U.S. foreign policy response to the latest incarnation of a multi-polar world has generated discussion within think tanks, the Pentagon, Congress, and industry on the appropriate naval force structure to maintain sea dominance in cooperation with partner states. While the U.S. Navy was designed to meet peer competitor, the same structure, directives, and policies have yet to adequately prepare for a transition from conventional naval warfare. The Navy has become accustomed to irregular challenges, such as conducting anti-piracy patrols. But non-state actors (NSAs) and non-governmental organizations currently operating on the maritime commons might illustrate how their operations and assets might be used in the future by other non-state actors, by state sponsors of irregular challenges, and by belligerent sponsors themselves. The nation and the Navy need to prepare for hybrid warfare at sea where people and platforms indistinguishable from traditional non-combatants are further complicated by geographical, legal, and public relations challenges.  

Whether it is a bipolar or multi-polar world, the fundamental conditions required of state-to-state relations are the same: stable governments, systems of communication with one another, rules that guide their relations and enforcement mechanisms whether they are economic, political, or military in nature. When any one or more of those operating conditions is removed, the result is either anarchy or fault lines that pose security risks and can be exploited by irregular forces. As we have seen those circumstances on land, they might also be applied to the maritime commons.

The New Shadow Zones

Focusing on traditional centers of power in a bi-polar or multi-polar world can blur other regions – shadow zones – where conventional naval forces and conventional responses may not always apply and permit hybrid warfare scenarios to flourish.

In traditional underwater acoustics, shadow zones are an environmental condition created by factors of temperature, salinity, and pressure. In oceanography, one might also find oxygen minimum zones, largely lightless and devoid of levels of oxygen needed to cultivate most sea life. One of the few sea creatures to have survived adapted and thrived in this environment has been the vampire squid which has evolved because it cannot be seen by its potential predators; it

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1 The term “hybrid warfare” was first conceptualized by Robert G. Walker while at the Naval Post-Graduate School.
can also emit its own bioluminescence when required. Similar factors might contribute to surface shadow zones in maritime regions that are near ungovernable or unenforceable shores which might be deemed a region or issue of such minor consequence that conventional surveillance or patrol platforms ignore the area or international laws themselves either do not apply or are not applied. Frank Hoffman suggests that, “the maritime commons is at risk at its edges and transition points from small maritime armed groups.” But they need not be necessarily armed to achieve their goals or for the U.S. and other legitimate states from being prevented in taking action.

Like submarines hiding in shadow zones, or vampire squids in oxygen minimum zones, the new shadow zones have their own organic entities, some clearly lethal while others pose more understated threats to freedom of the seas and perhaps to future U.S. navy platforms. The shadow zone entities fall into two general categories: those who clearly threaten or have acted against security or laws, and those entities who on the exterior may seem innocuous but whose operations could be employed by other threatening entities.

Traditional threatening NSAs in the shadow zones might include pirates and terrorists while indirect threatening NSAs might include narco-traffickers and human traffickers. The behavior, common traits, and operations of non-traditional, largely non-threatening non-governmental organizations (NGOs) might illuminate how truly irregular methods are or could be employed by NSAs or unfriendly state actors. What can be learned from their behavior can be as informative in understanding NSAs and how to respond to them. Two examples of how hybrid warfare at sea might operate are an environmental NGO and a medical NGO.

**The Case of the Environmental NGO: Sea Shepherd**

Sea Shepherd is a privately funded environmental activist organization known primarily for its pursuit of Japanese whaling ships in southern waters. For naval personnel intimately familiar with shipboard operations and deployments, watching the Sea Shepherd ship on the Animal Planet television program “Whale Wars,” can be entertaining if not frustrating as the captain and crew seemingly violate safety at sea, rules of the road, and the law of the sea. Ironically, safety standards and professionalization occurred only after a former U.S. Navy surface warfare officer joined the crew and standardized evolutions by using simple checklists familiar aboard every U.S. Navy and Coast Guard ship.

Two Australian professors attempted to determine the status of the Sea Shepherds and whether they were terrorists, pirates, vigilantes, or environmental activists. They suggested that Sea Shepherd “may not conform ideally” to standards definitions of terrorism. They likewise suggested that they are not pirates since the International Maritime Bureau defines it as “an act of boarding any vessel with the intent or capability to use force for the furtherance of the act.” But their article was published in 2008, before Sea Shepherd was shown to ram and board Japanese whaling ships. More recently, one crew member boarded the ship and demanded restitution for the collision of the ADY GIL, a Sea Shepherd craft. Likewise, the ship flies the Jolly Roger.

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3 Gerry Nagtzaam and Pete Lentini, *Vigilantes on the High Seas?: The Sea Shepherds and Political Violence, Terrorism and Political Violence,* vol 20, 2008, p. 113
wears attire with the skull and crossbones, and takes some glee in referring to themselves as pirates, likely more for media and public attention.

The organization’s seaborne craft flies various national flags – the STEVE IRWIN is Dutch-flagged, the BOB BARKER is Togo-flagged, and the ADY GIL, before its sinking, flew the flag of New Zealand – making accountability for the ship’s and crew’s actions more difficult. The crews are comprised of many nationalities.

What Sea Shepherd does best and craves is the manipulation media and public attention. When one crew member illegally boarded a Japanese whaler and was taken to Japan for prosecution, Captain Paul Watson issued a press release that “[Sea Shepherd] will use any trail in Japan to the maximum benefit of the whales.” Inflammatory language punctuated the arrest as the first New Zealander taken as a prisoner of war to Japan since World War II. According to one of Watson’s books, *Earthforce! An Earth Warrior’s Guide to Strategy*, he believes “media manipulation is merely a matter of survival in a media culture,” “emotion will always triumph over fact,” and “the public believes what it is told to believe.”

Aside from pursuing legislation which may restrict operations (e.g. marine mammal protection from sonar, restrictions of port visits by nuclear-powered ships, etc), environmental organizations pose minimal threat to the U.S. Navy. Perhaps the best-known incident was in Palma de Majorca in 1988 when a Greenpeace zodiac attempted to interfere with the anchorage of the aircraft USS DWIGHT EISENHOWER, an attempt that was quickly and easily repelled by hoses. This maritime method poses threats in a far broader sense, namely the inability of any one nation to take action against illegal activities in certain global regions. One retired Japanese Admiral suggests that “if any singular government cannot take independent action, an international framework is necessary.”

When it comes to whaling, gaining international support for Sea Shepherd is fairly easy. Most Western countries are against whaling rights. This gives Sea Shepherd some advantage from a public relations perspective as well as an operational standpoint since any safety at sea issues might not be addressed by nations who prefer to turn a blind eye. “If the issue remains just about whaling,” the former Japanese admiral said, “the Japanese government is isolated.”

**The Case of the Medical NGO: Women on Waves**

Women on Waves (WoW) is a Dutch-based non-profit organization that was founded over a decade ago by a physician who previously served aboard a Greenpeace ship. WoW views itself as advocating for women’s human rights by increasing education about reproductive rights and providing abortion services in a maritime environment. Initially the founder, Dr. Rebecca Gomberts “imagined an entire fleet of floating clinics...[that] would anchor in international waters, carry out abortions, distribute medication and train local staff.” To do so, WoW developed a mobile treatment room, also called the A-Portable, an 8’x 20’ standard container that could easily be placed on a boat (see photo 1 courtesy of Women on Waves).

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4 Vice Admiral Yoji Koda, JMSDF (Ret), Interview with the author, 12 November 2009, Annapolis, Maryland.
5 Koda interview
6 *Der Spiegel* Online, 28 July 2009
In the past decade, WoW has conducted several campaigns by sea, going to countries whose governments have not supported abortion procedures. In 2001, it placed the A-Portable on the Dutch fishing vessel AURORA for a campaign in Ireland; and in 2004 it went to Poland and Portugal on the LANGENORT and BORNDIEP respectively. In 2008, the modus operandi changed when a small sailing yacht was used. The yacht was obviously not capable of transporting the A-Portable, so the organization focused on using abortion pills. A subsequent campaign to South America failed with their ship, the HARMONY, ran aground in Ecuador.

When it might be easier to provide abortion services in countries adjacent to those that outlaw them, why has WoW used ships for this purpose? “Women travelling to other countries, [the issue is] often under the radar; they do it secretly, but it’s not public. The ship is a visual…with the ship are making the problem that exists visible.”

The organization states that the most successful campaign occurred in 2008 when it went to Portugal, the only time a government tried to stop a WoW ship from entering a port. According to WoW, the Portuguese Minister of Defense contacted the captain of the ship through a fax and said Women on Waves “was a threat to national security and health and they were preventing the ship from entering national waters.” The Portuguese government then deployed two navy ships to intercept the BORNDIEP and prevent it from entering Portuguese waters. The resulting public relations made this campaign the most effective in the eyes of the organization. “It was worldwide front page news. It was widely discussed in the European Parliament and basically it was considered a big scandal.” Gomberts admits that had the Portuguese government had taken no action; Women on Waves would not have been successful. The action was later pursued through the European Court of Human Rights through the lawsuit “Women on Waves and others v. Portugal.” The Court ruled that Portugal had violated Article 10 of the European Convention on Human Rights and awarded each applicant 5,300 Euros.

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7 Dr. Rebecca Gomberts, Interview with the author 29 January 2010.
8 Gomberts interview
9 Gomberts interview
Like Sea Shepherd, Women on Waves posed no threat to U.S. national security. Rather the lessons learned are those operations and tactics that might be employed by non-state actors in the shadow zones or by state actors themselves.

Lessons Learned for Hybrid Warfare at Sea

Non-state actors, non-governmental organizations, and even some states, share some common traits in maritime operations against state governments, other NGOs or even multi-national corporations. All use commercial platforms. Most use ships as a visual public relations tool and all demonstrate a capacity for adapting to the rules. The primary difference is with non-state actors who employ lethal tactics, but as Sea Shepherd and Women on Waves demonstrate, lethal tactics need not be used to achieve public relations victories.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Commercial platforms</th>
<th>Ship as the visual</th>
<th>Employs lethal tactics</th>
<th>Adaptive</th>
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<td>Yes</td>
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<td>Yes</td>
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<td>Women on Waves</td>
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<td>No*</td>
<td>Yes</td>
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<td>Yes</td>
<td>No**</td>
<td>Yes</td>
</tr>
<tr>
<td>Narco-traffickers</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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</tbody>
</table>

*Table 1: Selected factors hybrid warfare at sea*

* While the author understands that the issue of abortion will elicit arguments that the act itself is lethal, the purpose of studying Women on Waves was not about abortion but how NGOs use the sea to effect change.
** While small boats have not resulted in any deaths, should they employ suicide boats that would obviously change.

With both NSAs and NGOs, crews can be international, further complicating how or if they are held accountable for actions. They need not be certified mariners. In the case of Sea Shepherd, the STEVE IRWIN is classified as a yacht and not a commercial vessel, therefore only a licensed captain is needed. Women on Waves had crews that were a mix of hired hands and volunteers.
when they were transporting the A-Portable, but with the use of a sailboat, they had no requirements for licensed mariners.

Those entities operating in the shadow zones can also exploit unclear or non-existent rules of engagement. Whether when dealing with pirates off Somalia, potential environmental NGOs, or state actors like China during the USNS Impeccable incident or Iranian small boats interfering with legal transits of Navy ships, ROEs that prevent action or are known to potential opponents can be exploited. In 2009, the U.S. changed its rules in Afghanistan that would “generally require U.S. troops taking fire in populated areas to break contact rather than risk civilian casualties.” Later that year, The Washington Post reported that “U.S. rules of engagement restricting the use of air power and aggression have also opened up new space for the insurgents…[they] have learned to gauge response times for U.S. artillery cannons as well as fighter jets and helicopters.” The same can be said for the maritime environment in the case of piracy. According to Nick Davis, owner of the Gulf of Aden Transit Group, “[pirates] are literally so fast and quick and adept. Their lines of communication are fantastic…they know the system very well.”

Publicity can also lead to success for those entities whether it’s a hole in a Navy destroyer caused by a terrorist organization, television ratings by an environmental activist ramming a ship, or an abortion provider sitting a few hundred yards from a Portuguese Navy ship. All an NGO or NSA requires is to frame their fight with the right issue – women’s choice, save the whales – or even pirates who might viewed by some as victims of economic injustice. As the Chairman of the Joint Chiefs of Staff recently noted, “the battlefield isn’t necessarily a field anymore. It’s in the minds of the people. It’s what they believe to be true matters.” Influence warfare cannot be ignored, particularly in the shadow zones.

Strategic communication and mass persuasion are vital tools in the arsenal of NSAs and NGOs. James Forest, in Influence Warfare, contends that “Nation-States and Violent Non-State Actors – including terrorists and insurgents – rely on positive perceptions (at least acceptance) among key constituencies in order to muster support necessary for achieving then strategic objectives.” The media serves as their link in influencing public opinion, recruiting followers, and raising money. While some may argue that the media may be geographically restricted to land-based operations, modern technology allows for taped programs by the NGOs themselves (such as the television program “Whale Wars” taped by an on-board film crew in the middle of Antarctic waters) or immediate uploading to outlets such as YouTube. This is the democratization of the media.

These entities are also proving highly adaptable. In the case of WoW, using a small sailboat still achieved their purpose of generating publicity, but it also meant it had access to more ports, was cheaper to maintain, and required less experienced or certified crew members. For Sea

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11 Karen DeYoung, Taliban Surprising US Forces with Improved Tactics, Washington Post, 2 September 2009
12 Nick Davis, Interview with the author 2 February 2010
13 Admiral Michael Mullen, Speech delivered at Kansas State University, Manhattan, Kansas, 3 March 2010.
14 See James J.F. Forest, Influence Warfare: How Terrorists and Governments Fight to Shape Perceptions in a War of Ideas.
15 Ibid.
Shepherd, it meant using the ADY GIL, designed as a wave-piercing trimaran powered by biodiesel fuels that was, simply, faster than the STEVE IRWIN.

All of their platforms are seemingly benign commercial boats and ships, easily defeated by multi-billion dollar warships. Secretary Gates has noted that “in terms of capabilities, the over-match [between the United States Navy and its potential competitors] is even greater. No country in the rest of the world has anything close to the reach and firepower to match a carrier strike group.”16 But over-match can risk over-reach. The USS COLE, the USS SAMUEL ROBERTS, and the USS VINCENNES, with their vast military over-match could not deter terrorists, mines, or the public relations consequences of shooting down an Iranian airliner respectively.

**Recommendations**

The U.S. Navy’s Vision for Confronting Irregular Challenges is an important step in addressing these and other issues, not the least of which is simply changing the lexicon from irregular warfare to the more comprehensive irregular challenges. According to the vision statement published in January 2010, the outcomes are:

- Increased effectiveness in stabilizing and strengthening regions
- Enhanced regional awareness
- Increased regional partner capacity and
- Expanded coordination and interoperability

What these will also require is the ability to respond to or exploit the common characteristics of entities like those listed in Table 1. While the U.S. Navy is always trained and prepared for the use of kinetic response against traditional and non-traditional forces, in some cases with hybrid warfare at sea, other conditions and scenarios may require alternative responses. This might be accomplished through Adapting, Adopting, and Adeptness.

First, opposition to these entities must mean adapting faster than them in operations and tactics. This will mean, in part, establishing ROEs that permit effective responses rather than restrict operations from achieving success. This might mean capturing pirates who might otherwise experience the “catch and release” efforts and prosecuting them. WoW, for example, encountered Dutch law when the government found that the license to carry the A-Portable did not mean that the organization had a license to convey abortion pills on a sailboat. Finding similar avenues for pirates or other entities might be as beneficial as remembering that the gangster Al Capone was not imprisoned for murder or violating prohibition laws – he was jailed for tax evasion.

Second, although U.S. interest groups may be averse to doing so, the Navy should adopt a more flexible and innovative force structure that, in addition to traditional warship might include less obvious commercial platforms. When the Portuguese Navy sent warships to deal with WoW, it generated more public interest than a commercial platform indistinguishable from other

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16 Robert Gates, Speech delivered at the Naval War College, Newport, Rhode Island, 17 April 2009
platforms would have done; the fact that the Portuguese sent the corvette BAPTISTA DE ANDRADA with the hull number F486 might not have been the most media savvy platform (RU486 is the abortion pill) unless, of course, that was the intent. Smaller commercial platforms might also prove useful as short-term surge platforms to cover more area in pirate-dense areas. Another alternative in force structures is investing in the Influence Squadrons proposed by Commander Henry J. Hendrix in *Naval Institute Proceedings*.

Third, it must be adept in public relations at countering potential propaganda or challenges early and clearly. The battle plan, even in the maritime environment, must include the airwaves, or the 21st century equivalent. Winning the war of ideas will be as important for maritime incidents or potentially prolonged engagements in the littorals to get the message out. And few have as vital a message as the Navy. When Admiral John Harvey deployed naval forces to provide humanitarian relief in Haiti, he recognized the importance of that message to the taxpayers and to the families – that U.S. Navy and Marine Corps personnel were saving thousands of lives.17

Without these and other measures, the U.S. Navy faces potential incidents by NSAs and NGOs who find operational and tactical successes and, more importantly potentially belligerent state actors who learn from them.

*Claude Berube is a Visiting Fellow for Maritime Studies at The Heritage Foundation. He has taught at the U.S. Naval Academy since 2005. A lieutenant commander in the U.S. Navy Reserve, he has been mobilized several times including a deployment to the Persian Gulf with Expeditionary Strike Group Five which included tsunami humanitarian relief operations in Sumatra, maritime interdiction operations, and anti-piracy operations off Somalia. He has worked on Capitol Hill for two Senators, for a defense firm, and as a civilian for the Office of Naval Intelligence.*

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17 Admiral John Harvey, 5th Annual Milblog Conference, Arlington, Virginia, 10 April 2010