

# Understanding Relative Combat Power Analysis: How Planners Can Make the Most of a Powerful Tool

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In Issue #2 of MOC Warfighter (November 2013) US Naval War College Professors Sean Henseler and Eugene Augustine made the case for why Navy planners should include a Relative Combat Power Analysis (RCPA) as part of the Course of Action (COA) development process. Their argument was well founded and well received, and the RCPA process was codified as doctrine in the December 2013 revision of the NWP 5-01. Since that time, Navy planning teams have done a good job of including RCPA in their COA development. However, this valuable planning tool is often misunderstood and seldom used to its full effect.

The concept of relative combat power analysis originated with land-centric forces where numerical comparisons between friendly and enemy forces were often a good way to measure one's combat strength against an adversary. The basic building blocks of an army – infantry companies, armored battalions, etc. – are generally comparable, and after making weighting adjustments for equipment and training, numbers can be compared to give the planner a good idea of how friendly strengths and weaknesses stack up against an opponent.

This numerical approach seems logical, but quickly falls apart when trying to compare similar classes of ships with significant differences in mission, armament and capability. The NWP 5-01 recognizes as much when it states:

*Historically, the US military has employed RCPA methods that resulted in obtaining mathematical force ratios. However, the land-centric methods proved insufficient to maritime planners. There are several reasons for this, to include the multi-mission nature of many naval platforms, the qualitative difference between various nations' platforms, and the characteristics of the maritime domain itself where forces simultaneously operate on, under and over the water and land as well as outer space and cyberspace. (NWP 5-01, E-1)*

The NWP 5-01 also warns that,

*When conducting an RCPA, a numerical comparison of major air, surface, and subsurface platforms should be balanced by comparing the actual capabilities of what are often multimission platforms. (NWP 5-01, 3-3)*

Despite these warnings, planners often still fall into the trap of defaulting to a numerical analysis of forces, what Clausewitz aptly described as “war by algebra.” This is due in no small part to the inclusion of numerical based RCPA worksheets in Appendix E of the NWP 5-01. It is all too easy for planners to grab the worksheets as a starting point, which often leads them down the wrong path because they miss the caveats in the text. These worksheets are a

valuable tool and can be used very successfully when friendly and adversary assets are similar in capabilities and characteristics, but even with near peer competitors, we seldom encounter rival navies that are comparable to ours.

Rather than going straight to the numerical RCPA worksheets, planners should default to a capabilities based RCPA. Instead of focusing on numbers and types of potential adversary platforms, they should look carefully at the offensive and defensive capabilities that each platform or group brings to the fight, and examine how those capabilities compare to those of US forces.

To get an idea of how a capabilities-based RCPA can provide a better understanding of strengths and weaknesses than a numerical based approach, it is useful to look at real world examples recently encountered by planning teams.

In October of 2016, the *Admiral Kuznetsov* battle group left the Kola Bay for the Mediterranean on its first-ever combat deployment to project Russian naval power in Syria. Sailing with the aircraft carrier *Admiral Kuznetsov* was the nuclear-powered battle cruiser *Peter the Great* and two Soviet-era *Udaloy* class ASW destroyers (the *Admiral Kulakov* and the *Severomorsk*). After transiting the English Channel and Straits of Gibraltar, the *Kuznetsov* battle group joined the small Mediterranean Flotilla made up of frigates and corvettes off the coast of Syria to commence combat operations. At the time, US SIXTH FLEET planners developed an outstanding plan to monitor the *Kuznetsov* battle group and maneuver US forces in the area to deconflict operations.

Using the 2016 *Kuznetsov* deployment as an example - and assuming a US CSG was operating in the Mediterranean - a numerical RCPA, based on the worksheets in Appendix E of the NWP 5-01, might look like table 1 below.

Tangible Factors	Adversary Quantity	Friendly Quantity	Planning Considerations
Aircraft carriers	1	1	Even
Strike/Fighter a/c	12	48	Advantage blue
Helicopters	10	20	Advantage blue
Cruisers	1	2	Advantage blue
Destroyers	2	4	Advantage blue
Frigates	2	1	Advantage red
Corvettes	4	0	Advantage red
Submarines			
Nuclear	0	2	Advantage blue
Diesel	2	0	Advantage red
Logistics ships	2	2	Even

Looking at this RCPA from a strictly numerical perspective, both sides have a number of advantages and disadvantages, but with more categories falling to the friendly side, it would be easy to conclude that friendly forces enjoy a significant relative combat power advantage. Unfortunately, a numerical RCPA inherently assumes that similar classes of ships have similar capabilities, limiting the usefulness of the information we have developed. At best, this drives planners to an inefficient use of US combat power, and at worst could have disastrous consequences as it surreptitiously leads the planner down a path that encourages mirroring. Further, although the numerical assessment allows planners to assign an advantage to one side or another, this method does not inform the planner how either side might leverage those advantages as conflict develops.

By way of contrast, a capabilities based RCPA approach yields a much different, and more useful picture of two asymmetric forces. Conducting an in-depth analysis of force capabilities provides planners a much deeper understanding of adversary force strengths and weaknesses, and may offer insights regarding how they may be employed. On its most recent deployment, the *Kuznetsov* carried a combat load of 12 Su-33 and MiG-29 aircraft, which is significantly less than the 48 strike aircraft in a typical US Carrier Air Wing. The *Kuznetsov's* air wing also includes a number of Ka-52K, Ka-31R and Ka-27PS helicopters, but lacks AWACS, Electronic Attack, ISR and logistics enablers that a US Air Wing provides, and without catapults, the *Kuznetsov's* airwing is limited in the amount of ordnance each aircraft can carry. The *Kuznetsov* is clearly not numerically equal to an American aircraft carrier, however planners must be careful not to underestimate its value as an offensive platform.

Looking at asymmetric capabilities, the Russian carrier holds some surprises for Western planners. By definition, the *Admiral Kuznetsov* is not actually an aircraft carrier. The Russian Navy classifies it as a *heavy aircraft-carrying missile cruiser*, and is appropriately outfitted with 12 P-700 *Granit* (SS-N-19 "Shipwreck") anti-ship missiles and a 192 cell vertical launch system (VLS) (24 cells with eight missiles per cell) for the SA-N-9 "Gauntlet" system. Because its systems are significantly different from its American counterpart, direct comparisons between the two platforms do not yield useful results. Planners must be careful to evaluate the *Kuznetsov* based on its capabilities as a missile cruiser with a limited aviation capability, not an American-style, power-projection aircraft carrier, which could significantly change the perception of the threat and the COAs planning teams develop.

In a similar vein, planners must be careful to look at Russia's other surface combatants in terms of their capabilities, not as a mirror of an American ship of the same class. Modern Russian naval leadership has chosen to invest a significant portion of their acquisition budget into cruise missiles, which have become the center of gravity of the current Russian fleet. The 3M-54 Kalibr (SS-N-27 "Sizzler") anti-ship cruise missile has become the backbone of this new concept in power projection. First deployed in 2012, the Kalibr has been widely and rapidly propagated across the fleet using the Multipurpose Ship Fire System (UKSK), which is a modular eight-cell VLS system capable of firing Kalibr or P-800 Onyx (SS-N-26 "Stroble") missiles. This

system is currently fitted on *Admiral Gorshkov*, *Admiral Grigorovich* and *Gepard* class frigates, as well as on *Gremyashchy*, *Buyan* and some *Steregushchy* class corvettes – ships that are small enough to navigate inland rivers and were recently responsible for firing the land-attack variant of the Kalibr missile (3M-14 Biryuza/SS-N-30) from the Caspian Sea into Syria. The Russian Navy has also outfitted *Kilo*, *St. Petersburg*, *Akula*, *Severodvinsk* and *Dolgoruky* class submarines with Kalibr missiles, giving the submarine force a capable and credible anti-surface threat.

Looking at the Russian surface fleet in terms of cruise missile capability, it becomes quickly obvious that each UKSK-equipped corvette carries a much more significant offensive punch than the much larger, and much older, *Udaloy* class destroyers, which feature a battery of eight old and outdated SS-N-14 “Silex” missiles. Even the flagship of the Russian Northern Fleet, *Peter the Great*, with its 20 P-700 *Granit* (SS-N-19) anti-ship cruise missiles is easily outgunned by a small SAG of frigates and corvettes equipped with the new VLS. In many ways, the Russian Navy has done an admirable job of perfecting the concept of distributed lethality, which planners must understand but will not appreciate if they only use a numerical RCPA.

A complete capabilities-based RCPA that fully examines the strengths and weaknesses of each platform in the theater of operations exceeds the scope of this article, however the above examples show some of the considerations that planners should give to their RCPA as opposed to counting the number of platforms in theater. Relying solely on a numerical RCPA has the potential to lead planners to focus on the larger surface combatants in a mirror of US capabilities, which could lead planners to overlook significant adversary capabilities. Conversely, by carefully examining the capabilities of each platform and thoughtfully considering how a potential adversary might use those capabilities, planners are able to use the RCPA to identify force asymmetries and develop a true understanding of the strengths and weaknesses that both friendly and adversary forces bring to bear. Although many of these issues will likely come out through the COA development and COA analysis process, it will be much more efficiently and succinctly captured during this important first step of COA development. Though it takes a little bit more work up front, it is an essential investment that will pay off later through better understanding of the operating environment and a more effective COA development.

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