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War Gaming at the Naval War College 1969-1989

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It has been said that war gaming as a means of examining defense issues is being used more today than at any time since the period between World Wars I and II. Whether this broad statement is true is difficult to determine, however, it is clear that in the 1980s we experienced a resurgence in the use of the war-gaming technique. Certainly we game more and better now than we did in the 1960s and 1970s.

The Naval War College began war gaming in 1887, and the students used it extensively thereafter until the end of World War II. In 1913, Captain W.S. Sims and Commander Dudley Knox introduced war games into the fleet. The navy, however, did not establish a formal, navy-wide war-gaming program until 1958, when the technique was in disfavor if not disrepute. The program established that year consisted of two parts—interactive gaming by the fleet and students at the Naval War College in Newport, and digital computer simulations and studies conducted in Washington. The gaming program at Newport reserved the period January through June for the students, and the remainder of the year was available for the fleet or other external users. But by the late 1960s, both in Washington and in various think-tanks around the country, most serious defense issues were being addressed through the use of computer simulations. Interactive gaming had been relegated largely to an education and training role, and even in this role its use was modest. For example, at Newport during the academic year 1969-70, there were only 29 days of curriculum gaming and 36 days of fleet gaming. An additional 66 days were scheduled for demonstration and reserve games.

Captain Hurlburt was assigned to the Naval War College on five occasions, commencing as a student in the Command and Staff course, 1969-70, and concluding as Director of the War Gaming Department, 1985-88. Other positions at the college included Director of Tactical Research at the Center for Advanced Research, member of the second CNO Strategic Studies Group, and Deputy Director, Center for Naval Warfare Studies. At sea he served in destroyers in both the Atlantic and Pacific Fleets, including command of the U.S.S. *Goldsborough* (DDG 20) and Destroyer Squadron 24.

Student gaming at the Naval War College was practiced primarily by members of the Naval Command and Staff course. A major portion of this course emphasized operational planning, and gaming was the technique used for "supervising the action" (testing plans). Assuming fairly equal opposing forces, the key to victory lay in how well we had estimated our opponents' courses of action. Captain William McCarty Little, who brought gaming to Newport, said: "Now the secret of its power lies in the existence of the enemy, a live, vigorous enemy in the next room waiting feverishly to take advantage of any of our mistakes, ever ready to puncture any visionary scheme, to haul us down to earth, and, above all, ready and anxious to 'carry the war into Africa'"; and he was right.

At the end of World War II, the U.S. Navy, with its powerful forces, ruled the world's oceans. But this condition was threatened as the navy moved into the 1970s. In 1967 we saw the first sinking of a surface combatant by surface-to-surface missiles when Egyptian patrol boats successfully attacked the Israeli destroyer *Eilat* with the Russian-built *Styx*. In the Indo-Pakistani War of 1971, the *Styx* sank another destroyer, although the unintentional sinking of a neutral merchant ship in Karachi harbor gave a hint of approaching over-the-horizon targeting problems. Meanwhile the Soviet navy was emerging from a coastal defense force into a true blue water navy, bringing with it new and impressive aircraft, ships and submarines, most of which were capable of launching improved antiship cruise missiles. During the Arab-Israeli War of 1973, two significant events occurred:

- The Soviet Mediterranean Squadron, heavily reinforced, was positioned to counterbalance, if not challenge, the U.S. Sixth Fleet;
- Antiship cruise missiles again played a major role in the naval engagements. This time, however, the Israelis demonstrated not only that missiles could work in naval warfare, but that incoming missiles could be defeated.

Analysts reduced these events into numbers that were fed into computers. The resulting output predicted that surface fleets would be driven from the seas. Not everyone agreed, but the role of computers in getting man to the moon in the 1960s led many to believe whatever came out of a computer. (Initially, even the gaming community believed in these outcomes, and it took years of discussion, "getting back to basics," and help from the intelligence community to really understand what was happening in missile warfare.)

In 1972 Admiral Stansfield Turner became president of the Naval War College. He shifted the emphasis from fleet use of the war gaming center to student use. Turner objected, in particular, to the large amount of staff work required in writing operation orders for fleet games and to the fact that few students were given the opportunity to play decision-making roles in such games. Turner encouraged Professor Jacques Naar, the first occupant

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of the McCarty Little Chair of Gaming and Research, to develop tabletop games that gave as many students as possible the opportunity to play. It was during this period that the college helped to develop the Sea Control Tactical Analysis Game (SEATAG), a simple tabletop game that proved to have broad application for both teaching and research. These changes moved the emphasis in gaming from the war gaming center in Sims Hall to the classrooms of the college, where the academic departments used the tabletop versions.

SACLANT, CINCLANTFLT, the Chief of Naval Material and the reserves continued to use the computer gaming facilities in Sims Hall. If they had not, computer gaming in Newport probably would have ended. During academic year 1973-74, there were but 96 days of demonstration and reserve games, and only 20 days of fleet and NAVMAT games in Sims Hall. This low tempo did, however, provide great flexibility in scheduling external users, who began to use time formerly reserved for the students. This precedent would have an impact in the 1980s.

With more time on its hands than games to play, the War Gaming Department turned its attention to transitioning from the already old Navy Electronic Warfare Simulator (NEWS), which had been installed in 1958, to the Warfare Analysis and Research System (WARS) as its principal gaming system. Although this was necessary, it resulted in some loss in war-gaming skills among the staff. This was perhaps the nadir of gaming at the Naval War College, although there is some evidence that it reached a similar low in the early to mid-1950s.

By 1975 important changes were taking place. Difficulties with WARS led to a new definition of requirements. Admiral Julian Le Bourgeois, Turner's successor as president of the Naval War College, wrote to each of the three and four-star officers on active duty, as well as to the two-star officers in command, requesting their input. The results of these efforts became the requirements for the Naval Warfare Gaming System (NWGS). Admiral Isaac Kidd, Jr., a firm believer in war gaming, was among those flag officers who submitted recommendations. While Chief of Naval Material in the early to mid-1970s, he sponsored a series of games at the War College both to explore new vehicles and systems and to educate his scientists. One of these games continues today under the name SEACON. When he moved on to become SACLANT/CINCLANT/CINCLANTFLT, he started the Atlantic Fleet Tactical Command Readiness Program series. Although these were fleet games, Admiral Kidd was able to use his CINCLANT hat to involve the other services and thus, over time, the games became both joint and strategic. Largely due to Admiral Kidd's advocacy, fleet gaming increased to 60 days during the 1977-78 academic year.

Meanwhile, the Naval War College regained research as part of its mission. The Center for Advanced Research was established with Captain Hugh Nott, U.S. Navy (Ret.) as its first director. Hugh, another firm believer in the value of war gaming, sought ways to use it in support of the research program. Thus, gradually, gaming became a part of the advanced research program. Students used the SEATAG game in support of a Harpoon employment project and in an Air ASW study. In 1979 Hugh and I used a spinoff of SEATAG in a war gaming elective course aimed at exploring new tactics. From this course emerged target dilution as a tactic for dealing with antiship cruise missiles and also the return of the submarine to employment against surface ships.

That same year the Global War Game series began at Newport as the result of two queries:

- Admiral Tom Hayward, chief of naval operations, asked Hugh Nott and F.J. "Bing" West (the center's director of strategic research) to examine the prospect of global war with the Soviets, including its associated sequential operations.

- Admiral Ed Welch, president of the Naval War College, asked what could be done for the first group of Navy phased-input students, who would be on board during the summer (when classes were not in session). The Global War Game became the answer to both questions.

As the navy moved into the 1980s, it didn't mind being the instrument of choice in most real-world crises, but it was tired of being the object of the analytical Cassandras' predictions of disaster at sea in a general war unless the navy confined its operations to low-threat areas (wherever they might be). The more the operational navy scrutinized the analyses, the less satisfactory the answers appeared. War at sea is not a set piece of computer simulations, but a highly dynamic activity. An initiative to look at the dynamics began to burgeon. This drive was reinforced by the outcome of the Falkland/Malvinas war in 1982, where, in spite of early predictions of the cruise missile dominance over surface ships, the war at sea was won by the British fleet. This was accomplished by several factors:

- employment of British SSNs in an early antisurface ship role which drove the Argentine fleet into port;
- misuse of Argentine SSs;
- maneuver (forcing the Argentine strike aircraft to operate at maximum range) and target dilution (ECM and Chaff) to defeat the missile threat; and
- amphibious power projection, once sufficient sea control was attained.

Back in Newport, the research program at the Naval War College had been strengthened with the establishment in 1981 of the Center for Naval Warfare Studies under the leadership of former Under Secretary of the Navy

Robert Murray. The Center embraced the recently established CNO Strategic Studies Group, the existing Advanced Research Program and Global War Game project, the Naval War College Press and the War Gaming Department (then called the Center for War Gaming). This one center embodied the capability to develop strategic concepts, to test these concepts through gaming, and to publish the results. Mr. Murray was a firm supporter of war gaming, and the early gaming work of the Strategic Studies groups which he directed suggested that the proper employment of naval forces in an offensive campaign had the potential for significant payoff. The annual Global series tended to support this insight. Thus the navy began to regard gaming as a tool necessary for the consideration of the dynamics of maritime warfare in its strategic analyses.

In 1982 the new chief of naval operations, Admiral James Watkins, urged the fleet commanders in chief to use the War Gaming Department at Newport to develop and test their campaign plans. The newly installed Naval Warfare Gaming System was viewed as a major source of support for this effort. Though the fulfillment of that potential proved elusive, gaming techniques were used with increasing frequency in curriculum, fleet and OPNAV support. Perhaps as much as anything else, the tasking of the Naval Operational Intelligence Center Detachment Newport to play a constant and credible Red opposition enhanced the quality of the games. With success breeding success, the war gaming schedule expanded rapidly from about a dozen games annually at the beginning of the 1980s to about 50 games a year by mid-decade. In order to meet the increasing demand for games, the manning of the War Gaming Department was increased in both quantity and quality. The distribution of game sponsorship changed as well. Curriculum gaming returned to the War Gaming Department; Washington staffs began using interactive gaming to look at strategic issues; and unified as well as fleet commanders either came to Newport or the war-gaming staff went to them. Gaming insights gained visibility as Admiral Watkins and Secretary John Lehman cited them in testimony supporting the Maritime Strategy and the navy's budget requests. While perhaps inferring more than was actually warranted by the games, they succeeded in convincing Congress to fund the 600-ship navy. This in turn conferred a validity on the gaming process and increased the demand for, and popularity of, war gaming.

As this decade draws to a close, I sense another potential change ahead. The use of gaming has become excessive, and it has been applied to degrees that exceed its capacity to help. As proof of analysis, it has become sufficient to say that an issue was gamed. Consequently, the currency is being devalued. Before long, responsible people in the national security community will become uneasy with these answers to their questions, and they will demand

a more rigorous analysis of defense issues. The gaming community itself should begin this process now. Its members should insist on adequate time for game development (including player preparation), on detailed play of games by the players (rather than by the umpires), on a rigorous analysis of each game, and on the incorporation of game results into the design of the next game in that series. If we fail to do these things, gaming will again go into eclipse—a victim of its own success, but a victim nonetheless. We can do better than that.



War Gaming, 1930s Style

“Study was directed to the preparation for war at sea and of the consummation of any such war in swift and decisive fashion should war become necessary. The most penetrating examination of the personalities most likely to be involved was taken very, very seriously. In other words, know your enemy, the adage of today. Their analyses were entitled, ‘estimates of the situation.’ Computer modelling to predict outcomes was handled on one’s hands and knees moving miniature models about on a large game room floor in reaction to rolls of recalcitrant dice. . . . Competition was at its keenest. Poor judgements, bum guesses, inadequate preparation and incompetence were rewarded appropriately. It was not an uncommon thing for some careers to change direction radically and even for some to end, following the rigors of the gaming floor which quickly separated the sheep from the goats and left no room for doubt as to which was which.”

Admiral Isaac C. Kidd, Jr.
Newport, R.I.
14 August 1984