 2004; available from <http://www.navy.dnd.ca>.

⁹⁴ Canadian Navy, Leadmark: The Navy’s Strategy for 2020 (Ottawa: Directorate of Maritime Strategy NDHQ, 2001), C1-C7.

⁹⁵ Royal Australian Navy web page, accessed 4th March 2004; available from <http://www.navy.gov.au>

⁹⁶ Tom Frame, Pacific Partners (Rydalmere: Hodder & Stoughton Pty Limited, 1992), 89-92.

⁹⁷ *Ibid.*, 111-132.

⁹⁸ *Ibid.*, 86.

⁹⁹ Commonwealth of Australia, White Paper Defence 2000 (Canberra: Ministry for Defence, 2000), 11.

The Argentine Navy (ARA) consists of 14 surface combatants, 3 submarines, 1 logistic ship, 6 fast patrol boats and other auxiliary vessels.¹⁰⁰ The particularity in the Argentine case is that the Navy encompasses the naval aviation and the marines. The naval aviation operates various helicopters, P-3 long-range maritime patrol aircraft, Super Etendard attack aircraft and other auxiliary platforms. The Marines are a force of about 3,500 men. In the case of Argentina, its navy had an active participation both in the Cold War and in the post-Cold War operations with like-minded states. In the Cold War times, the contribution to the Cuban blockade in 1962 is a good example, as well as the US Navy-lead yearly UNITAS exercises. In the post-Cold War era, the Argentine Navy's units worked in partnership with like-minded states in UN sponsored operations in Central America (ONUCA), Cyprus (more than ten years of uninterrupted presence), the Gulf War 1990 or Haiti, among others. Officers were also sent to integrate UN staffs in the Balkans while the Army had a battalion as part of the peace enforcing force.

This evidence confirms the inclusion of the three navies analyzed within the concept of "medium power navies." As a conclusion, and according to this classification and the facts analyzed, the navies of Canada, Argentina or Australia can be categorized as Rank 3 (Medium Global Force Projection Navies).

This section has analyzed the concept of medium power navies, and has established which are the characteristics of medium power navy. It has demonstrated that medium-power navies' capabilities are broad but at the same time limited. In addition, the paper has demonstrated that the three navies used as examples in the essay meet the requirements to be categorized as medium-power navies. The next section will analyze some historical examples that will show that submarines, since their early days, have enhanced the power of navies.

ANALYSIS OF HISTORICAL EXAMPLES.

As the preceding section demonstrated that medium power navies have limited capabilities, this one will show with historical examples how submarines have enhanced the power of navies. The examples are chosen from cases where navies had limited capabilities, as medium power navies have. As the examples will show how submarines enhanced medium power navies, they will also show how major naval powers reacted to the threat. The concept of

¹⁰⁰ Armada Argentina web page, accessed 4th March 2004; available from <http://www.ara.mil.ar>.

“conventional deterrence” is applicable. The variety of ways in which a submarine can enhance a navy’s power is also addressed by the examples.

The origin of the submarine as a weapon can be traced back to the United States’ War of Independence. It was then, in 1776, that David Bushnell built a boat that was capable of diving and attacking an enemy vessel. The boat is known as the “Turtle”, and it was used to get close to the English ships that, anchored in New York harbour, were carrying on a sea blockade.¹⁰¹ The plan was to stick a 150-pound gunpowder mine to the hull of HMS “Eagle.” The charge would be set to detonate by a clockwork mechanism. Although the attack was not successful, the explosion happened in the proximity of HMS “Eagle” and the English fleet had to move to a safer anchorage in New York Bay.¹⁰² British captains were consternated and “hastily moved their ships out of the inshore waters.”¹⁰³ Even more, **“never again would the British ever feel quite so certain of their position in dealing with the damnably unpredictable Americans.”**¹⁰⁴ If that was the case, the “Turtle” enhanced the perceived naval power of the Americans. The conclusion is that submarines, from their origin, were weapons that enhanced the perceived power of navies, and also allowed a small power to challenge more powerful enemies.¹⁰⁵ That is the value of this example for the purpose of the essay.

The next historical example is taken from the American Civil War. The Confederate Forces in Charleston used a “David” to attack the Yankee fleet.¹⁰⁶ On 17th February 1864 the first sinking of a surface ship due to submarine attack was achieved.¹⁰⁷ This hallmark of submarine warfare took place in Charleston, South Carolina. The weapon was a “David” type

¹⁰¹ Roberto L. Pertusio, Submarinos: Su historia, relatos y curiosidades (Buenos Aires: Instituto de Publicaciones Navales, 1992), 48.

¹⁰² Robert F. Burgess, Ships Beneath the Sea: A History of Subs and Submersibles (New York: McGraw-Hill Book Co., 1975), 31.

¹⁰³ Drew Middleton, Submarine: The ultimate naval weapon – It’s past, present and future (Chicago: Play Boy Press, 1976), 10.

¹⁰⁴ Robert F. Burgess, Ships Beneath the Sea: A History of Subs and Submersibles (New York: McGraw-Hill Book Co., 1975), 31.

¹⁰⁵ The principle of using submarines to challenge more powerful enemies is applicable for a middle power navy facing a stronger enemy. To oppose a submarine threat, surface forces need to build up a defensive frame that nowadays is complicated, expensive and vulnerable. This is a proof of the high leverage that submarines provide in naval warfare, in other words, a proof of how they enhance naval power.

¹⁰⁶ Robert F. Burgess, Ships Beneath the Sea: A History of Subs and Submersibles (New York: McGraw-Hill Book Co., 1975), 63. “David” was the generic name given to half boat-half submarine cigar-shaped weapons that attacked from under the surface. These “Davids” were the first submarine units to successfully attack a ship.

¹⁰⁷ *Ibid.*, 76.

boat named “Hunley.” The target was the U.S sloop of war “Housatonic.”¹⁰⁸ Although the cost was very high, because the “Hunley” never returned,¹⁰⁹ this historical example is relevant for the purpose of this paper. The first reason is that a weaker party –from the naval perspective-, conceived the use of submarine craft to enhance its power and break a naval blockade imposed by a stronger enemy.¹¹⁰ The second is that it forced a change in the attitude of the enemy fleet, which was ordered to move outside the harbour every night.

The following example is taken from France in the early nineteenth hundreds. Some French senior naval officers led by Admiral Aube supported the idea of a type of warfare based on the replacement of battleships (by then, the capital ships) for smaller, faster and torpedo-armed ships.¹¹¹ They were known as “Le Jeune Ecole.” Considering how powerful the Royal Navy was at the time, the French strategy appears to be part of another “David vs. Goliath” type of conflict. The “Jeune Ecole” aimed to enhance the power of a weaker navy (by then the French) against a stronger one (the British). Their strategy considered submarines as important assets, fostered the widespread use these boats,¹¹² and intended to give submarines a relevant place in an organized defensive framework. That is the first reason why this example is important for the purpose of this paper. The second reason is that the strategy adopted by the navy of Argentina nowadays adopts some concepts originated in the “Jeune Ecole’s” principles.¹¹³

The next historical example is taken from Germany. The Germans were not pioneers in developing the first submarines, but when they realized their potential, they didn’t want to lose

¹⁰⁸ Brayton Harris, The Navy Times book of Submarines: A Political, Social and Military History (New York: Berkley Publishing Group, 1997), 94. The author emphasizes: “After the sinking of the “Housatonic,” all the wooden vessels were ordered to keep up steam and go out to sea every night, not being allowed to anchor inside.”

¹⁰⁹ Ibid., 95. Although the “Hunley” was lost after the attack, it was not due to enemy counter-attack. Evidence shows that her sinking could have been done by the wake of a passing steamer rushing to assist the “Housatonic.” The “Hunley” may have had her hatches open to improve the quality of the air inside, a situation that permitted the flooding.

¹¹⁰ Drew Middleton, Submarine: The ultimate naval weapon – It’s past, present and future (Chicago: Play Boy Press, 1976), 21. The historical value of the “Hunley” is also described as having been the “precursor of vessels that could destroy the greatest ironclads ever built.”

¹¹¹ Ernest Jenkins, A History of the French Navy (London: Macdonald and Jane’s, 1973), 307.

¹¹² Clark G. Reynolds, Command of the Sea (Malabar: Robert E. Kriegel Publishing Company, 1983), 412. The source states, “the Jeune Ecole embraced the submarine as its new anti-battleship panacea.”

¹¹³ The strategy adopted by the Argentine Navy –a middle-power navy- will be analyzed forward in this paper. Its similarity with the “Jeune Ecole” is in the emphasis on the defence of home waters and the lack of capital ships (nowadays, aircraft carriers). The issue of defence of home waters applies particularly in relation with submarines and their capability of sea denial and coastal defence. National or combined task groups carry on the offensive functions in the Argentine case.

the race. As Drew Middleton says, “if Germany started late, she caught up rapidly.”¹¹⁴ As soon as they started to build submarines for Russia (three were ordered on a French design), they began to build the Unterseeboot I (U-1), “the first in a long line of U-boats that in two great wars were the most effective weapons in the German naval armoury.”¹¹⁵ Germany authorized unrestricted submarine warfare, a very controversial decision at the time because it was considered to be against the customary international practice.^{116 117} There are two reasons that justify the value of this example for the purpose of this article. The first one is that Germany adopted –in both World Wars- a naval strategy that heavily relied in the use of submarines to enhance its power. Germany used its submarines to interdict Sea Lines of Communication. In addition, its enemies were stronger at least from the naval perspective. The second reason is that the German strategy forced the naval powers of the time to try to restrict submarine warfare.¹¹⁸

The next historical example is taken from the Second World War. The United States Navy focused its submarine effort in the Pacific Theatre. American submarines played a major role in isolating Japan and preventing the Japanese from receiving any supplies. The US submarines also acted since the beginning of the war. Admiral Chester Nimitz said, “fortunate for the United States, our great submarine base in Hawaii with its supplies and facilities and our submarines were undamaged. When I assumed command of the Pacific Fleet on 31 December 1941 our submarines were already operating against the enemy, the only units of the fleet that could come to grips with the Japanese for months to come.”¹¹⁹ Theodore Roscoe refers to the blockade of Japan that was later imposed by the U.S Submarine Force –that targeted merchant shipping as a main task- in this terms: “the continuous submarine blockade delivered upon the enemy’s home front a series of blows that landed with increasing frequency and impact as the

¹¹⁴ Drew Middleton, Submarine: The ultimate naval weapon – It’s past, present and future (Chicago: Play Boy Press, 1976), 31.

¹¹⁵ Ibid.

¹¹⁶ The issue of unrestricted submarine warfare and how the powers faced it in the “1930 London Treaty for the Limitation and Reduction of Naval Armaments” is explained forward in this article.

¹¹⁷ Roberto L. Pertusio, Submarinos: Su historia, relatos y curiosidades (Buenos Aires: Instituto de Publicaciones Navales, 1992), 96. The Germans used submarines to enhance their navy’s power in some other roles that we could classify today as “unconventional,” such as shipping of goods. Those particular boats had the legal status of merchant ships, as they were unarmed. Repeating again the pattern, they were used to break a blockade. The first one, the “Deutschland,” arrived in the U.S in 1916. This practice, although very profitable, was abandoned after the “Bremen” disappeared, presumably after hitting a mine.

¹¹⁸ Natalino Ronzitti, The Law of Naval Warfare - A Collection of Agreements and Documents with Commentaries (Dordrecht: Martinus Nijhoff Publishers, 1988), 347-348.

¹¹⁹ Theodore Roscoe, United States Submarine Operations in World War II (Annapolis: United States Naval Institute, 1949), v.

war went on.”¹²⁰ Japanese Admiral Nomura admitted that “our supplies lines were cut and we could not support these supply lines.”¹²¹ Also in the Pacific Theatre the variety of tasks assigned to U.S submarines served as the foundation of today’s employment of submarine forces, particularly when navies seek for Task Forces integrated with submarines. This happens in the Canadian and Australian navies.^{122 123} This example contributes in two ways for the purpose of this article. The first one is that emphasizes how submarines enhance a navy’s power in places where their navy’s freedom of action and sea control capabilities are limited and a necessity of sea denial arises¹²⁴ (in this case, Japanese home seas). The second is that it shows how submarines enhance a navy’s power when combined with other platforms, as intended by the Canadian (CN) and Royal Australian (RAN) navies.

The last historical example is taken from the post-Second World War era. The sinking of Argentine cruiser ARA “General Belgrano” by HMS “Conqueror” on May 2nd 1982 enormously reduced the Argentine’s surface fleet’s possibilities of supporting the campaign effort. The importance of this example for the purpose of this paper is explained by two facts. The first one is that HMS “Conqueror” was able to attack in a place where British surface forces had limited – if any- sea control capability.¹²⁵ The second is that it shows how one single submarine attack forced a whole surface fleet to change its operational attitude and remain only in places where very low depth did not permit access to British submarines.¹²⁶

The analysis of historical examples has shown how submarines, since their early days, were particularly suitable weapons to be used when (or where) the adversary to face was relatively stronger. Natalino Ronzitti comments, “...there is the strategic issue that

¹²⁰ Ibid., 169.

¹²¹ Ibid., 183. Roscoe emphasizes in his book also the variety of tasks accomplished by US submarines. They included attacking enemy merchant shipping and combat naval units, landing and recovering special forces, gathering intelligence, evacuating personnel, mining, executing fire support over land targets and supporting other forces with meteorological information and SAR (Search and Rescue) services. In this very last task, they rescued 504 pilots.

¹²² Canadian Navy, MARCOM Capability Planning Guidance, (Ottawa: Chief of the Maritime Staff, 2001): Art. 106.10. The Canadian Navy adopts the concept of Task Group as a combination of destroyers, frigates **and submarines**.

¹²³ Royal Australian Navy, Australian Maritime Doctrine (Canberra: Department of Defense, 2000), 97. The Australian doctrine envisions submarines to “operate in association with surface task groups, generally separated in distance but positioned to provide the greatest levels of defensive or offensive support.”

¹²⁴ Both limited sea control capability and relative freedom of action are two of the three criteria adopted in this article to characterize middle-power navies.

¹²⁵ Limited sea control has been adopted in this article as one of the distinctive characteristics of middle-power navies.

¹²⁶ John Woodward, Los Cien Días (Buenos Aires: Editorial Sudamericana, 1992), 161-179.

indiscriminate submarine warfare may be more attractive to Nations with small merchant fleets when at war with much bigger naval Powers. This point seems to have been reflected in German submarine warfare in the two world wars, where their operations were seen as a means of crippling British world-wide naval power.’¹²⁷

As a result of the widespread use of submarines, naval powers reacted after the First World War, trying to limit the new weapon’s effectiveness. The growing importance of submarines and the danger they posed was considered by international law. The 1922 Washington Treaty Relating to the Use of Submarines and Noxious Gases in Warfare addressed the issue.¹²⁸ The 1930 London Treaty for the Limitation and Reduction of Naval Armaments also required submarines to place “passengers, crew and ships’ papers in a place of safety” before sinking or rendering a merchant vessel incapable of navigation.¹²⁹ The 1936 London Procès-Verbal Relating to the Rules of Submarine Warfare extended the validity of these restrictions without limit of time.¹³⁰ Despite the entire legal frame restricting submarine warfare, during the Second World War all Germany, the United States and the United Kingdom ordered their submarines to execute unrestricted warfare.¹³¹ For all of them submarine warfare was a way to enhance their navies’ power.

This section has demonstrated with historical examples how submarines grew in importance and how they were particularly suitable to threat powerful adversaries. It has also demonstrated that major powers tried to limit submarines’ freedom of action. The reason was that their interests were at stake. Summarizing, the section proved that submarines leveraged some navies’ power in situations where they played the role of what this article considers a medium-power navy. It has demonstrated that submarines enhance medium-power navies’ power.

¹²⁷ Natalino Ronzitti, The Law of Naval Warfare - A Collection of Agreements and Documents with Commentaries (Dordrecht: Martinus Nijhoff Publishers, 1988), 344. Article 1 section (1) states: “...A merchant vessel must not be destroyed unless the crew and passengers have been first placed in safety.” Article 1 section (2) of the same document states: “Belligerent submarines are not under any circumstances exempted from the rules above sated; and if a submarine cannot capture a merchant vessel in conformity with these rules the existing law of nations requires it to desist from attack and from seizure and to permit the merchant vessel to proceed unmolested.”

¹²⁸ Ibid., 363.

¹²⁹ Ibid., 348. The treaty was signed by 11 nations (Australia, Canada, France, India, Irish Free State, Italy, Japan, New Zealand, South Africa, United Kingdom and United States), most of them under the scope of strong British influence.

¹³⁰ Ibid., 355. Other parts of the 1930 London Treaty for the Limitation and Reduction of Naval Armaments expired in 1936.

¹³¹ Ibid., 359.

This section also showed that the use of submarines grew in importance until they turned into what they are nowadays, a worldwide-accepted weapon. In each nation-state, a framework based on national interests regulates their employment. From those interests, strategies, policies and plans are developed. Submarines must fit to fulfill a certain role. Accomplishing that role, submarines enhance their navies' power. In other words, there exists a connection that links "core values and interests and the tools and instruments to preserve them, which include defence policy and military power."¹³² Submarines are like chess pieces in that scheme, whose details are established in classified contingency plans.

Following, this essay will develop the concept of national interests. It will adopt a standard model to enunciate them. It will also examine the strategic context of Argentina, Canada and Australia, three countries whose navies are Rank 3 (Medium Global Force Projection Navies). The paper will have an insight, in the three cases, to the countries' interests and the roles envisioned for their navies to protect those interests. **In each case it will demonstrate that, within the framework of defence originated in national interests, submarines are intended to enhance the perceived power of the medium-power navies' considered.**

NATIONAL INTERESTS – A STANDARD DEFINITION.

There is not worldwide-adopted standard to define interests. This paper will accept the criteria conceived by Donald Nuechterlein. He conducted a study based on various cases both from the past and also considering probable future conflicts between nation-states. Nuechterlein identifies the need to express in some way the "aspirations and goals of sovereign states in the international arena,"¹³³ frequently referred as "national interests." He defines national interest as the "perceived needs and desires of one sovereign state in relation to the sovereign states comprising its external environment."¹³⁴ This definition is applied to aspects that deal with the external environment.¹³⁵ Following, Nuechterlein groups the interests in four areas: defence,

¹³² W.D Macnamara and Ann Fitz-Gerald, "A National Security Framework for Canada," *Policy Matters*, accessed 14th April 2004; available from <http://www.irpp.org/pm>.

¹³³ Donald E. Nuechterlein, *National Interests and Presidential Leadership: The Setting of Priorities* (Boulder: Westview Press, 1978), 1.

¹³⁴ *Ibid.*, 3.

¹³⁵ When referring to the internal environment, Nuechterlein uses the concept of "public interest."

economic, world order and ideological. The defence interests are related with physical protection of citizens; the economic interests are linked with the wealth, the world-order interests apply to the maintenance of the political and economic conditions in a multi-player scenario (the world), and the ideological interests refer to the values in which a nation-state believes. Nuechterlein emphasizes that defence interests as defined in his criteria should be assumed on a country's own, and not in the context of alliances.¹³⁶

A general principle of basic interests that could apply to any nation-state is enunciated by Nuechterlein as defence of homeland, favourable world order, economic well-being and ideological interests.¹³⁷ In addition, Nuechterlein generated the concept of "levels of intensity," a way to measure the importance that different issues in any of the four categories have to countries. They are survival (critical), vital (dangerous), major (serious) and peripheral (bothersome) issues.

Edwin J. Arnold adds a criteria referring to the use of military power to safeguard a country's national interests. Although he bases his study in different scenarios faced by the United States, his conclusion is that military force should be applied considering two issues. The first one is the level of intensity of the situation to solve. The second is the application of "selective military engagement that most fully supports the pursuit of national interests" and "mindful of benefit versus cost."¹³⁸ Taking into account the relative freedom of action, limited sea control capability and support of national policy that defines middle-power navies, this selectivity explains why a middle-power navy's strategy should be delineated following national interests and maximizing its potential contribution to support those interests.

Having enunciated a general principle of how a country's interests are expressed, their relative importance, and that military power should be applied in support of those interests; this essay focus on Argentina, Canada and Australia. The next section will demonstrate that in the three cases, within the framework of defence originated in national interests, submarines are intended to enhance the perceived power of their navies.

¹³⁶ Donald E. Nuechterlein, National Interests and Presidential Leadership: The Setting of Priorities (Boulder: Westview Press, 1978), 6.

¹³⁷ *Ibid.*, 11.

¹³⁸ Edwin J. Arnold Jr., "The Use of Military Power in Pursuit of National Interests," Parameters - US Army War College Quarterly Vol. XXIV N° 1 Spring 1994: 12.

NATIONAL INTERESTS AND THE ROLE OF SUBMARINES IN THE THREE COUNTRIES CONSIDERED AS CASE STUDIES.

Argentina defines its interests as vital and strategic.¹³⁹ Vital interests are sovereignty and independence, territorial integrity, self-determination and the protection of life and freedom of its people.

Armed forces are expected to act in case of national interests being in risk, under the mandate of the United Nations or other international organizations, and in support of security, the population or allies. The main mission of the military is defined as “to **deter aggression** or to employ its means in order to guarantee the nation’s vital interests.”¹⁴⁰

The limitations of having a middle-power navy and the geographical determinants of power are addressed in the White Book. It states, “it is difficult to shape or design an intermediate Navy¹⁴¹ such as that of the Argentine Republic, especially because of the size of the geographical scenario. As it cannot be prepared for everything, it is necessary to assign priorities to the resources selected.”¹⁴² Thus, in the Argentine case submarines can potentially fulfill a primary role, because the navy is a medium-power one that must deter aggression or defend the national interests in a vast maritime area.

Following the guidance established in the White Book, the Navy of Argentina issued the “Strategic Vision”, a document with the purpose of setting the bases for naval planning and policing, as well as to communicate what the navy does and how. It mentions also the assets required to perform its mission. The Naval Strategic Vision addresses the geographical determinants of power. It highlights the condition of extreme farness of the country’s seas in relation to the world’s centres of power. The document states that the main task of the Navy is

¹³⁹ República Argentina, White Book on National Defense (Buenos Aires: Ministerio de Defensa, 1999), 5-41 - 5-43. The White Book mentions also “strategic areas of interest” like international peace and security, regional integration and security, protection of the nation from drug trafficking, renewable and non-renewable resources, maritime and insular spaces, inter-ocean passages and preservation of areas that can be seen as empty from the geopolitical point of view.

¹⁴⁰ Ibid., 9-81 – 9-83. Other missions related to the purpose of this paper are also defined, like the involvement in peacekeeping operations and/or multinational coalitions or development of self-confidence measures.

¹⁴¹ The expression “intermediate navy” refers to what is defined as “medium power navy” in this article.

¹⁴² República Argentina, White Book on National Defense (Buenos Aires: Ministerio de Defensa, 1999), 15-139. These priorities are related with the selectivity that Edwin Arnold mentioned.

that of contributing to national defence by means of deterrence, and if deterrence fails, by effective employment of force.¹⁴³

On deterrence, it states “deterrence depends on the credibility that a force is able to transmit.”¹⁴⁴ Then it adds, “nevertheless, the sole idea of having a capability is necessary but not enough. The **demonstration of an efficient preparation** and professional employment of force is what turns deterrence credible.”¹⁴⁵ The document concludes that **the best way to avoid conflicts meanwhile protecting the country’s interests is to exercise an effective deterrence**. Based on this national guidance, a capable and credible submarine force will materialize an effective deterrence.

The last section of this paper will provide examples that will help to find out if the Argentine Navy’s submarines have always been -or not- perceived as deterrent assets, as the Argentine Naval Strategic Vision establishes.

After analyzing the case of Argentina, the essay will next focus on the strategic context of Canada. It will analyze the roles envisioned for the navy, and in particular the submarines. This analysis will prove that, within the Canadian framework of defence, submarines are intended to enhance the Canadian Navy’s power.

Canada’s pillars in international affairs are established in its foreign policy. The first one is promotion of prosperity and employment, the second is protection of Canada’s security within a stable global framework and the third is projection of Canadian values and culture.¹⁴⁶ In the way they are enunciated, they do not clearly identify the country’s basic interests. Neither is their “level of concern” (survival, vital, major and peripheral), as defined by Nuechterlein.¹⁴⁷ The Canadian Foreign Policy approaches security (the maintenance of a “stable global

¹⁴³ Armada Argentina, Vision Estratégica Naval (Buenos Aires: Armada Argentina, 1997), 22.

¹⁴⁴ *Ibid.*, 26.

¹⁴⁵ *Ibid.* For submarines in particular, the Naval Strategic Vision emphasizes “the great deterrent capability” that they have.

¹⁴⁶ Canadian Department of Foreign Affairs and International Trade, Canada in the World – Canadian Foreign Policy Review 1995, accessed 29th May 2003; available from http://www.dfait-maeci.gc.ca/foreign_policy/cnd-world/menu-en.asp.

¹⁴⁷ W.D Macnamara and Ann Fitz-Gerald, “A National Security Framework for Canada,” Policy Matters, accessed 14th April 2004; available from <http://www.irpp.org/pm>. The authors address “the lack of any framework for articulating Canada’s national security strategy and its subsequent linkage to defence policy.” Based on Nuechterlein’s National Interest Matrix they propose a National Security Policy Framework for Canada.

framework”) and stresses the importance of Canadian commitment.¹⁴⁸ The Conference of Defence Associations Institute explains the reason for this approach.¹⁴⁹

Based on the three pillars, and particularizing in the second one (protection of security within a stable global framework), the Canadian White Paper on Defence defines the basic concepts in the security area. They are enunciated as “commitments to undertake.” “Defend Canada”, “assist in the defence of North America” and “contribute to international peace and security.”¹⁵⁰

Other approaches have been done to define Canada’s interests. Colin S. Gray enunciated Canadian national interests in a way that fits with Nuechterlein’s model. Among those interests, and in direct relation with this paper, is “protect the national, regional and global geophysical environments.” Gray proposes a defence policy with three main roles for the Canadian Military. The first one is the “direct protection of Canada, including all enforcement duties in support of national sovereignty.”¹⁵¹

The Canadian White Paper on Defence addresses the issue of self-protection when stating, “Canada should never find itself in a position where, as a consequence of past decisions, the defence of our national territory has become the responsibility of others.”¹⁵² Within the concept of protecting Canadians, it states that the Canadian forces will “**demonstrate, with a regular basis, the capability to monitor and control activity within Canada’s territory, airspace and maritime areas of jurisdiction.**”¹⁵³ The “demonstration of capabilities” is one of the ways to execute conventional deterrence. Particularizing in submarines, the White Paper states, “submarines can conduct underwater and surface surveillance of large portions of Canada’s maritime areas of responsibility, require relatively small crews, can be operated for

¹⁴⁸ Canadian Department of Foreign Affairs and International Trade, *Canada in the World – Canadian Foreign Policy Review 1995*, accessed 29th May 2003; available from http://www.dfait-maeci.gc.ca/foreign_policy/cnd-world/menu-en.asp.

¹⁴⁹ Conference of Defence Associations, *Stability and Prosperity: The Benefits of Investment in Defence*, accessed 14th March 2004; available from <http://www.cda-cdai.ca/english-frame.htm>. The members of the Conference of Defence Associations recognize that providing security for the citizens and maintaining sovereignty are top priorities for the Canadian Forces. But the National Interest is “prosperity and well being,” and this is embodied in a stable international system that Canada has to support to get beneficial trade relations.

¹⁵⁰ Canadian Department of National Defence, *1994 White Paper on Defence*, accessed 29th May 2003; available from http://www.forces.gc.ca/admpol/eng/doc/white_e.htm.

¹⁵¹ Colin S. Gray, *Canadians in a Dangerous World* (Toronto: The Atlantic Council of Canada, 1994), 21 According to Colin Gray, the second role for the Canadian Forces should be the contribution to collective and global security, and the third –always according to Colin Gray- should be the support of foreign policy.

¹⁵² Canadian Department of National Defence, *1994 White Paper on Defence*, accessed 29th May 2003; available from http://www.forces.gc.ca/admpol/eng/doc/white_e.htm.

roughly a third of the cost of a modern frigate, and work well with other elements of the Canadian Forces.”¹⁵⁴ The advantages of submarines mentioned in the White Paper are a paraphrased definition of enhancing power.

Within the framework of defence, the Canadian Navy issued its strategy. Canada’s current naval strategy is published in the document “Leadmark: The Navy’s Strategy for 2020.” “Leadmark” adopts for the Canadian Navy the model of three roles enunciated by Ken Booth. The three roles are military, constabulary and diplomatic.¹⁵⁵ Within this model, naval diplomacy is “the use of naval force in support of diplomacy to support, **deter**, persuade or compel.”¹⁵⁶ In the constabulary role, submarines enhance the Royal Canadian Navy’s power carrying on the “assistance to other government departments.”¹⁵⁷ In the military role the functions of the navy are **sea denial**, sea control, fleet in being¹⁵⁸ and maritime power projection. “Leadmark” establishes the objective of allowing “naval forces to **influence the actions of potential and actual opponents, whether for deterrence, intimidation or the actual application of force.**”¹⁵⁹

Independent studies address the necessity of having submarines from the Canadian perspective. Those studies include concepts like “submarines represent an effective, and comparatively inexpensive, naval platform. Submarines require relatively small crews and can operate for about 20 or 30 percent of the cost of major surface vessels. **Submarines are an integral element of the Canadian Task Group** and complement the operational characteristics of surface vessels and maritime aircraft. Submarines make a unique contribution to maritime

¹⁵³ Ibid.

¹⁵⁴ Ibid. The 1994 White Paper on Defence echoes the Joint Committee on Canada’s Defence Policy.

¹⁵⁵ Ken Booth, *Navies and Foreign Policy* (Buenos Aires: Instituto de Publicaciones Navales, 1977), 21.

¹⁵⁶ Canadian Navy, *Leadmark: The Navy’s Strategy for 2020* (Ottawa: Directorate of Maritime Strategy NDHQ, 2001), 37.

¹⁵⁷ Canadian Department of National Defence, *The Potential of a Submarine in Fishery Surveillance and Enforcement* (Ottawa: CFN Consultants, 1993). The document details the advantages of executing fisheries patrols with submarines.

¹⁵⁸ Geoffrey Till, *Estrategia Maritima y la Era Nuclear* (Buenos Aires: Instituto de Publicaciones Navales, 1984), 130. Till attributes the concept of “fleet in being” to the actions carried on by Adm. Torrington against the French fleet in 1690. The idea is to threaten a superior fleet aiming to restrict his freedom of action. This could be achieved deterring a maritime power from offensive action in order to avoid significant losses that would affect other enemy’s vital pursuits. The fleet in being is supposed to force the enemy to tie down its fleet from other vital tasks. The French first used this strategy against the English fleet in the Napoleonic wars.

¹⁵⁹ Canadian Navy, *Leadmark: The Navy’s Strategy for 2020* (Ottawa: Directorate of Maritime Strategy NDHQ, 2001), 149.

operations.”¹⁶⁰ Later the document adds “the nature of submarines makes them a strategic national military asset with an influence that transcends their cost. Due to its relative invulnerability, covertness and potential lethality, **the submarine makes a superior deterrent.**”¹⁶¹ To support even more the Canadian necessity of having submarines, the source states “while the submarine makes a strong contribution to military deterrence, it is equally effective as a maritime law enforcement tool. Both the department of fisheries and Oceans and the Royal Canadian Mounted Police have benefited from the services of Canadian submarines.”¹⁶² Finally, the document shows that “without submarines, Canadian sovereignty beneath the sea would rely upon the goodwill alone of our friends.”¹⁶³

The last section of this paper will provide examples that will help to find out whether the Canadian Navy’s submarines are being perceived as effective accomplishing three roles. The first one is to “demonstrate, with a regular basis, the capability to monitor and control activity within Canada’s territory, airspace and maritime areas of jurisdiction”, as stated in the White Paper. The second is to deter, persuade or compel. The third is to “influence the actions of potential and actual opponents, whether for deterrence, intimidation or the actual application of force”, as the Canadian Navy’s Strategy establishes.

Next, and having analyzed the cases of Argentina and Canada, this section will focus on the strategic context and defence framework of Australia, and the roles assigned to the Royal Australian Navy. As it was in the cases of Argentina and Canada, the article will demonstrate that Australian submarines are intended to enhance their navy’s perceived power.

The Australian interests, as well as the country’s defence policy, are enunciated in the Australian Defence White Paper 2000. The document also establishes both national and military strategies and enunciates military capabilities required. They are founded on a “strategy of denial, highly capable maritime assets and layered defence”¹⁶⁴ aiming to defend the maritime area to the North and East of the country.

¹⁶⁰ “Why Canada Needs a Navy and Why We Need Submarines: Some Basic Facts,” *Maritime Affairs*, accessed 2nd April 2004; available from http://www.naval.ca/article/whyweneedsubmarines_somebasicfacts.html

¹⁶¹ Ibid.

¹⁶² Ibid.

¹⁶³ Ibid.

¹⁶⁴ Alan Dupont, “Transformation or stagnation? Rethinking Australia’s defence,” *Australian Journal of Military Affairs* N°1, (2003): 55. The author makes an analysis of the current Australian defence strategy, stating that it’s outdated and not suitable to face threats posed like terrorism. Nevertheless, he admits the need to emphasize the capabilities related to naval operations in the littorals.

The Australian interests are expressed as “strategic interests,”¹⁶⁵ and they are five. The first one is to ensure the defence of Australia and its direct approaches. The second is to foster the security of the country’s immediate neighbourhood. The third is the promotion of stability and cooperation in Southwest Asia. The fourth is the support of strategic stability in the wider Asia Pacific region. The fifth is to support global security.¹⁶⁶

The first strategic objective includes the protection of the country’s maritime approaches from intrusion by hostile forces. The second strategic objective includes preventing the positioning in neighbouring states of foreign forces that might be used to attack Australia. As the approaches to Australia and its neighbouring countries are various sea lines of communications (SLOCs); which include numerous choke points; submarines therefore should be used to enhance the RAN’s power. Both strategic objectives are influenced by geography as a determinant of national power. The White Paper 2000 reinforces the support that strategic objectives deserve when saying, “the key to defending Australia is to control the air and sea approaches to our continent.”¹⁶⁷ A task tailored for submarines in a middle-power navy.

Three principles drive the Australian approach to military strategy.¹⁶⁸ The first one is self-defence. Australians must be able to defend their country without relying on other countries’ combat forces.¹⁶⁹ The second principle is the necessity to control the air and sea approaches to the country.¹⁷⁰ The third is the recognition of a defensive posture with capability for pro-active operations.¹⁷¹

The relation with Indonesia is another major factor that influences Australian defense strategy. Indonesia is considered by Australia as its “biggest and most important near neighbour.”¹⁷² It is an archipelago of more than 17,000 islands¹⁷³ standing in the middle of

¹⁶⁵ Commonwealth of Australia, *White Paper Defence 2000* (Canberra: Ministry for Defence, 2000), 29. The words “interests” and “objectives” are both used in the White Paper Defence 2000 to refer to the five above-mentioned issues.

¹⁶⁶ *Ibid.*, 30-32.

¹⁶⁷ *Ibid.*, 47.

¹⁶⁸ *Ibid.*, XI.

¹⁶⁹ Submarines play a vital role in accomplishing this principle, due to their unique leveraging capacities. As Owen R. Cote stated, “they have been and are likely to remain the weapon with the highest leverage in a battle for control of the ocean surface.”

¹⁷⁰ Submarines play a vital role in accomplishing this principle too, due to their capability of sea denial.

¹⁷¹ The concept of pro-active operations refers to the possibility of attacking hostile forces as far from Australia as possible. The long endurance of submarines makes them vital assets to this principle too.

¹⁷² Commonwealth of Australia, *White Paper Defence 2000* (Canberra: Ministry for Defence, 2000), 41.

¹⁷³ United States of America, Central Intelligence Agency, *The World Factbook 2003*, accessed 14th March 2004; available from <http://www.cia.gov/cia/publications/factbook/geos/id.html#Geo>

major sea lines of communication, with huge maritime traffic and numerous choke points. In other words, a maritime environment almost customized for the application of naval power through the use of submarines. In addition, the problems in East Timor caused tensions between Australia and Indonesia, which led to postponement of defence-related dialogs.¹⁷⁴ Indonesia constitutes an area of concern for Australia. Submarines are vital assets to address this issue and enhance the RAN's perceived power.

The White Paper 2000 establishes as a priority for the Australian Forces the maritime capability to deny air and sea approaches.¹⁷⁵ A powerful submarine force fulfills this capability to a great extent.

The Australian Maritime Doctrine contributes to the accomplishment of the country's strategy and, as the Canadian Navy, adopts the model proposed by Ken Booth to explain the roles of navies. The Royal Australian Navy's mission is stated as: First, fight and win in the maritime environment. Second, assist in maintaining Australia's sovereignty. Third, contribute to the security of the region.¹⁷⁶

The Australian Maritime Doctrine states that the country's strategic requirements are "closely tied up with the concepts of sea control and **sea denial**."¹⁷⁷ Submarines are to be used as primary strike assets, intelligence-gathering platforms, delivery units for Special Forces, blockade, **sea denial** and other tasks in combination with surface forces.¹⁷⁸ Submarines are also included in the typical organization of a RAN Task Force.¹⁷⁹

Independent opinions from within the RAN reinforce the important role that submarines can play in the Australian defense framework. Considering the possibility of fitting the "Collins" class submarines with Tomahawk missiles, a senior Australian naval officer judged that "a threat of a strike from a submarine would be an effective deterrent in the region."¹⁸⁰

Summarizing, this section of the paper has considered the defence frameworks of the three countries chosen as examples. Those frameworks are based on the concept of national

¹⁷⁴ Commonwealth of Australia, White Paper Defence 2000 (Canberra: Ministry for Defence, 2000), 168.

¹⁷⁵ *Ibid.*, XII.

¹⁷⁶ Royal Australian Navy, Australian Maritime Doctrine, (Canberra: Department of Defense, 2000), 5.

¹⁷⁷ *Ibid.*, 45.

¹⁷⁸ *Ibid.*, 97.

¹⁷⁹ *Ibid.*, 92.

¹⁸⁰ Mark Forbes, "Sub chief calls for cruise missile strike power," The Age 30th January 2004, accessed 5th March 2004; available from <http://www.theage.com.au>.

interests. Within those frameworks, the essay analyzed the roles envisioned for navies, categorized in all cases as “medium-power navies.”

The Argentine Navy unambiguously emphasizes the defensive attitude. Its strategy is based on deterrence and, if necessary, in the use of force. Although it participates actively in coalitions of like-minded nation states, it does not rely heavily in alliances as a primary resort for accomplishing its mission. The geographical characteristics of the country, particularly the long distance to the world’s populated areas, are among the determinants of this naval strategy. Submarines are intended to be major deterrent assets.

The Canadian national interests are related with free economic development as a prerequisite for wealth. Although the country is a permanent member of strong military alliances, Canadians recognize the need to be capable of defending their interests on their own, at least to some extent. The documents that constitute the Canadian defence framework emphasize that defence of the Canadian national territory should not become the responsibility of others. The protection and control of rich fishing areas is one of the examples. The possibility of defending Canada requires to “demonstrate, with a regular basis, the capability to monitor and control activity within Canada’s territory, airspace and maritime areas of jurisdiction.”¹⁸¹ As well, Canada’s naval strategy mentions the capability to “influence the actions of potential and actual opponents, whether for deterrence, intimidation or the actual application of force” and “the use of naval force in support of diplomacy to support, **deter**, persuade or compel.” The framework conceived for Canadian defence intends submarines to enhance the Canadian Navy’s perceived power.

In the case of Australia, the regional SLOCS are among the most crowded in the world, and the country is the only traditional ally of the western world in the region that possesses a medium power navy. Submarines are intended to enhancing their navy’s power not only deterring potential enemies but also exercising sea control and sea denial in numerous choke points, particularly in the proximities of mistrusted Indonesia.

As a conclusion, based on each country’s interests, Argentina, Canada and Australia developed defence policies. Following, their navies developed their missions, strategies and doctrines. In each case, submarines are intended to enhance their navy’s power.

¹⁸¹ Canadian Department of National Defence, 1994 White Paper on Defence, accessed 29th May 2003; available from http://www.forces.gc.ca/admpol/eng/doc/white_e.htm.

COUNTER EXAMPLES THAT INFLUENCE THE PERCEIVED POWER OF THE ARGENTINE, CANADIAN AND AUSTRALIAN NAVIES.

This essay has demonstrated that conventional submarines enhance the perceived power of medium-power navies. In the particular cases of Argentina, Canada and Australia, the paper has demonstrated that submarines are intended by the current official policies to enhance those navies' power. The paper has also established that some of the ways in which submarines should enhance the perceived power of those navies is through sea denial, integrating task groups or exercising conventional deterrence.

This section will provide some counter examples. The purpose and the importance of the counter examples are multiple. They are selected from both war and peacetime cases. They are taken from the three nations considered as examples of medium-power navies that aim their submarines to enhance their navies' power. In the cases of Canada and Australia the counter examples are the expression of problems that have not been worked out yet and represent a concern to their navies. The counter examples provide cases in which the perceived power of the three medium-power navies considered has been –or is- temporary influenced. The counter examples are important because they will modify the reader's perception of the Argentine, Canadian and Australian navies' power.

The first counter example is related with the perceived power of the Argentine submarines. It addresses also their lack of capabilities during a period of time. The Argentine submarine force exists since 1933,¹⁸² but it was not always perceived as an effective one. In his article "Argentina's Geopolitics and her Revolutionary Diesel-Electric Submarines," Keith Wixler mentions that the purpose of the Argentine Submarine Force until the 1970s was to assist

some old submarines were replaced, the Argentine Navy was still a surface-oriented force in the early 1980s.¹⁸³ A force perceived as a training element for other units will never enhance its navy's power. During the conflict in the South Atlantic in 1982, the torpedoes fired from

¹⁸² Ricardo Burzaco, Submarinos de la Armada Argentina 1933-2000 (Buenos Aires : Eugenio B. Ediciones, 1999), 26.

¹⁸³ Keith Wixler : Eu

Argentine Submarine A.R.A “San Luis” failed three times to reach their targets.¹⁸⁴ Some people argue, “the greatest source of concern to the Royal Navy through out the campaign was the whereabouts of the Argentine submarines.”¹⁸⁵ Then, it could be argued that the presence of submarine “San Luis” prevented the British Task Force from operating closer to the Malvinas/Falklands. But that doesn’t seem to be the case. Admiral Woodward wrote, “I thought that if both of them were operational, they would have to be limited to patrol only in areas very close to Port Stanley.”¹⁸⁶ His concern about Argentine naval aircraft firing Exocet missiles may have been greater than the anxiety provoked by the possible presence of one submarine with failing torpedoes. If Admiral Woodward’s perception of the Argentine submarine force was similar to Wixler’s, unsuccessful attacks on his ships surely confirmed it. The Argentine submarine force did not deter the British Fleet. This is not surprising, because although the type 209 submarines were operational in the Argentine Navy since 1975, they had never fired a war shot torpedo.¹⁸⁷ The Argentine Navy learned from the disappointing experience of 1982. Since 1987, war-shot torpedoes are fired periodically. Conventional deterrence is now exercised. Argentine submarines, after an ugly experience, are able to “contribute to national defence by means of deterrence, and if deterrence fails, by effective employment of force”¹⁸⁸, as aimed in the Naval Strategic Vision. Argentine submarines enhance nowadays their navies’ perceived power.

Next, this paper will provide counter examples that influence the perceived power of the Canadian Navy. They address also a temporary lack of capability. Canada has operated submarines since the First World War.¹⁸⁹ Canadian submarines have enhanced their navy’s power in numerous opportunities. The most recent publicized one was the “Turbot War”, where their actions expelled foreign illegal fishing vessels and deterred them from violating again Canadian interests at sea.¹⁹⁰ Nowadays, the Canadian Navy is in the process of incorporating

¹⁸⁴ Horacio A. Mayorga, No Vencidos (Buenos Aires: Editorial Planeta Argentina, 1998), 290-297.

¹⁸⁵ “Why Canada Needs a Navy and Why We Need Submarines: Some Basic Facts,” Maritime Affairs, accessed 2nd April 2004; available from http://www.naval.ca/article/whyweneedsubmarines_somebasicfacts.html

¹⁸⁶ John Woodward, Los Cien Días (Buenos Aires: Editorial Sudamericana S.A, 1992), 139. The word “both” refers to A.R.A “San Luis” and A.R.A “Salta,” her sister ship, which was not operational at the moment.

¹⁸⁷ Ricardo Burzaco, Submarinos de la Armada Argentina 1933-2000 (Buenos Aires: Eugenio B. Ediciones, 1999), 222.

¹⁸⁸ Armada Argentina, Vision Estratégica Naval (Buenos Aires: Armada Argentina, 1997), 22

¹⁸⁹ Dave Perkins, Canada’s Submariners 1914-1923 (Erin: The Boston Mills Press, 1989), 23-38.

¹⁹⁰ Canadian Department of National Defence, The Potential of a Submarine in Fishery Surveillance and Enforcement (Ottawa: CFN Consultants, 1993).

four ex-British “Upholder” class submarines, renamed as “Victoria” class. Since the “Oberon” class submarines were retired and until the “Victoria” class boats develop into operational, there will be no submarine capability in the CN. No submarines will be available to “influence the actions of potential and actual opponents, whether for deterrence, intimidation or the actual application of force” or “support, **deter**, persuade or compel”, as intended by the CN and stated in “Leadmark.” Neither to “demonstrate, with a regular basis, the capability to monitor and control activity within Canada’s territory, airspace and maritime areas of jurisdiction”, as it is written in the White Paper.

This temporary lack, longer than expected due to technical difficulties, is perceived outside the CN. “Naval Forces” published “more problems have surfaced with Canada’s second hand submarines: almost all of the hull valves tested on the HMCS “Victoria” failed inspection.”¹⁹¹ The same magazine published a brief comment saying “in July a leak was found in HMS “Ursula” –to be renamed HMCS “Corner Brook” when she arrives in Canada.”¹⁹² To make things even worse, concepts like “Canadians bought some lemons”¹⁹³ arose, in this case from defence analyst Steven Staples, from the Polaris Institute. The article mentions several troubles in the newly acquired subs; concerning a dent in the hull, cracks in diesel exhaust valves and other “mechanical and public relation problems.”¹⁹⁴ Going even further, the author states “we are reaching the point where we should be asking the British for our money back.”¹⁹⁵

The “National Post” echoes and amplifies the concerns. An article signed by Bill Curry says that the Canadian Military is “on the hook”¹⁹⁶ in relation to the repairing needed in cracked valves on the first two of four subs. The article publishes that the damage was found “after a one-year warranty had expired.”¹⁹⁷ Problems related to a dent that would cost \$ 400,000 to repair are mentioned. But the worst comment is the one that says “in September, 2002, a crew of Halifax-based sailors refused to board one of the subs, claiming it was unsafe.”¹⁹⁸ The same

¹⁹¹ John P. Stewart, “News in Brief,” Naval Forces (International Forum for Maritime Power) Vol. XXIII N° IV, (2002): 151.

¹⁹² Ibid..

¹⁹³ Jim Beatty, “Sub will arrive to fanfare: HMCS Victoria won’t see active duty until 2006,” The Vancouver Sun, 22nd August 2003, B1.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

¹⁹⁶ Bill Curry, “Canada on hook for sub repairs,” National Post, 2nd May 2003, A4.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid.

article mentions a report from Australia that “led the Australians to take a pass on the British subs and build their own.”¹⁹⁹

Other articles also have a blast effect to the Canadian Navy’s perceived power if considering the contribution of the “Victoria” class subs at the present. In “That Sinking Feeling” an anonymous author also talks about the cracked valves issue, which “could allow water into the vessels.”²⁰⁰ There is also a mention to ‘a shallow dent the size of a phone book that was discovered on Victoria’s hull.’²⁰¹ The cause of the dent is said to be not determined.

Floodings and equipment problems also reached public knowledge. Dean Beeby published in “The Ottawa Citizen” information about two floodings in HMCS Cornerbrook. One of them required an emergency-surfacing maneuver. Although a flooding can be expected with a crew in training period, the article mentioned that a released document attributes the incident to “a combination of human error and less-than-optimum equipment performance.”²⁰² An anonymous article that appeared in the periodical “Sea Power”, in the U.S, also refers to problems in the new boat’s fire control systems. It mentions, “several technical problems, ...developed during the installation of Canadian-specified equipment, including fire control and communications systems.”²⁰³ When HMCS “Victoria” made her transit to the West coast, an article reminded people that the new submarines have been “plagued by delays and technical problems since Ottawa bought them” and “have not had a smooth entry into Canadian waters.”²⁰⁴

The Canadian Navy is solving this problem, and rebutting the waterfall of critiques in the press. For example, the navy detached HMCS “Victoria” to the port of Esquimalt, a deployment that “ends a 29-year hiatus of submarines in the West coast.”²⁰⁵ Vice-Admiral Ron Buck said that the vessels are “through the worst of their teething troubles”²⁰⁶ when HMCS Victoria crossed the Panama Canal on her way to the West coast. Vice-Admiral Buck said that the boats are “well worth having in the Canadian fleet.”²⁰⁷ Vice-Admiral Garnett emphasized “experience

¹⁹⁹ Ibid.

²⁰⁰ Anonymous, “That sinking feeling,” Maclean’s, 13th May 2002, 16.

²⁰¹ Ibid.

²⁰² Dean Beeby, “Sub flooded by seawater for second time, papers reveal: “Less-than-optimum” equipment blamed,” The Ottawa Citizen, 19th September 2003, A 10.

²⁰³ Anonymous, ““Technical problems” beset Canadian SSK program,” Sea Power – The Official Publication of the Navy League of the United States N°5, (2002): 27.

²⁰⁴ Chris Wattie, “New subs’ teething woes are over, navy chief says,” National Post, 23rd July 2003, A7.

²⁰⁵ Anonymous, “HMCS Victoria – SSK 876,” Lookout – MARPAC News, 17th September 2003, 1.

²⁰⁶ Chris Wattie, “New subs’ teething woes are over, navy chief says,” National Post, 23rd July 2003, A7.

²⁰⁷ Ibid.

has and is showing that Canada's Navy will return the Victoria Class submarines to service in a safe and efficient manner."²⁰⁸

The Canadian submarines did not have the ugly wartime experience of their Argentine equivalents. Nonetheless, technical problems and a media that mistrusts are preventing them from enhancing the perceived power of the Canadian Navy. Temporary the boats are not perceived as capable to "support, deter, persuade or compel", as intended in the Canadian defensive framework. To enhance the Canadian Navy's power, they will also have to "demonstrate, with a regular basis, the capability to monitor and control activity within Canada's territory, airspace and maritime areas of jurisdiction" and "influence the actions of potential and actual opponents, whether for deterrence, intimidation or the actual application of force." The counter example related to Canadian submarines is relevant for the purpose of this paper for multiple reasons. Bottom line is that the perceived power of Canadian submarines is influenced.

The following counter example impacts the perceived power of the Australian submarines. It addresses also their temporary lack of capabilities. The Australian case is similar to the Canadian. Australia developed its own submarines rather than buying from abroad. The country built six "Collins" class boats. The official RAN information highlights that the boats' have been "tailored specifically for its defence and two-ocean surveillance role in the Royal Australian Navy."²⁰⁹ In particular, the source boasts that "the sophisticated combat system, which gathers its intelligence from its sensors, computes the input and then launches and directs weapons, is an advance on any system currently available."²¹⁰ With such an introduction, the perception is a powerful Australian submarine force. But the capability of the "Collins" class boats to enhance the Royal Australian Navy's perceived power is not, temporary, what it was planned to be.

Since 1999 problems with the "Collins" class have been made public. Australia's "National Post" details some issues. First, it describes the boats as "plagued with design problems and make too much noise."²¹¹ Then it quotes the Defence Minister's comments, enumerating the deficiencies of the boats as "inadequate and outdated combat system, poor

²⁰⁸ Gary L. Garnett, "Submarines," *Maritime Affairs*. Accessed 15th April 2004; available from <http://www.naval.ca/article/Garnett/Submarines.html>.

²⁰⁹ Royal Australian Navy web page, accessed 4 March 2004; available from <http://www.navy.gov.au>.

²¹⁰ Ibid.

²¹¹ Anonymous, "'Soundly built' Aussie subs make too much noise: Official review slams a range of problems in 6 new submarines," *National Post*, 2nd July 1999, A 14.

design and manufacture of the diesel engines, and noise resulting from poor machinery, hull and propeller design.”²¹² Other failures refer to cracked propeller blades (absolutely vital for the submarine’s performance), vibration and poor vision from the periscopes. The Minister assumed the problems and although considered that the boats are what Australia needs, “they are, however, bedeviled by a myriad of design deficiencies...most of which are taking too far to remedy.”²¹³ The Minister also admitted that the problems are “restricting the operational usefulness of the boats.”²¹⁴

In 1999 submarine designer Norman Friedman, a world authority in the subject, seriously criticized the “Collins” class. He mentions reports originated in the Australian Defence Ministry, stating that preventive extension of Oberon class boats’ service life (the ones to be replaced by the “Collins” class) should be ordered.²¹⁵ Other issues commented by Friedman are the replacement of the diesel engines, vibrations in the propeller, vibrations in the masts, poor optical quality in the periscopes and the poor matching of the combat system and the sonar, which is evaluated by Friedman as “far more serious” than the rest of the issues.²¹⁶ Friedman says that the RAN will have to do major modifications in the subs’ combat system “if they are to become fully operational.”²¹⁷

In February 2003 the “Herald Sun” published a statement done by John Moore, who was the Defense Minister from 1998 to 2001, saying that the Collins subs in their current state were not seaworthy.²¹⁸ And he did not mean problems with the combat system, but “significant welding problems” that would prevent them from being in full service.²¹⁹ The statement was made in relation to a flood in HMAS Dechaineux, which allowed tonnes of seawater into the ship and determined the Australian Navy to temporarily retire the Collins class submarines from the fleet.²²⁰ The piece of news also mentions “unreliable engines, propeller shaft leaks,

²¹² Ibid.

²¹³ Ibid.

²¹⁴ Ibid.

²¹⁵ Norman Friedman, “Sub problems down under continue,” United States Naval Institute – Proceedings N° 9, (1999): 121.

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ Anonymous, “Collins subs “unseaworthy”,” Herald Sun Sunday, 25th February 2003. Accessed 16th March 2004; available from <http://www.heraldsun.news.com.au>.

²¹⁹ Ibid.

²²⁰ Ibid.

excessive noise, seawater contamination of fuel, periscope vibration and a computer combat system which failed to achieve basic levels of capability.”²²¹

The Australian Navy is also solving this problem, and rebutting the waterfall of critiques in the press. In 2002 the Australian Government approved the replacement of the combat system for the subs.²²² Eventually, in March 2004 the Australian Minister of Defence announced the “operational release” status of the Collins Class submarines. Anyway, the Minister said, “some aspects of the Class require future rectification or modification.”²²³

In the Australian counter-example, severe technical problems became public through the media. The relevance of this counter example for the purpose of this article is that it deals with the perceived power of the Royal Australian Navy, which is critically influenced. The Australian submarines are temporarily prevented from effectively enhancing the Australian Navy’s power. In conditions like the ones released by the press, the Australian submarines will hardly “ensure the defence of Australia and its direct approaches”, as the White Paper states. Nor will they be able to “fight and win in the maritime environment”, “assist in maintaining Australia’s sovereignty” or “contribute to the security of the region”, as the Australian Maritime Doctrine adopts as the Navy’s mission.

As a conclusion, this section of the article has provided the reader with some counter examples. As it was stated in the opening paragraph, the purpose and importance of the counter examples are multiple. They cover both war and peacetime cases. They involve the three nations considered as examples of medium-power navies that aim their submarines to enhance their navies’ power. In the cases of Canada and Australia the counter examples are the expression of problems that have not been worked out yet, and represent a concern to their navies. The counter examples provide cases in which the perceived power of the three medium-power navies considered has been –or is- temporary weakened instead of being enhanced. Even further, the counter examples provide cases in which submarines did not –or would not be able to- accomplish the tasks assigned to them in national contingency plans. The counter examples

²²¹ Ibid.

²²² Anonymous, “\$54m deal for Collins sub upgrade,” accessed 16th March 2004; available from <http://www.news.com.au>

²²³ Australian Minister for Defence, “Collins class submarines achieve “Operational Release” status,” Media Release 39/2004. Accessed 16th March 2004; available from <http://www.defence.gov.au/minister/Hilltpl.cfm?CurrentId=3617>.

demonstrate the importance of submarines for the three navies studied, because of the tremendous amount of effort that those navies put to solve the problems described.

This paper has enumerated how submarines enhance a navy's power. It has focused on the so-called "medium power navies." Particularly, in three navies that share many common facts, like the Canadian, Australian and Argentine navies. In order to achieve its purpose, the paper examined the concepts of power and deterrence. It proved that power is a way to exert influence. The article also explained that power and perception are linked. Following, this essay has described that power is exercised -among other environments- at sea, and that conventional deterrence -also detailed- is a way to do so. Then, the paper explained how navies are categorized and why a navy can be considered a "medium power" one. The paper also demonstrated that the three navies considered as case studies are indeed medium power navies. After that, the essay enumerated historical examples that clearly demonstrated that conventional submarines enhance their navies' perceived power in a variety of ways. The examples were taken from various historical epochs and are applicable to medium power navies.

Subsequently the article analyzed the defence frameworks of Argentina, Canada and Australia, starting the analysis from the national interests and showing that in all three cases submarines are intended to enhance their navies' power. At the end, in order to strengthen even more the thesis, the paper analyzed cases -in the three medium power navies evaluated- when their perceived power was strongly influenced by undesired, temporary events related with their submarines. The article showed that those cases have been or are being solved, with a great amount of effort from the navies involved. That effort is another way to demonstrate how important submarines are to medium power navies. The conclusion is clear. The employment of conventional submarines can enhance significantly the perceived power of a medium power navy.

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