



*Guillem Colom Piella*

*Professor in Political Science and Public Administration at the University Pablo de Olavide (Seville) and co-director of THIBER, the cybersecurity think tank.*

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## **DEFINING THE US NAVY IN THE 21<sup>ST</sup> CENTURY**

### **Abstract**

*Since the end of the Cold War, the U.S. Navy has made profound changes in its strategic concepts, operating structures, naval doctrines and combat systems to adapt its forces both to the changing security environment and to achieving a Revolution in Military Affairs that promised to transform war at sea. This article examines those changes – firstly oriented towards littoral warfare, later to achieve the revolution and nowadays to secure its access to any point of the globe by contributing to the Air-Sea Battle – aimed at maintaining the relevance of the U.S. Navy in American foreign policy.*

### **KeyWords**

*U.S. Navy, post-Cold War, transformation, littoral warfare, air-sea battle – Revolution in Military Affairs – anti-access – area denial*

## DEFINING THE US NAVY IN THE 21ST CENTURY

### I. INTRODUCTION

Nowadays, armed forces from all over the world are immersed in transformation processes, adapting their force structures and range of capabilities to ever-changing strategic, operative and tactical environments. Initially, this process focused on the achievement of a Revolution in Military Affairs (RMA) that promised to bring about a new style of combat characteristic of the Information Age<sup>1</sup>. Later, the transformation came to define the process whereby the armies of the Cold War adapted their military capabilities to the operative requirements of a world in constant evolution.<sup>2</sup>

The present article focuses its attention on the transformations within the U.S. Navy from 1991 to the present day. We shall see how, initially, they ruled out the existence of any military revolution capable of rendering obsolete the formidable air-sea and antisubmarine fleet built during the Cold War to exercise control over the seas and establish a forward presence throughout the world. The Navy thus clung to its traditional remit, reinforcing its expeditionary vocation and focusing its existing capabilities on operating in littoral regions. Nevertheless, when in the mid-nineties Admiral Cebrowski – basing himself on the “system of systems” that Admiral Owens

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1 In general terms, a RMA could be defined as a profound change in the form of combat, instigated by the exploitation of new weapons systems, operative concepts, doctrines relating to the use of force or ways of organising and administering military means, rendering obsolete the former military style. In the decade of the 90s, this possibility articulated international strategic analysis and U.S. defence planning, as it was assumed that this revolution – made possible by information technology, founded on obtaining full knowledge of the field of battle and built around the generation of a joint force capable of dominating the spheres of land, sea, air, space and cyberspace– would allow for an increase in the military gap between the United States and its potential adversaries and contribute towards maintaining its political hegemony. A more detailed analysis of this idea can be found in COLOM, Guillem: *Entre Ares and Atenea, el debate sobre la Revolución en los Asuntos Militares*, Madrid: Instituto Universitario General Gutiérrez Mellado, 2008.

2 The United States conceives military capacity as the product resulting from the integration of Doctrine, Organisation, Training, Material, Leadership and Education, Personnel and Facilities (DOTMLPF). In Spain it is understood to be a combination of Materiel, Facilities, Human Resources, Training, Doctrine and Organisation (MIRADO).

had proposed years previously – suggested that network warfare was the essence of the RMA, the Navy immediately endorsed this idea and it became the apex of the naval revolution. Expeditionary vocation, littoral warfare, network operations, oceanic supremacy and controversial air-sea battle –recently raised requisites, with the United States fearful that countries like China could challenge their control of the sea and deny access to certain zones of interest in the world– constitute the axes of a naval transformation conditioned by the inheritance of the War on Terror and the grave economic crisis affecting us.

Bearing this in mind, we shall take a panoramic view of the technological, operational and organic changes developed by the U.S. Navy since the end of the Cold War, so as to successfully face the uncertain challenges of the 21st Century.

## 2. THE FUNDAMENTAL PRINCIPLES OF THE NAVAL TRANSFORMATION

Historically speaking, the Navy has been one of the main springs of American foreign policy. During the Cold War, it played a central role in military strategy,<sup>3</sup> protecting lines of sea communication between the United States and its allies, stalking the Soviet fleet while denying it control of the sea and safeguarding the missile-launch submarines, the most fearful element of the nuclear triad.<sup>4</sup>

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3 A complete analysis of the U.S. Navy during the Cold War can be found in: MAROLDA, Edward: “Cold War to Violent Peace”, in HOLLAND, William (ed.): *The Navy*, Washington DC: Naval Historical Foundation, 2000, pp. 105-132). However, it is important to recall that the founding principles of the present-day U.S. Navy were established in the 1980s when, in order to counter-attack the Soviet naval strategy devised by Admiral Gorskho, the Reagan Administration proposed the construction of more and better vessels; that was when the 600-ship Navy was proposed, with the integration of elements of the fleet and the Aegis combat system and the debut of the Tomahawk cruise missile and an aggressive strategy aimed at denying the Soviet fleet control of the sea was implemented, obliging them to reposition their missile-launch submarines to their own coasts or those of the Black Sea, thereby facilitating their destruction in the case of nuclear war. (HATTENDORE, John: *The Evolution of the U.S. Navy’s Maritime Strategy, 1977–1986*, Newport: Naval War College, 2003).

4 This concept came into existence in The United States during the Cold War to define the three vectors – land-based ballistic intercontinental missiles (ICBM), submarine-launched ballistic missiles (SLBM) and nuclear-capable strategic bombers. Relying on this nuclear triad guaranteed the survival of atomic weapons in the case of a preventive strike, enabling the capacity for counter-attack and thus strengthening their deterring force. Besides, the difficulty in detecting submarine missile launchers and their capacity for launching missiles any point of the ocean, turned the SLBM into a weapon of reprisal or counter-attack and the most feared element of this nuclear triad.

Nevertheless, in 1991 there were many American politicians, members of the military and analysts who asked themselves what would be the use of their powerful surface and submarine fleet following the disappearance of the Soviet Union and the consolidation of the nascent RMA that promised to transform military art and revolutionise naval warfare.<sup>5</sup>

The first attempt to set down the broad outlines of U.S. naval strategy after the fall of the Iron Curtain, the spectacular triumph against Iraq and the popularisation of this revolution took place in the year 1992, when the General Staff of the Armed Forces presented the white paper *From the Sea*.<sup>6</sup>

This roadmap took on the political precepts established by the National Security Strategy of 1991 and the Base Force of 1989-92.<sup>7</sup>

They proposed replacing the global-combat strategy against the Soviet Union with a new regional focus and the conservation of sufficient capabilities to guarantee strategic deterrence, maintaining a forward presence in sensitive areas, responding to all kinds of crises that could flare up in any point of the globe and the ability to rebuild, or have the capacity to return to the levels of force prior to the end of the Cold War, supposing that Russia was to suffer an involution and become a risk for regional stability, a threat to international peace and an obstacle to the creation of a new global order.<sup>8</sup> In

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<sup>5</sup> Broadly speaking, the champions of the naval revolution argued that the integration of sensors, platforms and arms would ensure dominance of the oceans and of shipping lines while maintaining a limited physical presence. Thus, it would not only do away with the need to possess great oceanic fleets to exercise control over the sea; it would also transform air-sea groups – described by many as the United States’ best ambassadors, given their capacity to guarantee a forward presence and a response to crises anywhere in the world – which is somewhat irrelevant in 21st Century war (FRIEDMAN, George and Meredith: *The Future of War: Power, Technology and American World Dominance in the Twenty-First Century*, New York, St. Martin’s Griffin, 1997, pp. 331-76).

<sup>6</sup> Department of the Navy: *From the Sea*, Washington DC: GPO, 1992.

<sup>7</sup> One should recall that, while the National Security Strategy was a political document that put forward the broad outlines to be followed in the field of security and defence, the Force Base was a technical work that revised the force structure and catalogue of capacities of the armed forces in order to adapt them to the new strategic reality. An interesting analysis of the context in which the Force Base can be found in COLLINS, John: *National Military Strategy, the DoD Base Force and U.S. Unified Command Plan: An Assessment*, Washington DC: Congressional Research Service, 1992; an exhaustive study on its effects can be found in: “The Base Force: From Global Containment to Regional Forward Presence”, in LARSON, Eric; ORLETSKY, David and LEUSCHNER, Kristin: *Defense Planning in a Decade of Change: Lessons from the Base Force, Bottom-Up Review, and Quadrennial Defense Review*, Santa Monica: RAND Corporation, 2001, pp. 5-39.

<sup>8</sup> These same principles outlined in the controversial Wolfowitz Doctrine and consolidated in the Base Force were to guide the National Military Strategy of 1992 which, published a few months after *From the Sea*, constitutes the last American document to consider the hypothetical resurgence of the Soviet Union as a threat.

response, this white paper demonstrated that the Navy that emerged from the Cold War –with an imposing oceanic fleet, a formidable submarine weaponry, a powerful marine infantry and an efficient support force– could not only carry out these duties very effectively; but was highly capacitated for forward presence and crisis response thanks to its carrier-battle and amphibious-ready groups capable of providing a broad range of responses to any eventuality. However, *From the Sea* also deemed it necessary to make some adjustments in force structure, materiel and operational concepts, with the following goals:

- To increase the deployment capacity and sustainability of the Navy so as to reinforce its expeditionary vocation, by modernising strategic transport, integrating logistics and anticipating materiel.
- To carry out joint operations as a way of power projection on the coast and control of the littoral region<sup>9</sup> via the implementation of a joint doctrine, the improvement of capabilities command, control, communications, computers, intelligence, observation, acquisition of objectives and reconnaissance (C4ISTAR), adapting existing material means and the acquisition of new systems optimised for these new tasks.<sup>10</sup>
- To project naval power on land, strengthening the capacity for land strikes by onboard aircraft, the increased arsenal for naval and submarine-launched cruise missiles, the acquisition of new precision arms and the strengthening of the Marine Corps.

Two years later, the Navy Chiefs of Staff presented *Forward...From the Sea*, which developed the thesis of the previous work. Basing itself on the 1993 *Bottom-Up Review* and the 1994 *National Security Strategy*<sup>11</sup> – which definitively disregarded the Soviet threat, confirmed the new regional approach and put forward as a major

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<sup>9</sup> Bear in mind that the bulk of world's population, interests, maritime traffic, piracy and contraband are concentrated along coastlines. A more detailed analysis of this strategic reality and of the reasons why the Navy should focus its efforts towards littoral warfare can be found in: MUNDI, Carl: "Thunder and Lightning: Joint Littoral Warfare", *Joint Forces Quarterly*, n° 5, 1994, pp. 45-50.

<sup>10</sup> Although the so-called Anti-Access and Area-Denial strategies, which are currently giving rise to so many fears, had not been defined, the document warns that the naval troops operating in the littoral region will have to face a varied range of measures (cruise and ballistic missiles, marine mines, submarines, terrorist attacks, etc.) designed to obstruct or impede the approach of American troops to the coast.

<sup>11</sup> The 1994 *National Security Strategy* formalised the political doctrine of "engagement & enlargement" that guided U.S. external action during President Clinton's first mandate. For more details on the objectives outlined by this work and the enormous differences compared to the last work of the Bush Administration (1988-92), see SNIDER, Don: *Strategy, Forces and Budgets: Dominant Influences in Executive Decision Making, Post-Cold War 1989-91*, Carlisle Barracks, U.S. Army Strategic Studies Institute, 1993, pp. 9-11.

threat the possible outbreak of a regional conflict anywhere on the globe requiring a rapid and decisive response from the United States<sup>12</sup> – this roadmap deduced that the contribution of the Navy, defined as an "...indispensable, unique and exceptional instrument of the Nation's foreign policy",<sup>13</sup> should materialise in forward presence, the projection of power, strategic deterrence, control of the sea, maritime supremacy and strategic deployment. And in order to satisfy this remit, it was proposed that the Navy should make certain adjustments to the structure of its troops, capabilities and procedures:

- Dividing the fleet into distinct blocks or modules constituted from the fourteen existing carrier-battle and amphibian groups that could autonomously intervene in any operation, from humanitarian aid intervention to combat missions. If necessary, these groups could be added to or integrated into a combined, larger force, capable of waging a limited war.
- Modernising and enlarging the support troops to broaden the deployment capacity and autonomous sustainability of the new carrier-battle modules and amphibians as well as the strategic transport of ground forces.
- Improving the fleet's anti-aircraft and anti-missile capacity for providing comprehensive coverage to the troops operating close to the coast<sup>14</sup> and

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12 More specifically, the Bottom-Up Review proposed a forces structure capable of intervening in two regional conflicts (Major Regional Contingencies) arising almost simultaneously in two distinct regions of the world, allegedly North Korea and Iran/Iraq. Basing itself on Operation Desert Storm, the Pentagon sketched a template scenario whereby the United States armed forces should be prepared to face an enemy army with the following volumes of forces: between 400,000 and 750,000 troops, 2,000-4,000 tanks, 3,000-5,000 infantry combat vehicles, 2,000-3,000 pieces of artillery, 500-1,000 warplanes, 100-200 warships and between 100 and 1,000 short or medium-range ballistic missiles equipped with conventional, chemical, biological, nuclear or radiological warheads. Similarly, the war also prompted Washington to use it as an example of regional contingency and establish the defence requirements of the country basing itself on the capacity to go into combat and triumph in two conflicts of these dimensions, disperse in geographical terms and taking place almost simultaneously. To fight against armies of these characteristics easily identifiable with those of Iraq or North Korea, the American strategists made the following force estimates: 4-5 Army divisions, 4-5 expeditionary brigades of the Marine Corps, 10 fighter attack squadrons, 100 bombers, 4-5 air-sea groups and an indeterminate number of special operations forces (O'HANLON, Michael: *Defense Planning for the Late 1990s. Beyond the Desert Storm Framework*, Washington DC: The Brookings Institution Press, 1995, pp. 41-56).

13 Department of the Navy: *Forward...From the Sea*, Washington DC: GPO, 1994, p. 3.

14 To understand this particular threat, among others, posed by anti-ship missiles or cruise missiles in the context of littoral operations, see KREPINEVICH, Andrew; WATTS, Barry and WORK, Robert: *Meeting the Anti-Access and Area-Denial Challenge*, Washington DC, Centre for Strategic and Budgetary Assessments, 2003 and FREIER, Nathan: *The Emerging Anti-Access/Area-Denial*

developing an antiballistic missile defence capable of covering the entire area of operations and contributing towards the defence of the U.S. national territory.<sup>15</sup>

- Enlarging the capacity for joint action between the Navy and the Marine Corps in littoral warfare operations and power projection deep inland, and for joint combined operations with troops from other countries on crisis management and peacekeeping missions.

Finally, this roadmap not only vindicated the usefulness of armament and materiel programmes developed at the time, about which serious political doubts had been expressed regarding its technical and economic viability, –in particular the convertiplane V-22 Osprey, the fighter-bomber F-35 Lightning II, the attack submarine Seawolf and the plans for fast troop-transport catamarans, the CVN21 to build a new series of nuclear propelled aircraft carriers, the CS-21 to provide a family of combatant ships<sup>16</sup> or the project Expeditionary Fighting Vehicle (EFV), providing the Marine Corps with a new amphibian vehicle; it also claimed that these changes in the Navy's orientation, structure, procedures, means and capabilities of the Navy would in a short space of time transform it into an expeditionary force capable of carrying out joint combined operations, projecting power on the coast and ashore, with an adequate structure and capabilities to satisfy the strategic post-Cold war requirements.

The two previous works traced the Navy and Marine Corps joint roadmap because both are functionally dependent on the Department of the Navy. Nevertheless, in

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Challenge, Washington DC, Centre for Strategic and International Studies, 2012.

<sup>15</sup> This need translated into the Aegis Ballistic Missile Defense project which, based on the Aegis combat system, rigged U.S. naval ships with the Standard SM-2 or SM-3 missiles, aimed at providing a theatre missile defence to the naval forces and amphibians deployed abroad as well as forming part of Bush's Ballistic Missile Defense. Today, this programme constitutes a pillar of Obama's anti-missile shield, and is at the same time the cornerstone of the Atlantic Alliance's anti missile system. Furthermore, the naval base of Rota is to harbour four ships, – the first of these docking early in 2014. A more detailed analysis can be found in O'ROURKE, Ronald: Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress, CRS-RL33745, Washington DC: Congressional Research Service, 2013.

<sup>16</sup> The CS-21 project (Combatant Ship for the 21st Century) was an ambitious initiative put forward by the Navy in 1994 to create a family of ships – corvettes, frigates, destroyers and cruise ships – optimised to operate in the littoral region and hit objectives onshore. This project was not only the direct predecessor of the cruise models CG(X), destroyer DD(X) and Littoral Combat Ship (LCS) currently under development; but one of the designs of the CS-21 was the ship Arsenal, a semi-stealth platform armed with cruise missiles and described by many defence analysts, by the 1997 National Defence Panel and by Secretary Rumsfeld as the paradigm of naval revolution. Although this controversial project was cancelled on account of its cost, vulnerability and military value, many of the solutions envisaged for this ship are now to be found in the Zumwal-class destroyers. A complete analysis of these naval programmes can be found in: SCOTT, Truver: "A Selected View of U.S. Navy Programs: Transformation for the Future", *Sea Power*, n° 144, 1998, pp. 33-50.

1996 the latter published its first white paper, titled *Operational Maneuver From the Sea: A Concept for the Projection of Naval Power Ashore*,<sup>17</sup> offering its view on how amphibian operations in littoral warfare should be conducted. Having taken on the principles identified in *Forward...From the Sea*, the report reaffirmed the Marine Corps' expeditionary vocation. In addition it detailed its new modular composition (based on Expeditionary Units with a ground, air and support component and the capacity for additional larger Brigades or Expeditionary Troops), its special ability in joint combined operations and its recently developed doctrines to efficiently engage in any kind of stabilising and support task : from the rescue of non-combatants and humanitarian aid to peacekeeping and crisis response missions.

### 3. THE NAVY JOINS THE REVOLUTION

In November 1997, the Navy Chief of Staff published the *Navy Operational Concept: Operating Forward...From the Sea*.<sup>18</sup> Presented by its authors as an adaptation of the 1994 roadmap to the new revolutionary context, deemed by many to be the Navy's tacit acceptance of the RMA,<sup>19</sup> this work is much more moderate and conservative than one might suppose. In effect, it was drawn up a year after the *Joint Vision 2010* (1996) established the pillars of the U.S. Revolution in Military Affairs and eight months after the first Quadrennial Defence Review politically admitted the existence of the revolution and proclaimed that network-centric warfare would guide the transformation of the Navy;<sup>20</sup> and at a moment when important sectors of

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17 Department of the Navy: *Operational Maneuver From the Sea: A Concept for the Projection of Naval Power Ashore*, Washington DC: GPO, 1996.

18 Department of the Navy: *Navy Operational Concept: Operating Forward...From the Sea*, Washington DC: GPO, 1997.

19 DOMBROWSKI, Peter: "Transforming the Navy: Punching a Feather Bed?", *Naval War College Review*, vol. 56 n° 3, 2003, pp. 103-123 and TANGREDI, Sam: "Assessing New Missions", in BINNENDIJK, Hans (ed.): *Transforming America's Military*, Washington DC, National Defense University, 2002, pp. 9-13.

20 In effect, the Quadrennial Defence Review stated that: "The Navy has embraced an RMA concept called network-centric warfare, the ability of widely dispersed but robustly networked sensors, command centres, and forces to have significantly enhanced massed effects. Combining forward presence with network-centric combat power, the Navy will close timelines, decisively alter initial conditions, and seek to head off undesired events before they start.(Department of Defense [DoD]: *Quadrennial Defense Review 1997*, Washington DC: GPO, 1997, p. 11).



the Navy not only embraced the RMA<sup>21</sup> but had been converted – thanks to Admiral Owens and his system of systems<sup>22</sup> and Admiral Cebrowski with the network-centric warfare<sup>23</sup> – its greatest promoters.

Similar in form and content to the 1996 roadmap, this document continued ratifying the role of the Navy as the pillar of U.S. foreign policy and established its main duties as forward presence, strategic deterrence, control of the sea, maritime supremacy and strategic deployment. However, the bulk of the report dealt with littoral warfare and power projection onshore, as it was in coastal regions where the new technologies, procedures, concepts and organic structures promised to revolutionise how missions were conducted.<sup>24</sup>

Basing itself on the framework for joint operations laid down in Joint Vision 2010 – where the dominance of manoeuvre, precision strikes, multidimensional protection and consolidated logistics, together with superior information constituted the pillars of the U.S. Revolution in Military Affairs – this roadmap affirmed that

21 See, for example, the great variety of articles written by Army officers, who were analysing the impact of the RMA on the sea, published in specialised journals like *Sea Power*, *Proceedings* or *Joint Forces Quarterly*; or the numerous research works and monographs penned by pupils, teachers and researchers of the United States Naval School of War.

22 Classified as the essence of the RMA, the system of systems is founded on the networked connectivity that any soldier, sensor, arm, platform or team has available in order to accumulate an immense quantity of information on the operations area, converting it into useful intelligence for the troops operating on the ground and putting it to immediate use in order to defeat the enemy. By providing full knowledge of the battlefield, the system-of-systems not only serves to reduce the inherent friction of any armed conflict, but also to dissipate the fog of war that surrounds any military operation from the beginning of time (OWENS, William: “The Emerging System-of-Systems”, *Proceedings*, vol. 121 n° 1.105, 1995, pp. 35-39).

23 Considered to constitute the theory of conflicts of the Information Age, it is based on the possibilities offered by the system of systems for the development of a new style of combat which, organised around small joint network-centred forces, and distributed geographically across the battlefield, permits operations with historically-speaking unprecedented coordination, flexibility, speed, precision and security, enabling these to identify, determine and hit enemy targets before they realise that they have been discovered. Indeed, network-centric warfare was to become one of the central elements of the RMA and one of the pillars of the new American style of fighting. (CEBROWSKI, Arthur and GARSTKA, John: “Network-Centric Warfare: Its Origin and Future”, *Proceedings*, vol. 124 n° 1.139, 1998, pp. 28-35).

24 It is interesting to note that *Forward...From the Sea* is the first official document that explained the reasons behind the Navy's interest in littoral warfare, reasons that years previously had been addressed in numerous technical and academic publications. Thus, as the document argues: “...the landward side of the littoral [...] encompasses areas of strategic importance to the United States. Seventy-five percent of the Earth's population and a similar proportion of national capitals and major commercial centres lie in the littorals. These are the places where American influence and power have the greatest impact and are needed most often.” (Department of the Navy, *Operational Maneuver... op. cit.*, p. 3).

the greatest, most decisive and undoubtedly revolutionary contribution of the Navy to the joint roadmap was in the littoral region. Why? Because the new technologies (systems C4 and ISTAR, unmanned aircraft systems and submarines, cruise missiles and precision armaments) and the new procedures (network-centric and effects-based operations,<sup>25</sup> littoral warfare, dominance of amphibian manoeuvres, precision strikes inland, multidimensional protection or logistics efficiency) would permit the Navy to dominate the entire littoral region.

In this sense, the Navy could provide the necessary protection and support (theatre anti-aircraft and anti-missile coverage,<sup>26</sup> precision firepower against the enemy defence, forward operational headquarters and command and control capabilities, observation and acquisition of objectives) to guarantee that the joint force could operate freely in the littoral; moreover, its own carrier-battle resources and amphibians would allow them to strike down with great precision any objective situated on the coast or further inland, deploying on firm ground a powerful force capable of facing any rival and carrying out deep strikes against the strategic objectives of the enemy.

Nevertheless, this roadmap that Admiral Jay Johnson – Head of Navy Operations between 1996 and 2000 – viewed as the cornerstone of the U.S. naval transformation had a very short life, as just a few months afterwards it was replaced by a new, much more revolutionary work. This decision, possibly due to enormous criticism on the part of analysts over the extreme moderation of the former document,<sup>27</sup> and the recommendations of the National Defence Panel brought about the publication

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25 Although this work never explicitly mentions network-centric warfare or effects-based operations, there are several references to both ideas. In relation to the networked integration of the fleet, see the following passage: “We take advantage of the reach of our sensors and weapons to project power over vast areas from a dispersed networked force – concentrating combat power rather than our platforms and delivering firepower far inland when required by the mission.” (Ibid., p. 5). And on the capacity of reaching objectives without having to resort to the physical destruction of the adversary, see: “We deliver precision naval fires to accomplish strategic, operational and tactical objectives. Precision means having the desired effects on the enemy, limiting collateral damage, lessening the risk to our forces, and achieving maximum impact with our combat resources.” (Ibid., p. 8). However, while the concept of network-centric warfare was to be introduced a year later into the Navy’s official doctrine, effects-based operations were never employed; probably for organisational reasons, having been an idea developed by the Air Force. Nevertheless, in 2002, the roadmap *SeaPower 21* introduced the concept of Effects-Based Striking Power. For more detailed information, COLOM, Guillem: “La evolución de la concepción operativa basada en efectos”, *Política y Strategy*, nº 117, 2011, pp. 66-88.

26 For information on all aspects relating to theatre missile defence and its role in littoral warfare, see NICKERSON, Brian: *Theatre Missile Defense: Operating Forward From the Sea*, Maxwell AFB: Air University Press, 1997.

27 DOMBROWSKI, Peter and ROSS, Andrew: *Naval Transformation: Prospects and Implications*, Boston, American Political Science Association, 2002 or KREPINEVICH, Andrew: *National Defense Panel Report: First Shot in the Debate Over Transforming the U.S. Military*, Washington DC: Centre for Strategic & Budgetary Assessments, 1997, pp. 5-8.

of Vision...Presence...Power.<sup>28</sup> This white paper not only laid down the bases of the revolution and the U.S. naval transformation, but it turned the Navy into the staunchest backer and defender of the revolution.

In effect, the National Defence Panel— an independent commission of experts created ad hoc to examine the 1997 Quadrennial Defence Review – had concluded that the Navy’s future plans were scarcely revolutionary, considering at the same time that their acquisition plan was anchored in the industrial war paradigm.<sup>29</sup> To amend this situation, the commission put together a package of recommendations geared towards the transformation of the Navy so that it could attain the RMA reclaimed by Donald Rumsfeld four years later when he produced the Quadrennial Defence Review of 2001. Among these recommendations was the cancellation of the last Nimitz-class nuclear aircraft-carrier, the F-18E/F Hornet and F-35 Lightning II combat planes and the convertiplane V-22 Osprey, a reduction in plans for acquiring CG(X)-class cruisers and DD(X) destroyers and the redefinition of the EFV expeditionary fighting vehicle developed for the Marine Corps; and in their place the acquisition of unmanned strike air systems and submarines, small aircraft-carriers from which these drones would operate, submarines equipped with cruise missiles or Arsenal ships almost invisible to radar and strongly armed with ballistic and cruise missiles.<sup>30</sup> Similarly, it

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28 Department of the Navy, *Vision...Presence...Power*, Washington DC: GPO, 1998.

29 National Defense Panel: *Transforming Defense: National Security in the 21st Century*, Washington DC: Department of Defense, 1997. More specifically, this work claimed that the United States was at a strategic crossroads, given that on the one hand it was at the cusp of a revolution capable of transforming the art of war and guaranteeing the military supremacy of the country in the new century, while on the other hand the apparent world stability was hiding the gestation of new risks and threats of a very different nature, intensity and provenance that would come to the fore in the early decades of the 21st Century. As a result, the recovery of the RMA and the preparation of the armed forces to engage in the future operational environment required identifying the emerging challenges – conventional war against advanced adversaries, counter-insurgency, counterterrorism, asymmetric war, information missions, war in space, cyber-war, capability of access to hostile zones away from enemy defence lines, protection of their forces deployed abroad or defence of national territory from direct attacks or the disruption of information networks – and developing and implementing military capacities distinct to those required during the Cold War. The report deemed it essential for the Pentagon to launch an ambitious “strategy of transformation” to bring about the revolution and anticipate the challenges that could be on the horizon from 2010-2020; thus achieving a flexible future force, stealthy, fast, modular, network-centric, highly deployable, capable of carrying out precision strikes and conducting combined inter-agency operations in any scenario. In other words, this report laid the foundations for defence transformation.

30 Considered the battleship of the 21st Century, the Arsenal was the star of the CS-21 project that was to provide the navy with a family of ships optimised for land strikes. Conceived as a semi-stealth platform of 20,000 and 30,000 ton displacement, heavily protected and armed with over 500 missiles to strike ground objectives with precision, this ship was considered the paradigm of naval revolution. In this context, see: DRIESBACH Dawn: *The Arsenal Ship and the U.S. Navy: A Revolution in Military Affairs Perspective*, Monterey, Naval Postgraduate School, 1996; LANCE, Joseph: *Can the*

recommended furthering the integration of platforms, sensors and arms systems and the implementation of networked warfare.

Bearing all these elements in mind, *Vision...Presence...Power* was proposed as a guide to the modernisation and materiel acquisition programmes being undertaken within the Navy in fulfilment of the tenets in *Forward...From the Sea* following the precepts of *Joint Vision 2010*.<sup>31</sup> This report not only responded to the voices of criticism vindicating the Navy's long revolutionary tradition, but also explicitly recognised the existence of the RMA and underlined the need for undertaking a transformation to secure the revolution and adapt the facilities and the capabilities of the Navy to the challenges of the 21st Century.

In relation to the RMA, the work showed –following the lines marked down by the National Defence Panel– that the United States armed forces were at the initial stage of a revolution which, conditioned by the military application of information technologies and communications, would transform the art of warfare in the first decades of the 21st Century.

This profound technological, doctrinal, operational, organisational and institutional change and one that hinged on a new style of networked warfare,<sup>32</sup> was to combine with a Revolution in Business Affairs<sup>33</sup> that would improve the financial management of defence externalising numerous support functions (logistics, coordination, maintenance or administration); the use of commercial or dual-use technologies in military systems, the introduction of business management techniques, the reduction

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Arsenal Ship Replace the Battleship?, Fort Leavenworth, U.S. Army Command and General Staff College, 1997 or FRIEDMAN, George and Meredith: *The Future of War...* op. cit., pp. 180-204.

31 An interesting analysis of these programmes, enumerated in chapter 3 of *Vision...Presence...Power* and divided into platforms, sensors, arms, C4I systems and anti-mine war machinery, can be found in: SCOTT, Truver: "A Selected View of...", op. cit., 33-50.

32 For a more complete study of the Navy's Network Centric Warfare and of all the programmes that underpin it– the Cooperative Engagement Capability, the Joint Fires Network, the Information Technology for the 21st Century, the FORCENet and the Navy-Marine Corps Intranet – see the following work: O'ROURKE, Ronald: *Navy Network-Centric Warfare Concept: Key Programs and Issues for Congress*, RS-20557, Washington DC: Congressional Research Service, 2001.

33 The Navy took serious note of the need to externalise functions, rationalise acquisitions, flexibilise funding or use spiral design for its products so as to save on R + D costs and accelerate their entry into service. An example of this was the process followed for the designing, funding and planning of the life cycle of the LCS, of the Independence and Freedom classes or the Zumwalt-class destroyers. However, these programmes have not been without their delays, overruns, and redefinitions of technical specifications. For further information see: Government Accountability Office [GAO]: *Significant Investments in the Littoral Combat Ship Continue Amid Substantial Unknowns about Capabilities, Use, and Cost*, GAO-13-738T, Washington DC: GAO, 2013 u O'ROURKE, Ronald: *Navy DDG-51 and DDG-1000 Destroyer Programs: Background and Issues for Congress*, RL-32109, Washington DC: Congressional Research Service, 2013.

of overheads in infrastructures and the reform of the process of acquiring armaments and materiel. In other words:

“...today, the Navy and the Marine Corps are on the threshold of a revolution fuelled by truly revolutionary developments in information technologies. This transformation involves much more than the acquisition of new military systems; it calls for harnessing new civilian technologies to support the Navy-Marine Corps Team’s advanced concepts, doctrine, and operations. The full potential of this RMA can be realised, however, only by exploiting information superiority and by achieving an integrated set of systems founded on a common C4ISTAR architecture. To this end, the Navy’s evolving concept of Network-Centric Warfare will provide the foundation for future exploitation of today’s and tomorrow’s RMAs. The Navy’s RMA will be nurtured by a similarly far-reaching Revolution in Business Affairs that will support the transformation of the Navy for the 21st century.”<sup>34</sup>

In relation to the transformation, drawing from the forces structure proposed by the Quadrennial Defence Review<sup>35</sup> and the roadmap drawn up by the National Defence Panel, this work considered that the Navy had to rely on the Revolution in Business Affairs<sup>36</sup> – that would sanitise the Navy’s financial situation, accelerate the entry into service of new equipment, lower the life cycle of systems and make more flexible the acquisition and funding of materiel –to accomplish the process towards achieving a Revolution in Military Affairs and adapt its infrastructure, capabilities and forces to the challenges of the 21st Century. These changes would build a Navy with an expeditionary vocation, logistically self-sufficient, modularly organised, network-centric, prepared to operate in the entire range of operations and capable of imposing itself on any adversary in whatever contingency, present and future.

To embark on this process without degrading the capacity of the fleet to fulfil its present duties, the document proposed working in three separate areas in parallel: Force Readiness; Force Structure; and Force Transformation. This strategy, coherent with that proposed by the Quadrennial Defence Review and endorsed by the National Defence Panel a year earlier, would guarantee the maintenance of a sufficient volume of troops to ensure forward deployed presence, deterrence and crisis response during

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34 Department of the Navy, *Vision...op. cit.*, p. 2.

35 The proposed structure of forces consisted in twelve air-sea groups, eleven carrier air wings, twelve amphibian groups, fifty nuclear attack submarines, fourteen missile-launch submarines and one hundred and sixteen warships.

36 Conditioned by the application of information technologies in business management, the Revolution in Business Affairs is based on promoting streamlining, centralising processes of armaments’ and materiel procurement, the simplifying and flexibilising of administrative procedures, employing dual-use technologies and the outsourcing of certain services to optimise defence management and guaranteeing the necessary funding to cover the RMA (CARTER, Ashton and WHITE, John (eds.): *Keeping the Edge: Managing Defense for the Future*, Cambridge: MIT Press, 2001).

the “strategic pause” that the United States underwent in the nineties,<sup>37</sup> while proceeding with the procurement of new capabilities, the selective modernisation of certain systems and the development, experimentation and implementation of new concepts, doctrines and procedures aimed at preparing the Navy for the challenges of the future.<sup>38</sup>

Although this guide to the Navy programmes in progress was substituted a year later by a revised edition of *Vision...Presence...Power*, that set out a new order of priorities for the acquisition and financing of materiel, the work not only established the pillars of the U.S. naval revolution; but it also constitutes the roadmap that was to guide the Navy’s transformation process right up to the *Sea Power 21* (2002), which to this day continues to constitute the definitive roadmap of the U.S. naval transformation process.

While the Navy General Staff used this provisional roadmap to guide its transformation, the Marine Corps in the year 2000 published the *Marine Corps Strategy 21*,<sup>39</sup> which replaced the *Operational Manoeuvre From the Sea* published four years previously. Proposed as an update, following along the lines defined by *Vision...Presence...Power* for naval transformation and the principles of *Joint Vision 2020* (2000) for joint operations between the three armies, this document maintained the same ideas that guided the previous roadmap (expeditionary vocation, modular composition, capacity to operate in joint-combined environments and stability and support initiatives), introducing network-centric warfare as the pillar of its transformation and the need to improve its capacity to operate in urban environments and low-intensity activities; something that turned out to be fundamental in the War on Terror.

Finally, in 2002 the Department of the Navy published the definitive white paper on U.S. naval transformation: *Sea Power 21*.<sup>40</sup> This work, replacing *Power and Access...*

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37 The concept Strategic Pause – understood as the period between the disappearance of the Soviet Union and the emergence of a new power capable of disputing United States hegemony– was used for the first time officially by the Secretary of Defence Les Aspin (1993-94) in the Bottom-Up Review. Widely used by the Clinton Administration to justify his decisions in defence matters, it was harshly criticised by the Republican opposition, who attempted to take advantage of the apparent stability afforded by the post-Cold War era to transform – as the neo-conservative think tank Project for a New American Century proposed in the year 2000 – the war machinery of the country in order to face future challenges.

38 A critical analysis of this process can be found in: DOMBROSKY, Peter: *Transforming the Navy...* op. cit., pp. 117-121.

39 Department of the Navy: *Marine Corps Strategy 21*, Washington DC: GPO, 2000.

40 Department of the Navy: *Sea Power 21*, Washington DC: GPO, 2002. A good synthesis of this roadmap can be found in: CLARK, Vernon: “Sea Power 21: Projecting Decisive Joint Capabilities”, *Proceedings*, vol. 128 nº 1.196, 2002, pp. 32-41; a harsh critique can be found in: HUBER, Jeff: “The

From the Sea dating from 1997, was drawn up in parallel to the Naval Transformation Roadmap: Power and Access...From the Sea,<sup>41</sup> a technical document that specified the Navy's priority programmes for 2003-2007 targeted at achieving the transformation objectives marked out by the Quadrennial Defence Review of 2001 and further defined in the Defence Planning Guide of 2002. For this reason, the roadmap and the white paper are based on the same principles, pose the same concepts and define the same priorities and objectives for the transformation of the U.S. Navy.

Taking its inspiration from the pillars of the naval revolution set out in Vision... Presence...Power, the broad outlines of military transformation delineated in the Joint Vision 2020<sup>42</sup> and the strategic objectives of the process established in the Quadrennial Defence Review of 2001, this document attempted to design the roadmap for the implementation of the U.S. naval transformation. This process had two major objectives:

- To design a modern and powerful fleet with an expeditionary vocation, modular in composition and network-centric, prepared to face any present or future adversary and with sufficient capability to exercise control over the seas and project power far inland.
- To contribute to the strategy of one and a half wars proposed by Rumsfeld by providing sufficient naval combat facilities and support to defend North American waters and territory, maintain advanced deterrence in four distant operations theatres, fight in two regional wars simultaneously and triumph decisively in one of them.<sup>43</sup>

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Invasion of the Transformers”, Proceedings, vol. 129 n° 1.208, 2003, pp. 25-34.

<sup>41</sup> It is interesting to point out that, paradoxically, the Naval Transformation Roadmap: Power and Access...From the Sea, does not replace the work of the same name published in 1997, the natural forerunner to the Sea Power 21 – but rather Vision...Presence...Power.

<sup>42</sup> This document replaced the Joint Vision 2010 published four years earlier. Less technically-centred than its predecessor, which developed the ideas presented in the earlier work and warned – in the wake of the attempts by the three armies to prioritise the acquisition of materiel to the detriment of other organisational or doctrinal changes– that technological innovation alone would have great difficulty in bringing about revolutionary effects. These could only occur if information technologies were combined with changes in doctrine, organisation, tactics, training, force structure and command and troop instruction. To reach that objective, the fundamental principles of the 1996 roadmap were maintained and the broad outlines of the American military transformation adopted, focused on achieving a joint force capable of imposing itself on any future adversary across the entire range of operations (Chief of the Joint Chiefs of Staff: Joint Vision 2020, Washington DC: GPO, 2000).

<sup>43</sup> Based on the Quadrennial Defence Review 2001, it replaced the template of two regional conflicts posed at the end of the Cold War. Valid during the entire War on Terror, this standard has been replaced in the Quadrennial Defence Review of 2014.

The document stated the need for undertaking an ambitious process of transformation that would exploit the technological advances of the RMA (the document makes explicit reference to the C4ISTAR systems, intelligent armaments, unmanned systems, the integration of platforms and the interconnection of networks) to accommodate the strategy, facilities and capabilities of the Navy to deal with present and emerging threats. This would guarantee the fulfilment of its traditional obligations (control of the sea, projection of power, deterrence, strategic deployment and forward deployment presence) and would reinforce its absolute control of the oceans and the rapid and decisive projection of naval power further inland. To achieve this objective, the white paper proposed working in three large areas:

- Sea Strike, defined as the capacity to project persistent offensive power in a flexible, precise, decisive manner and with full autonomy for the utilisation of lethal and non-lethal means.
- Sea Shield, understood as the capacity to provide full protection –especially anti-aircraft and anti-missile coverage– both to troops deployed abroad and on U.S. national territory.<sup>44</sup>
- Sea Basing, understood as the ability to sustain any military deployment with flexible, efficient and secure support to the force, thanks to the use of networked sea bases situated inside the theatre of operations.<sup>45</sup>

The offensive capabilities of Sea Strike, the defensive capabilities of Sea Shield and the logistics of Sea Basing would be integrated under Force Net which was defined as “...the architecture of systems and the operational concept for naval warfare in the information age integrating warriors, sensors, command and control, platforms, and weapons into a networked, distributed combat force”,<sup>46</sup> thus constituting the Navy’s initiative to make networked warfare a reality.<sup>47</sup>

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44 This work referred explicitly both to the Navy’s theatre defence initiative already raised in previous papers and its contribution – via the Aegis Ballistic Missile Defence programme aimed at the destruction of enemy ballistic missiles during the central phase of its flight towards its objective – to the Ballistic Missiles Defence proposed by President Bush.

45 There have been repeated calls for the building of large logistic bases which, situated in peace times on the open sea, could be towed to the theatre of operations in the case of conflict (FRIEDMAN, George and Meredith: *The Future of War...* op. cit., p. 379). However, the Sea Basing concept refers to the use of logistic support ships as floating bases, to increase the security of supplies and logistic autonomy by doing away with the requirement of ports within the area of operations. For further details on this initiative : HENNING, Mark: *U.S. Navy Transformation: Sea Basing as Sea Power 21 Prototypes*, Carlisle Barracks, U.S. Army Strategic Studies Institute, 2005 or the viability study carried out by Secretary Rumsfeld: *Defence Science Board: Task Force on Sea Basing*, Washington DC: Office of the Under Secretary of Defence for Acquisition, Technology and Logistics, 2003.

46 Department of the Navy, *Sea Power 21...* op. cit., p. 6.

47 This initiative to implement Network Centric Warfare/Operations in the Navy adopts the



To integrate these initiatives aimed at enhancing the flexibility, modularity, autonomous logistics and firepower of the fleet in the Navy force structure, the work proposed the implementation of a new Global Concept of Operations (2003). Composed of a total of 375 ships – much fewer than the 600-ship Navy proposed by Ronald Reagan in the 1980s, but considerably greater than the fleet of the immediate post-Cold War era<sup>48</sup> – this was to be constituted as follows:

- Twelve carrier-battle groups (plus two on reserve) for control of the sea and projecting power.
- Twelve amphibious ready groups, plus two on reserve, for crisis response and the initial entry into the theatre of operations. Although these forces would be designed to operate independently, as the spearhead of any naval operation, the carrier-battle groups and the amphibious-ready groups could be integrated into expeditionary strike groups in the case of war.
- Nine surface action groups and four missile-firing submarines, to contribute to sea control and carry out maritime interdiction, observation and intelligence tasks.
- Nine strike/missile defence surface action groups to protect troops deployed and contribute to the Ballistic Missiles Defence.
- A numerous combat support force, made up of floating sea-bases and transport ships, permitting fast projection and support for US forces.

To achieve this capabilities' objective, the document proposed a transformation plan divided into three main areas: the first aimed at the development and experimentation of new teams, operating concepts, procedures and innovative organisation (Sea Trial); the second, designed to enhance levels of instruction, training, and preparation of civil and military personnel (Sea Warrior) and the third, focused on greater financial and organisational efficiencies within the Navy to enhance the available human and materiel resources and guarantee the funding necessary to acquire the platforms, systems and weaponry required by the 21st Century. (Sea Enterprise).

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same name as its conceptual predecessor: the project FORCEnet (mid- 80s) that proposed the integration of surface ships, submarines, ground facilities and aircraft in a network that would foster the coordination and decentralisation of the fleet, and which, years later, became integrated into the project Information Technologies for the 21st Century (IT-21).

<sup>48</sup> For information on the evolution of the U.S. fleet from 1886 to 2011, it is interesting to consult the webpage “U.S. Navy Active Ship Force Levels” put together by the U.S. Naval History and Heritage in: <http://www.history.navy.mil/branches/org9-4.htm>. However, it should be clarified that it only includes ships in active service (not those on active reserve) and nor does it include submarines, minesweepers, patrol boats or auxiliary ships.

Although *Sea Power* was the swan song of the U.S. naval revolution, it still formally constitutes the roadmap of reference for the country's naval transformation in the absence of a new work that would incorporate the teachings of the War on Terror and assume the precepts established by President Obama in the Strategic Defence Guide of 2012,<sup>49</sup> the capabilities required to exploit Air-Sea Battle<sup>50</sup> and a renewed focus on the Asia-Pacific region enshrined in the Quadrennial Defence Review, which the executive presented in March 2014.<sup>51</sup>

Nevertheless, despite the fact that the focal areas and the guidelines for the transformation remain valid, many of the ideas raised in *Sea Power 21* have become obsolete. On the one hand, the search for the RMA has long since disappeared off the Pentagon's agenda, although the military developments of these last few years suggest that it could soon be consolidated, with ever-increasing numbers hoping for its recovery in order to resolve the strategic problems facing the United States following the War on Terror.<sup>52</sup> Besides, various research projects and materiel procurement

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49 Although this report laid down the broad outlines of U.S. defence policy and military organisation, it has no real legislative value. In fact, it was simply a roadmap that the Democrat executive drew up in order to present an adjustment plan prior to the debate on the 2013 federal budget and block the action of the House of Representatives, controlled by the Republican Party. However, its contents have been formalised in the Quadrennial Defence Review of 2014 and possibly this will also occur with the National Security Strategy, which the executive should produce next year at the latest (Office of the Secretary of Defence: *Sustaining U.S. Global Leadership: Priorities for 21st Century Defence*, Washington DC, GPO, 2012).

50 Basically, the Air-Sea Battle is based on cooperation between the Air Force and the Navy to guarantee the entry in force and U.S. movement capabilities in theatres of hostile operations and is proposed as the solution to anti-access strategies preventing troops from entering into a hostile theatre of operations and area denial activities (VAN TOL, Jan; GUNZINGER, Mark; KREPINEVICH, Andrew and THOMAS, Jim: *Air Sea Battle: A Point-of-Departure Operational Concept*, Washington DC, Centre for Strategic & Budgetary Assessments, 2010; OSD: *Air Budgetary Assessments*, 2011). Similarly, to observe how the search for the RMA and the consolidation of a techno-centric view of conflict is again gingerly making its way into strategic thinking after the parenthesis of the War on Terror, see COLOM, Guillem: "Cambio y continuidad en el pensamiento estratégico estadounidense desde el final de la Guerra Fría", *Revista de Ciencia Política*, Vol. 33 nº 3, 2013, pp. 675-692.

51 In effect, although the 2012 Strategic Defence Guide had already signalled this change of approach, it was consolidated politically with the publication of the Quadrennial Defence Review of 2014 where the Navy had to redefine its template of global deployment, reconsider its forward presence and increase its naval presence – up to 80% of the fleet – in the Asia-Pacific region (DoD: *Quadrennial Defence Review 2014*, Washington DC: GPO, 2014, pp. 13-17).

52 Indeed, there are those who assume that this revolution could be consolidated between 2025 and 2035 (WATTS, Barry: *The Maturing Revolution in Military Affairs*, Washington DC: Centre for Strategic & Budgetary Assessments, 2011). Similarly, to observe how the search for the RMA and the consolidation of a techno-centric view of conflict is again gingerly making its way into strategic thinking after the parenthesis of the War on Terror, see COLOM, Guillem: "Cambio y continuidad en el pensamiento estratégico estadounidense desde el final de la Guerra Fría", *Revista de Ciencia Política*, Vol. 33 nº 3, 2013, pp. 675-692.

programmes— detailed in the Naval Transformation Roadmap: Power and Access... From the Sea— have been cancelled, redefined or postponed. For its part, the Global Naval Operations Concept cannot now be implemented following the deactivation of two air-sea groups, three expeditionary groups and the possible immobilisation of three of the ten aircraft carriers actually in service, due to the economic crisis; the strategic and operational aspects of this roadmap have been redefined thanks to a new naval strategy<sup>53</sup> and a new concept of naval and amphibian operations<sup>54</sup> which in all probability will be refined in the coming months in line with the principles established in the Quadrennial Defence Review of 2014 and the National Security Strategy which Obama will be presenting in 2015.<sup>55</sup>

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53 In effect, 2007 saw the presentation of the document *A Cooperative Strategy for 21st Century Seapower*, which traces the broad outlines of naval strategy for the third millennium. Jointly produced by the Navy, the Marine Corps and the Coastguard Service, the work identifies new imperatives: an efficient response to regional crisis, maintaining a naval presence to deter China, safeguarding the freedom of navigation, free access to any port on the globe, the far-reaching defence of the country and new operative needs, such as strengthening joint action between the three armies, combined action with forces from allied countries and inter-agencies as well as with other civil actors, both national and international. To do all this, the strategy proposes centring naval efforts in three areas: sea control to guarantee that the United States can freely operate on the oceans; the projection of power for swift deployment and efficient sustainability of a force capable of defeating any adversary at any point on the globe; and maritime security to protect world maritime traffic from any act of terrorism, piracy, organised crime or deliberate attack and combat any illicit activity that could arise on the sea and in coastal regions (Department of the Navy: *A Cooperative Strategy for 21st Century Seapower*, Washington DC: GPO, 2007).

54 The Naval Operations Concept 2010 – which replaces the 2006 edition, drawn up in the middle of the War on Terror and coinciding with the deterioration of the situation in Afghanistan and Iraq – takes on the principles set down in the naval strategy and goes on to detail the obligations of the Navy, the Marine Corps and the Coastguard service. This bases itself on forward presence, maritime security, humanitarian aid and disaster-response, control of the sea, projection of power and extended deterrence to guarantee that the Navy may continue to enjoy the dominance of the seas in an uncertain world (Department of the Navy: *Naval Operations Concept 2010: Implementing the Maritime Strategy*, Washington DC: GPO, 2010). On the other hand, for more detailed information on this maritime strategy aimed at revitalising the importance of the Navy in the wake of the War on Terror, see, Guillem: “la seguridad marítima y el renacimiento del poder naval estadounidense.”, *General Marine Journal*, vol. 259 nº 3, 2010, pp. 449-458.

55 For more detailed information on the contents of this roadmap for the period 2014-18 and the implacable criticisms from the National Defence Panel – an independent group of experts set up to evaluate its approach and proposals – on the shortcomings of this strategy, see: Guillem: “la Nueva Revisión Cuadrienal de la Defensa estadounidense.”, *Boletim Meridiano* 47, vol. 15 nº 144, pp. 32-36.

#### 4. CONCLUSIONS

As we have observed, the U.S. Navy initially displayed a marked reticence towards accepting this revolution that promised to do away with the need to possess a large ocean fleet to exercise control over the seas, and with it, to render obsolete its formidable marine force. Consequently, it was judged necessary to maintain the capabilities inherited from the Cold War to continue to satisfy its traditional obligations while strengthening its expeditionary vocation and developing specific capabilities for littoral warfare and the projection of power inland: new procedures, operational concepts and combat systems.

Nevertheless, in the second half of the nineties, when the country's political and military élite accepted the Revolution in Military Affairs, the Navy and the Marine Corps already disposed of adequate capabilities for the new operational requirements. In effect, not only had they reinforced the joint and combined action, consolidated their expeditionary profile, implemented coastal warfare and enhanced their ability to combat across the entire range of operations, they were also acquiring revolutionary technologies such as C4ISTAR systems, advanced sea bases and intelligent armaments. However, the escalation of the costs of sophisticated materiel, together with the need to maintain and modernise the systems inherited from the Cold War, not only rendered it advisable to reduce the designs in existence – the projects linked to the SC-21 migrated towards the CG(X), the DD(X), destroyer, the CV(X) aircraft-carrier, the littoral combat ship LCS, the fast attack submarine Virginia or the transformation of various missile-launch submarines Ohio to serve as a platform for the launch of cruise missiles – but also to initiate a Revolution in Business Affairs that would sanitise the Navy's finances, reduce its overhead costs and guarantee the viability of the arms and material programmes.

Nevertheless, at the end of the nineties, coinciding with the identification of network-centric warfare as a pillar of the RMA and its inclusion in the ForceNET programme, the Navy definitively accepted the revolution and actually led the way on this. Such a decision allowed it to enhance connectivity between the systems, to the detriment of certain sea-bases which, except for those built specifically for littoral missions and land strikes, could hardly be termed revolutionary.

Although the appointment of Donald Rumsfeld as Secretary of Defence could have meant a change of direction in naval transformation, the tragic events of September 2001 and the wars in Afghanistan and Iraq put a hold on Rumsfeld's plans for transformation and substantially reduced the budget available for the procurement of new equipment and revitalised the centrality of the aircraft carriers, a platform inherited from the Cold War and condemned to disappear on account of their alleged

inadequacy for the revolution, as an arm of undeniable strategic value in spite of the dangers inherent in their use in certain scenarios.<sup>56</sup>

Although the transformation of the Navy continued formally anchored in a completely obsolete roadmap, and the economic crisis made a significant dent in its capabilities after losing two air-sea groups, three amphibious groups, various combat and support ships in order to reduce the volume of Marine Corps troops, it nevertheless suffered erosion to a lesser extent than the Air Force or the Army on account of their campaigns in Afghanistan and Iraq; besides, it has risen again as one of the driving forces of the new U.S. strategy following the War on Terror and many of the initiatives devised in full revolutionary euphoria are currently taking shape.

In a context marked by the erosion of American public opinion over the wars in Afghanistan and Iraq; the redistribution of forward presence and the reduction of bases abroad; the reorientation of its interest towards the Asia-Pacific region or the growing risks that hang over sea traffic and access to any point on the globe; in particular, the Straits of Hormuz and the Sea of China. Naval power has once again regained its protagonism as a tool of foreign policy. The Navy and the Marine Corps are not only especially qualified to maintain a credible, selective forward presence without needing to resort to external bases, to respond rapidly to a crisis or guarantee the security of sea lines of communication; but also to gain access by force to any theatre of operations, as proposed by the controversial Air-Sea Battle, which today constitutes the main priority of the Navy and the base upon which its entire transformation hinges, as does its strategy to maintain its status quo and fight for the Pentagon's diminishing resources.

Many initiatives linked to the revolution and some of Rumsfeld's most revolutionary projects are now actually taking shape, like the Aegis missile defence shield, that not only represents one of the pillars of the national U.S. system but also the shield of the allies; the drones, one of which took off and aimed from a carrier entirely autonomously via its artificial intelligence; the naval robots and submarines employed on coastguard anti-mine and infrastructure-protection control missions; the Ohio submarines armed with cruise missiles, a cheaper and more effective solution than the Arsenal ships; the Zumwalt destroyers and littoral combat ships heirs of the SC-21 project; the projects of the new amphibian attack ships LX(R) and the missile-launch submarines SSBN(X), the full networked integration of the Navy in the ForceNET or the creation of a virtual fleet entrusted with the task of operating in cyberspace.

Three decades after the end of the Cold War, the U.S. Navy continues to be one of the spearheads of the country's strategy. Although its volume of troops has diminished substantially and the loss of various air-sea groups will leave a dent in its capabilities,

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56 HOLST, Henry: "The U.S. Military's Ultimate Fear: Are Aircraft Carriers Too Big to Fail", *The National Interest*, 12 August 2014.

its mere presence is sufficient to deter its adversaries and its aircraft carriers are –as displayed in the recent attacks on the Islamic Caliphate in Iraq – magnificent sea bases for the projection of U.S. military power. It remains to be seen how the Navy will change in relation to the Asia-Pacific region, how it will consolidate its technological transformations, how it will adapt to the loss of capabilities arising from the economic crisis and how it will face growing Russian assertiveness in its area of influence, a situation which it is attempting to take advantage of to reverse the move towards the Asia-Pacific region, maintain its military presence in Europe as a demonstration of the transatlantic link and alter the proposals and cost priorities laid down before the events of Crimea and Ukraine.

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