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WHAT WAS NIMITZ THINKING?

Jonathan B. Parshall

Admiral Chester W. Nimitz, USN, is arguably the finest naval officer this country ever has produced. Since the close of World War II, he has been held up as an exemplar of what every modern commander ought to aspire to be: aggressive, decisive, cool under pressure, and skilled at delegation. Hence, the title of this article hints at the vilest sort of naval heresy on my part: the mere suggestion that Nimitz might have been anything other than calm, calculating, and completely rational during the planning phase for the Battle of Midway. Yet for the past few years I have been pondering Nimitz’s assessment of the odds facing him during the run-up to this crucial battle and whether his decision to fight there at all actually was sound.

In 2005, I coauthored with Anthony P. Tully a book on Midway entitled Shattered Sword. One of its central contentions was that the myth around the Americans “miraculously” prevailing against “overwhelming odds” at Midway was more hype than reality. In fact, at the tip of the spear, the outcome was decided by two fairly evenly matched carrier forces: Admiral Nagumo Chūichi’s Kidō Butai, or First Mobile Force (comprising four fleet carriers—Akagi, Kaga, Hiryū, and Sōryū—among a total of twenty Japanese warships and 264 aircraft), versus U.S. Navy (USN) Task Forces (TFs) 16 and 17 (comprising three fleet carriers—Enterprise [CV 6], Hornet [CV 8], and Yorktown [CV 5]—among a total of twenty-five American warships, an island air base, and 306 carrier- and land-based aircraft.)¹ In fact, we argued, it was because of this rough parity that the contest hung in the balance for twelve hours—from early morning until late afternoon of 4 June 1942. It was only then that all four Japanese carriers had been knocked out of action and set aflame, and the battle effectively won by the Americans.
In our conclusion, we wrote the following:

If one believes in the notion of overwhelming Japanese superiority, then Nimitz’s decision to engage the enemy and accept the horrific odds against him must be judged reckless in the extreme. Nothing less can explain his willingness to walk clear-eyed into a fight, pitting his allegedly pathetic force against the Japanese juggernaut to contest a speck of land that was entirely disposable and that could be isolated and recaptured at any time. However, we take the view that Nimitz was an exceptional commander who had a finer appreciation of the odds facing him than many commentators do sixty years after the battle. Based on estimates of four to five Japanese carriers, he was within his rights to suppose that his forces, if positioned correctly, could carry the day.²

Our understanding of history, however, is ever changing, as new sources of information are found and new interpretations created. When Tully and I wrote our appreciation of the odds around 2004, I was not aware of a crucial piece of information that became clearer only in 2006, when John B. Lundstrom published his Black Shoe Carrier Admiral: Frank Jack Fletcher at Coral Sea, Midway, and Guadalcanal. Not only was Nimitz willing to fight a potential five enemy carriers with three of his own; it turns out he was willing to give battle at odds of five against two, if Yorktown could not be repaired in time from the damage it had suffered at the Battle of the Coral Sea.³ To my mind, five carriers on three already felt dicey; five on two honestly seemed reckless. And yet this issue has not been addressed squarely in any major history of the battle. What on earth was Nimitz thinking by accepting those odds? And what likely would have been the outcome had such a lopsided battle actually taken place?

CONTEXT
We can judge Nimitz’s decisions only by stepping back into his perceptual frame. What did he know—or think he knew—regarding the capabilities of his own forces and those of his enemy? To address this question, we can use two contemporary primary sources. The first is the U.S. Pacific Fleet’s “Running Estimate and Summary” (commonly known as “Nimitz’s Gray Book.”)⁴ This resource details important intelligence information, message traffic, and the thoughts of both Nimitz and his superior, Commander in Chief (COMINCH) Admiral Ernest J. King. The second is Nimitz’s battle plan, Operation Plan No. 29-42 (OP 29-42), which he issued to his task force commanders: Rear Admiral Frank Jack Fletcher, USN (in overall command), and Rear Admiral Raymond A. Spruance, USN (commanding TF 16). To these can be added other contemporary briefing documents and memos. Finally, we can make inferences from contemporary doctrine, as well as lessons learned from the fleet problem exercises that had formed the centerpiece of USN training during the interwar period.
Nimitz’s perceptual frame also may have been shaped by the course of the war to that point, although this is more speculative. He certainly would have been aware of the general state of strategic military affairs, though. Eighty years later, the ultimately overwhelming Allied triumph in 1945 has dimmed these memories, but it is worth recalling the context: just how terribly things were going for the Allies in the middle of 1942. One of Nimitz’s peers, Dwight D. Eisenhower, specifically recalling that crucial year, wrote later, “None of us, not even the most sincere and analytical, can recapture in his own heart and mind the fears and worries of those days.”

In Russia, the Red Army had just been handed massive new disasters at Kerch and Kharkov (Kharkiv), portending worse to come during a Wehrmacht summer offensive that everyone knew was brewing. In the Mediterranean, Malta was being bombed and starved into submission, with its governor predicting that if nothing were done this crucial British bastion would have to surrender within two months. The balance of naval power in the Mediterranean clearly had shifted to the Axis, and the Italian navy was bringing supplies into North Africa with near impunity.

Rommel’s Afrika Korps was threatening Tobruk and Egypt.

Nearer to home, Admiral Karl Dönitz’s Operation PAUKENSCHLAG had turned the merchant shipping routes of the U.S. East Coast into a shooting gallery. Merchant losses to U-boats throughout the Atlantic, Caribbean, Gulf of Mexico, and Mediterranean during the month of May were accelerating toward the eye-watering total of 559,400 tons—an increase of more than 200,000 tons and 60 percent over the previous worst month, May 1941. British imports for the quarter would fall by 25 percent, food by 16 percent—a truly dire state of affairs. June would see Admiral King as COMINCH—and Nimitz’s boss—being upbraided by Army Chief of Staff General George C. Marshall, who bluntly noted that the effect of the U-boat campaign was beginning to “threaten our entire war effort.” President Franklin D. Roosevelt vented similar frustrations just a few days later. King thus was under tremendous pressure in Washington; and pressure, of course, has a tendency to roll downhill onto subordinates.

In any case, Nimitz had plenty of problems of his own close at hand. By mid-May 1942, the picture in the Pacific was one of utter calamity. In a few short months, Japan’s opening offensive had ripped the entire Allied strategic position to shreds, routing the British in Malaya and Burma and crushing the Dutch in the Indies. A powerful naval raid into the Indian Ocean in April had seen Japanese carriers rampaging through the Bay of Bengal, sinking two British cruisers and a carrier along with 140,000 tons of merchant shipping. Ignominiously, the Royal Navy had been forced to rebase to Kenya for the time being. India, the crown jewel of Britain’s empire, was in direct peril of invasion or a domestic insurrection. In the Philippines in April, the largest surrender in American military
history had sent 78,000 troops into captivity, followed a month later by the capitulation of Corregidor. Farther south, the fall of the Malay barrier had placed the Japanese practically on Australia’s doorstep. In an effort to stave off the threat to Australia, America had just fought its first carrier battle at the Coral Sea. And while it had saved Port Moresby in New Guinea from capture, that had been at the cost of the large carrier USS *Lexington* (CV 2) sunk in exchange for the much smaller Imperial Japanese Navy (IJN) carrier *Shōhō*—a swap that certainly did not feel favorable at the time.\(^{14}\) General Alan F. Brooke, British army, the head of Britain’s service chiefs, certainly spoke for many when he confided to his diary around this time, “These are black days!”\(^{15}\)

The most important person in Nimitz’s world was King. But his relationship with his hard-nosed superior was not built on trust yet, with King initially doubting Nimitz’s aggressiveness.\(^{16}\) A 24 April conference between the two had produced something of a détente, with Nimitz demonstrating that he was just as eager as his boss to seek battle, whereupon King had granted him permission to fight at Coral Sea.\(^{17}\) But given the pressure King was under, he understandably wanted results, and rapidly. Meanwhile, Nimitz’s intelligence section (Station HYPO, under the brilliant Commander Joseph J. Rochefort, USN) was feuding with its counterpart in Washington (OP-20-G, led by the notoriously political Captain John R. Redman, USN).\(^{18}\) Although Nimitz was skilled at hiding it, he was living in a pressure cooker. Furthermore, USN culture strongly militated toward taking aggressive action: upsetting the enemy’s operational tempo, seizing the initiative, forcing the enemy to react, and thereby imposing one’s will on the conflict.\(^ {19} \)

Clearly, King expected Nimitz to turn around what thus far had been a train wreck in the Pacific. But how?

**JAPAN’S PLAN UNCOVERED**

One thing Nimitz had going for him was code breaking. In one of history’s great cryptographic coups, the Americans had compromised Japan’s naval operational code (JN-25b) and were reading sufficient traffic to infer enemy intentions. On 14 May, just a week after the Battle of the Coral Sea, Station HYPO began detecting a possible Japanese operation aimed at Midway and timed for early June.\(^ {20}\) Over the next few days, that estimate coalesced, and by 16 May Nimitz was a believer. Two days later, King, too, was broadly in agreement.\(^ {21}\)

That very same day, at Pearl Harbor, Nimitz held a conference with his staff officers to discuss battle planning. The main problem was finding sufficient carriers. Nimitz had just received King’s current estimate of Japanese forces for the upcoming operation: “Cardivs [Carrier Divisions] 1 and 2 possibly plus Zui-kaku,” for a total of potentially five enemy fleet carriers.\(^ {22}\) Nimitz knew he would have TF 16’s *Enterprise* and *Hornet* available to face them; they were returning to
Pearl Harbor at best speed. But *Wasp* was in the Atlantic. And *Saratoga* was being repaired in Bremerton, Washington, from a submarine torpedo it had collected in January; it seemed unlikely it would be able to make it to Hawaii in time.

That left *Yorktown*. The ship had been damaged at the Coral Sea and was leaking oil. It was not expected back until 28 May—just five days before the Japanese might open their offensive at Midway. From what little Nimitz knew, the initial indications were that *Yorktown’s* damage was “within capacity Pearl to repair in reasonably short time.” But until the ship actually arrived it could not be ascertained with certainty how long repairs would take. Despite this, Nimitz signaled King on the night of 18 May that it had been “tentatively decided” to “employ task force 16 plus the *Yorktown* group if ready in the critical area.”

In other words, if worse came to worst, Nimitz was prepared to give battle at odds of five IJN carriers versus just *Enterprise* and *Hornet*. King did not dissent.

Over the next ten hectic days, there was continued uncertainty and disagreement between HYPO and OP-20-G about whether *Zuikaku* would be coming to the dance. Washington steadfastly believed that *Zuikaku* was slated for Midway; HYPO consistently thought not. Lieutenant Commander Edwin T. Layton, USN, in Hawaii noted in his personal intelligence notebook on 19 May that traffic analysis pointed to a Japanese striking force consisting of “BatDiv [Battleship Division] 3 of 4 BB [battleships], CarDivs 1 and 2 of 4 CV [fleet aircraft carriers], CruDiv [Cruiser Division] 8 and DesRon [Destroyer Squadron] 17”—broadly speaking, a fairly accurate estimate. A message from Pearl to Naval Air Station (NAS) Midway the following day likewise noted: “Attacks may be expected by planes from as many as 4 carriers.” A briefing then prepared on 24 May by Layton amplified that it was predicted that *Zuikaku* would “load planes by 28 May and [is] expected to Join Northern [i.e., Aleutians] Forces.” This same briefing, though, also had *literal* question marks regarding the status of *Sōryū* and *Kaga* for Midway. Another estimate, on 26 May, placed *Sōryū* in the Mandates (i.e., in the Central Pacific, and presumably close to either Truk or Palau). In other words, even a few days before Nimitz’s carriers had to sortie for battle, quite apart from skepticism regarding *Zuikaku*, there still was a great deal of uncertainty regarding what the Japanese actually had slated for their upcoming attack.

On 26 May—the day that *Enterprise* and *Hornet* returned to Pearl Harbor—Nimitz issued his formal “Estimate of the Situation” explicitly laying bare the HYPO/OP-20-G rift, noting that King’s estimate of enemy CVs was “Cardivs 1 & 2 plus 1 [i.e., a total of] 5,” whereas Nimitz’s estimate was “4.” Nimitz’s intelligence team continued to be skeptical of *Zuikaku*’s presence, but for his part Nimitz certainly could not discount entirely the possibility of the ship’s presence—especially not while working for a man like King.
As it happened, TF 17, with Yorktown, limped into Pearl Harbor a day early, on 27 May, trailing a ten-mile-long oil slick. The carrier’s crew was exhausted and looking forward to shore leave stateside as part of Yorktown’s anticipated refit in Bremerton; they soon were to be disappointed. Admiral Fletcher, commander of TF 17, debarked in search of the Officers’ Club and a well-deserved drink; instead he was whisked into a car and driven immediately to the office of the Commander in Chief, Pacific Fleet (CINCPAC). There he found Nimitz, who was “normally the calmest of people, . . . exceptionally disturbed.”

As Nimitz admitted later, “I got very little sleep before and during Midway, because I had so much on my mind.” Fletcher then was informed for the first time that a new battle was imminent. The goal now was patching up Yorktown and sending it back out immediately.

Nimitz then made another stunning announcement; the fiery vice admiral William F. Halsey—the Navy’s most prominent carrier commander—would be directing neither the battle nor TF 16. The stress of constant command since December had led to Halsey’s skin breaking out in excruciating psoriasis. He had lost twenty pounds and was unable to sleep. As soon as Enterprise docked, Nimitz had taken one look at him and ordered him to the hospital. That meant that

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FIGURE 1

The Japanese fleet carrier Zuikaku, whose role in the upcoming Midway operation was a crucial variable in Nimitz’s battle planning.

Source: U.S. Naval History and Heritage Command
Fletcher would be in overall command. At Halsey’s insistence, his TF 16 cruiser commander, Spruance, would take over Halsey’s entire task force. In other words, Nimitz was sending something of a scratch team, led by two nonaviator admirals, up to Midway to fight what was shaping up to be a critically important battle—no wonder he was agitated. After dropping these bombshells, Nimitz then had a private chat with Fletcher regarding Coral Sea and Yorktown’s damage. It was only afterward that Spruance poked his head into Nimitz’s office and was informed that Yorktown would be going along—this even before the ship had been moved into dry dock to assess the damage fully. Both Nimitz and Spruance were palpably relieved when they learned they would have three carriers after all.  

NIMITZ’S BATTLE PLAN
That night after dinner, Nimitz presented OP 29-42 to his senior commanders and staff. The timing of its issuance (1800 hours) makes it clear that its core
components had been thought through and finalized well before Nimitz could have received positive confirmation that Yorktown was repairable (which would require the hull to be inspected for underwater damage). Indeed, as issued, the plan noted that “[i]f Yorktown is not available, instructions will be issued as to employment of remainder of force.”

In other words, Nimitz reserved the right to handle Spruance’s TF 16 differently than currently envisioned if it were the sole task force in the battle.

OP 29-42 was constructed carefully to create a web of submarine patrol areas deployed in a 120-degree arc to the northwest of Midway Atoll, the direction from which the Americans anticipated the Japanese would approach the island. When the battle opened, Nimitz would rely on “strong attrition” from these fleet boats, as well as from the beefed-up air group at Midway, to whittle down the Japanese carrier force.

Nimitz explicitly noted that “it is essential that enemy carrier decks be damaged to immobilize enemy planes” and, if possible, that “enemy carriers be sunk before they get within striking range of Midway.” Nimitz acknowledged that, given the slim long-range air assets on hand at NAS Midway, hitting the enemy at such a distance would be difficult to achieve. But the overall goal was clear: whittling away at enemy airpower, thereby reducing the risk of committing American carriers.

Meanwhile, the American carriers would open the battle at Point LUCK, well off to the northeast of Midway. If the
initial attritional phase went well and circumstances seemed right, then—and only then—would the carriers be committed to battle.

The distant placement of Point LUCK has not been understood properly in any previous history of the battle, including Shattered Sword. Indeed, Point LUCK often is used—casually and mistakenly—to refer to the general position of TFs 16 and 17 on the morning of 4 June, from which the ambush of the Japanese was launched during the actual battle. But Point LUCK as originally defined (latitude 32° N, longitude 173° W) was actually about 360 nautical miles (nm) from where Japan’s Kidō Butai was anticipated to come within air range of Midway.\(^3^9\) This had very important consequences for Nimitz’s planning, because implicitly it created a multiphase, multiday battle, with the first day devoted solely to attacks by attritional assets—submarines and Midway’s aircraft. This is so because the maximum range of the Grumman Wildcat (F-4F) fighters and Douglas Devastator (TBD) torpedo aircraft carried aboard the American carriers was about 175 nm, and that of the Douglas Dauntless (SBD) dive-bombers only about fifty miles greater.\(^4^0\)

Given the distant placement of Point LUCK, the American task forces would have needed to close at least 185 nm to get within range of the enemy. That would have necessitated eight to nine hours steaming at 20–25 knots; any faster would have compromised the fuel situation of the escorting destroyers. Thus, even if Fletcher (or his boss, Nimitz) knew that the battle was going well by, say, midmorning (1000) of the first day, and then decided to commit the carriers, they would not have been in position to launch aircraft until very late in the afternoon (around 1800 at the earliest). It would be far from certain that Fletcher still would have current scouting information in hand by then. Even if he did, civil twilight ended at around 2100 hours. Given the time required for the aircraft launch cycle (as much as an hour, as the American carriers’ rather sluggish deck operations at Midway proved), Fletcher’s aviators probably would be searching for Kidō Butai in failing light conditions. Furthermore, given a likely mission duration of over three hours, the strike aircraft also would face the near certainty of a night recovery.\(^4^1\) It seems highly unlikely that Fletcher would have opted for such a risky course of action. In other words,
starting the battle at Point LUCK meant it was almost inevitable that the American carriers would not enter combat the first day. Instead, Day 1 would be used to reposition the carriers, if circumstances warranted, to where they could launch strikes first thing on the morning of Day 2.

The evidence indicates that Point LUCK fundamentally was a risk-management tool. By locating the carriers there to start, Nimitz was providing to Fletcher the time and standoff room to make an informed go-no-go decision before committing to battle. If the first day was not going well, Fletcher could disengage cleanly while still well outside Japanese scouting range, exit the battlefield, and preserve his flattops. This large physical separation also helps to explain OP 29-42’s apparently contradictory instruction to “[i]nflict maximum damage on enemy by employing strong attrition tactics. Do not accept such decisive action as would be likely to incur heavy losses in our carriers and cruisers.” Had Nimitz’s original battle plan envisioned his carriers beginning the battle already within likely air range of their

FIGURE 6
POINT LUCK AND NECESSARY MOVEMENT OF AMERICAN CARRIER FORCES TO ACHIEVE ATTACK RANGE AGAINST THE JAPANESE CARRIER FORCE

Point “Luck” (32°N, 173°W)

185nm

175nm

225nm

Midway

Source: Author

FIGURE 7

Nimitz’s Letter of Instructions from OP 29-42.
Source: Author, courtesy of John Lundstrom
enemy counterparts, “decisive action,” for all practical purposes, already would have been accepted. Point LUCK, though, placed the carriers at arm's length to start, with the decision whether to accept action still in the future. This conforms perfectly with OP 29-42’s next instruction: “operate with Task Forces available initially to the northeast of MIDWAY . . . in order to seize opportunity to obtain initial advantage against [enemy] carriers which are employing their air groups against MIDWAY.”

Note here the explicit mention of operating northeast of Midway, whereas in the actual battle Fletcher began with his carriers placed almost due north of the atoll—a change that happened for reasons that will be explained shortly.

Just before Spruance sailed the following morning, both admirals were handed one of the most famous orders in all naval history. In it, Nimitz laid out his expectations that they fight according to “the principle of calculated risk.”

Nimitz's letter perfectly exemplified the preferred style of interwar USN orders: embracing decentralized command and control, providing vital contextualization to commanders, but avoiding being prescriptive. The underlying message, though, was clear; Fletcher and Spruance were to act judiciously. Carriers were precious—not to be used recklessly.

This same theme had been reverberating all month through the exchanges between King and Nimitz captured in the Gray Book. On 9 May, Nimitz had stated that “[t]he general situation with respect to carriers is such that we must husband our present carrier strength for future operations.” A day later, with an eye to Lexington’s loss, Nimitz had messaged King again. “At present stage of our carrier building program we can not afford to swap losses with this ratio.” In other words, while Nimitz was cognizant that there would be losses in successfully prosecuting the war, he wanted a favorable kill ratio. King agreed with Nimitz’s general stance, messaging Nimitz the day before his conference with his staff officers. “I consider that our appropriate strategy is to make strong concentration Hawaiian Area and . . . chiefly to employ strong attrition tactics and not repeat not allow our forces to accept such decisive action as would be likely to incur heavy losses in our carriers and cruisers.”

These words clearly influenced Nimitz’s letter of instructions to Fletcher and Spruance a week later. They also mirrored something that Nimitz already had told Spruance in private; if the battle was going badly, he and Fletcher were to disengage, preserve their carriers, and leave the defense of Midway to the Marines. Nimitz was convinced that even if the Japanese managed to capture Midway (which was hardly certain, given the size of the Marine garrison and the island’s formidable defenses), “they can't hold it and we will get it back.” Given this, under no circumstances were his task force commanders to feel obligated to “slug it out” from an unfavorable position. Here again, Nimitz was mirroring an earlier message he had sent to King, on 14 May: “Your reference to conserving carriers...
ASSESSING THE PLAN

Nimitz’s battle plan was clear, simple, and well articulated (and much sounder than its Japanese counterpart). But was it actually viable, or even wise, especially against a carrier force as formidable as Japan’s Kidō Butai had proved itself to be? How would Nimitz and his staff have assessed the odds during their 18 May conference—which seems to have formed the basis of OP 29-42—and before Yorktown’s status was known? In attempting to calculate the odds he faced, Nimitz would have been influenced by the results of prewar fleet exercises (and their rules), current doctrine, and what smatterings of information he had on the performance of various weapons to date.

Defending Midway was familiar ground for Nimitz. It had been the focus of several exercises—most notably, Fleet Problem XVI in 1935. Indeed, by 1940, the commander in chief of the U.S. Fleet, Admiral James O. Richardson, USN, had noted: “There are few situations in and around the Hawaiian Islands that have not been explored already.” Nimitz also would have been well aware that the fleet problems had revealed that in carrier warfare it was critical to get in the first attack. That meant, in turn, that good scouting would be crucial. As Nimitz’s patrol aircraft commander noted, “The problem at Midway is one of hitting before we are hit.”

Likewise, on the basis of the rules used in the fleet exercises, Nimitz would have been familiar with the expected 16 percent hit rate from dive-bombers (his most important carrier weapon) and the belief that hits by three 1,000 lb. bombs would be sufficient to render a carrier unable to operate aircraft. In other words, a squadron of eighteen dive-bombers could expect to get 2.88 hits against a carrier—sufficient to knock it out. This same rough math was reflected in USN dive-bomber doctrine of the day, which stated that normally an entire squadron would concentrate all its firepower on a single carrier. Considering all that, Nimitz and his staff might have reasoned that just two carriers, each with two dive-bomber squadrons, theoretically could knock out four enemy carriers with an ambush. This would mean they could hope that even if a fifth Japanese carrier was present, the initial ambush would leave a pair of American carriers facing a single remaining Japanese flight deck.

Unfortunately for Nimitz and his commanders, OP 29-42 also contained a little-noticed flaw in its intelligence appraisal that had important downstream ramifications. In its estimate of how the Japanese would open their battle, Nimitz’s plan envisioned “Preliminary attacks by [Japanese] carrier aircraft beginning at daylight or during moonlight. . . . It is thought that one or more carriers may
take up close-in daylight positions for this purpose.” This forward-deployed carrier task force in turn would be covered “by additional carrier groups, and fast battleships.” Broadly speaking, this assessment seems to have been driven by Nimitz and his staff engaging in what is called mirror imaging; for reasons of passive defense, the U.S. Navy operated its carriers in task forces of only one or two flattops apiece, and they assumed the Japanese did likewise. In fact, current preferred IJN practice was to keep all their fleet carriers in a single formation, thereby making it easier to coordinate their air groups, as they had done during all their early-war operations, including at Pearl Harbor, off Java, and in the Indian Ocean. The net result was that OP 29-42 created a faulty mental model in the minds of the American task force commanders regarding likely Japanese tactical dispositions.

Lundstrom was the first historian to note this important defect in OP 29-42, as well as its “grave repercussions” during the battle. These eventually came to roost on Hornet’s bridge. On the morning of 4 June, the ship’s air group would render itself completely ineffective, engaging in the infamous “Flight to Nowhere” that winged its way well north of the Japanese carrier force, missing it entirely. This almost certainly was the result of Hornet’s commanding officer, Captain Marc A. Mitscher, USN, independently taking it on himself to search for a mythical second Japanese carrier task force—without first consulting Spruance. The result was a minor disaster and one of the most infamous incidents in the battle, as Hornet squandered its firepower and suffered heavy aircraft losses for no gain. Mitscher then compounded his error by not explaining his actions candidly in his ship’s action report. But the roots of Hornet’s poor performance lay at least partly in OP 29-42 itself.

Nimitz, of course, was completely unaware of the impending ramifications of this portion of his plan while he was putting it together in mid-May. However, it also should have been apparent that such a carrier ambush would work only if Nimitz’s intelligence estimates had predicted the enemy’s approach course correctly, and if Fletcher’s forces subsequently could approach to launch range without first being detected themselves, and if the weather was good, and if scouting was good, and if the dive-bombers could find their targets, and if they could coordinate their attacks adequately, and if they were not attrited themselves by Japanese fighters and antiaircraft fire, and if the hit percentages predicted by prewar exercises actually held true. That was a lot of ifs. Furthermore, Nimitz’s 26 May estimate noted that “[the Japanese] have amply demonstrated their ability to use their carrier air with great ability. We can no longer underestimate their naval air efficiency.” Among Japanese strengths were “[p]ossible carrier [fighter] superiority” and “[l]arger range of [carrier] aircraft”—both of which proved to be true. The latter, in particular, would make disengaging more difficult if the
battle was going against the American carriers, once they were committed. All in all, a leader such as Nimitz must have known that he was cutting his margins very thin in relying on just two carriers to win this battle.

That made the contribution of other assets—land-based aircraft and submarines—even more vital. Nimitz was a submariner himself, and he expected great things from his fleet boats, which he felt “have demonstrated considerable superiority” over their opposite numbers. However, here too closer examination reveals some serious problems. The submarine patrol sectors laid out in OP 29-42 were quite large, with only a single boat in each, meaning it would be very difficult to mass sufficient submarines along the Japanese axis of advance once Kidō Butai was detected. Moreover, the rules of the fleet problems had encouraged American submarine skippers to use deep-submergence attacks and to be extremely cautious about being detected—neither of which was good for their effectiveness.

The Gray Book also notes that “division tactics” (i.e., group attacks) had not been tried yet against the enemy, implying that communication and coordination problems could be expected while trying to jockey submarines into position. Finally, by this point in the war the Americans were beginning to collect their first inklings that not all was right with their boats. The Gray Book mentions on 17 May that “[t]he Subs at TRUK have not produced results yet. That concentration should have been able to do more.” On 27 May, another entry notes, “There is more evidence that our magnetic exploders on the torpedoes do not function 100%. In fact the torpedo [sic] picture is not the best.” Indeed it was not, and American torpedoes would be awful until mid-1943. This 27 May report would not have influenced Nimitz—it was too hot off the presses, and it was too late for him to do anything with the information anyway. But even so, he would have been right to be cautious. Indeed, his estimate of the situation noted that even getting his submarines within reach of the enemy was “dependent to a large extent on chance.”

Regarding air forces, our understanding of Nimitz’s opinion on the likely effectiveness of his motley (and half-trained) Army/Navy/Marine air group on Midway must remain uncertain. Despite the lofty prewar expectations for the B-17 as a ship killer, Nimitz had messaged King on 20 May as a result of war experience at the Battle of the Coral Sea—where Army B-17s mistakenly had attacked an Allied surface squadron—that “the general ineffectiveness of high altitude bombing against mobile targets . . . [is] evident.” Nimitz’s 26 May estimate of the situation noted that “Army air has not demonstrated that it has the ability to coordinate with surface forces, and they are not very successful in hitting mobile targets with their high-altitude bombers,” mentioning a few pages later that “Army air is of uncertain value.” Nimitz also had a squadron of Marine dive-bombers on the island and a mixed Army/Navy force of torpedo planes. Many of these units, though, either were flying older aircraft, were inexperienced, or both.
In sum, Nimitz’s overall tone about his attritional assets seems cautious. However, he still must have believed that they would subtract at least something from the Japanese carrier force.

All in all, Nimitz’s plan was not irrational, but it was breathtakingly bold, and it hinged on some very optimistic assumptions. It also may have been influenced by the tremendous pressure both Nimitz and King were under, which heavily inclined them toward taking action to change the momentum of a failing war. Then again, Nimitz already had demonstrated in May’s battle in the Coral Sea that he was willing to commit his carriers at what looked to be unfavorable odds if the opportunity to harm Japan’s carrier force seemed propitious. He was a very aggressive commander indeed. But he also was counting on the location of Point LUCK to give his carrier commanders sufficient breathing room to assess the opening phase of the battle, judge the odds, and then act accordingly. At the same time, though, because of OP 29-42’s erroneous view of Japanese task force dispositions, it also carried with it an additional unknown risk that at least some of the American carrier air groups might not be employed optimally.

**THE 2 JUNE WATERSHED**

On 28 May, *Enterprise* and *Hornet* sailed for Midway. *Yorktown*, after seventy-two hours of around-the-clock repairs, sortied two days later. Meanwhile, *Zuikaku*’s status was still the subject of debate. In Hawaii, Rochefort continued to lean toward just four Japanese carriers, and he estimated *Zuikaku*’s position as being “in empire.” On 31 May, though, the Office of the Chief of Naval Intelligence in Washington issued a memo citing indications that *Zuikaku* “had been assigned to the Midway attack force.” Ironically, that same day HYPO felt it had concluded definitively that *Zuikaku* would not be at Midway—some of its pilots were being transferred to the two smaller carriers taking part in the Aleutians operations. Washington was not convinced, however, opining as late as 2 June that *Zuikaku* would be with the striking force.

As it developed, that same day would mark a critical shift in Nimitz’s thinking. By the early afternoon, the men of Spruance’s TF 16 were gladdened to see *Yorktown* and its escorts heaving into view on the southern horizon. Fletcher had arrived, and both task forces now were on station at Point LUCK. A little later, Nimitz sent a message to his commanders wherein “[i]t was suggested to Task Force 16 and 17 that a position further to the West might be advantageous.” Although nothing had changed regarding enemy plans, moving farther west would “insure being within early striking distances of objectives”—a tacit confirmation that lurking at Point LUCK would make an early engagement impossible. Fletcher, being nobody’s fool, understood that “suggestions” from four-star admirals...
typically warrant rather scrupulous attention. He duly complied. On the night of 2/3 June, the two American task forces moved about 175 nm closer to where the Japanese were predicted to show up, thereby roughly halving the likely engagement range. Point LUCK itself never moved any closer to the battlefield—Fletcher’s ships did.

It seems likely that Nimitz was breathing a little easier. The HYPO team—in which he placed great stock—was assuring him that Zuikaku was off the table. All three of his carriers had arrived on station, and battle had not yet opened. Thus, he was more comfortable dialing up the level of risk by positioning his flight decks closer to where the main action was likely to be. In this sense, 2 June marks the milestone at which Nimitz dropped his initial scheme of a multiphase, multiday battle. His “suggestion,” in effect, committed Fletcher...
to battle on Day 1, thus paving the way for the encounter that actually unfolded. Nimitz here demonstrated both aggressiveness and flexibility by adapting his plan to changing circumstances.

During the actual battle on 4 June, though, important components of Nimitz’s plan fell apart. U.S. submarines were ineffective, with only USS Nautilus (SS 168) even firing at an enemy warship. The land-based torpedo planes and dive-bombers launched from Midway attacked sequentially, rather than en masse. Nagumo’s combat air patrol (CAP) duly crushed them, and they inflicted no damage. High-altitude B-17 attacks proved useless against Kidō Butai’s swiftly maneuvering carriers. Midway’s fighter cover and potent antiaircraft fire did attrit some of the Japanese carrier aircraft strength during the morning strike against the island.\textsuperscript{77} And the atoll’s Catalina amphibious scouting planes (PBYs) did yeoman’s work finding the enemy fleet. But from the standpoint of actually attacking Kidō Butai, Midway’s contribution was nil—forces based there scored not a single hit. Nimitz’s battle plan had counted on Midway making at least some positive contribution to take the heat off the carriers; that manifestly did not happen. Consequently, the outcome of the battle hinged almost solely on Fletcher’s flight decks. Fortunately, despite Hornet’s misfires, Enterprise and Yorktown had sufficient firepower between them to get the job done. In the end, the Americans triumphed—but only just (see figure 9).

**WHAT MIGHT HAVE HAPPENED?**

It is reasonable to ask what might have transpired had Nimitz pitted just Enterprise and Hornet against five of Japan’s carriers. Readers of Shattered Sword may recall my confession that “the authors (well, one of them, anyway) heartily dislike alternative history.”\textsuperscript{78} It is thus deliciously ironic that I now must drink deeply from the cup I poured myself fifteen years ago by wading into the counterfactual arena to suggest possible outcomes from Nimitz’s aggressiveness. Despite Point LUCK acting as a risk-mitigation mechanism, it is quite easy to envision a scenario characterized by the following:

- the Japanese work more diligently to assemble a composite air group for Zuikaku and commit it to battle at Midway after all, whereupon
- the first day of battle opens, with U.S. Army Air Forces (USAAF) B-17s making wildly inflated claims of success (which, in fact, they did during the actual battle), thereby
- convincing the American commanders at Point LUCK to commit their carriers to battle on Day 2, only to discover belatedly that
- Kidō Butai actually has five undamaged carriers, whereupon the Americans would find themselves involved in a carrier action at very unfavorable odds.
To explore this, we turn to a fascinating 2020 article in *Military Operations Research*: “Revisiting the Battle of Midway: A Counterfactual Analysis.” In this work, the authors (intriguingly, both Anelí Bongers and José L. Torres are Spanish economists with an interest in computational modeling and defense-related topics) built a stochastic model of the Midway engagement, then used it to test various counterfactual scenarios.

Students of naval history will be familiar with Lanchester models, which simulate the exchange of continuous gunfire by two opposing naval formations. First published in 1916, the formula devised by Frederick W. Lanchester (also known as the “N-square law”) describes the potent advantage that a larger opponent has over a smaller as combat continues, with the offensive power of the weaker side being eroded at a progressively faster rate. Lanchester’s model then was extended with the publication in 1986 of the seminal volume *Fleet Tactics* by Captain Wayne P. Hughes Jr., USN (Ret.). In that work, Hughes developed a “salvo combat model” wherein offensive firepower is applied not continuously but rather in discrete bursts or pulses. This more accurately describes the behavior of aircraft and missiles. Hughes’s approach also allowed for the modeling of defensive mitigation against the incoming pulse, thereby simulating the effects of CAP fighters and antiaircraft fire. This general approach was used in 2005 to explore the Battle of the Coral Sea, for instance.

Bongers and Torres built a similar model to examine Midway. The models’ parameters include such things as the probabilities of aircraft arriving at their target, the defense’s odds of successfully intercepting incoming attackers, the results of dropping ordnance on a target, the number of hits needed to disable that target, and so on. Each of these parameters is not a fixed value but rather lies along a distribution curve. And each can change—hence use of the term stochastic rather than deterministic. Once the model is constructed, its parameters are “calibrated” so that the model as a whole will replicate the observed results of the historical battle. This is done using standard Monte Carlo techniques (i.e., changing the parameters of, say, the efficiency of antiaircraft fire) across a range of probabilities and over a large number of simulated test runs. Once calibrated, the model then can be used to explore various what-ifs concerning the historic battle.

I subsequently worked with the authors to expand the counterfactual scenarios presented in their initial paper a bit further—specifically, to explore the 5 vs. 2 scenario that is the basis of this article. (I rationalize this reliance on mathematical tools far above my “pay grade” by reasoning that I merely am emulating Nimitz’s mind-set prior to the battle, as he had to trust that the technical wizards in the basement at HYPO really did know their stuff when it came to using decrypted Japanese intercepts.) The results of Bongers and Torres’s model are intriguing—and in some cases alarming.
Recall that in the real battle Hornet’s Flight to Nowhere meant that the decisive morning attack on Japan’s four carriers had to be carried out by just three squadrons of dive-bombers, from Enterprise and Yorktown. These duly succeeded in disabling three carriers: Akagi, Kaga, and Sōryū. Hiryū then launched two counterattacks that disabled Yorktown, whereupon a second set of American sorties finally disabled Hiryū during the late afternoon. Bongers and Torres’s stochastic model mimics a similar exchange of blows: an initial American strike, followed by a Japanese counterstrike, followed by another American strike, and a final Japanese strike (if the Japanese have sufficient flight decks remaining to mount one).\(^84\)

Bongers and Torres’s model also takes Hornet’s actions into account, using its performance as a parameter—each scenario can be run with either “Good Hornet” or “Bad Hornet” (the latter being the historical one). Of note, the model predicts that for the historical battle (four IJN carriers versus three American), if Hornet’s air group actually had followed Spruance’s orders instead of going off on a wild-goose chase, the Americans in most cases would have “firepower-killed” (i.e., sunk or heavily damaged) all four Japanese carriers outright without losing any of their own—a better outcome for the Americans than historically.\(^85\)

A fascinating implication from the Good Hornet model in the 4 vs. 3 scenario is that Mitscher almost certainly is culpable for the loss of Yorktown in the historical battle. Had he followed his instructions and not acted independently to send his air group in the wrong direction, Hornet most likely would have contributed to the destruction of Kidō Butai. In fact, had Hornet’s entire air group attacked at the same time as its torpedo squadron (VT-8) historically did, it might have been the first carrier to score, at around 0930, leaving Enterprise and Yorktown to complete Nagumo’s destruction shortly thereafter. The battle well might have been effectively over by lunchtime, with the Americans handing the Japanese a shocking 4–0 defeat and depriving them of any real ability to retaliate. With no Kidō Butai, Yorktown likely never even would have been attacked. Instead, Hiryū’s escape at 1020 meant that it subsequently put Yorktown out of action with two strikes of its own, leaving the crippled American flattop to be sunk by a Japanese submarine a few days later. Thus, the Flight to Nowhere was not just a disaster for Hornet’s own air group; it had momentous implications for the battle as a whole. In this respect, however, it is worth noting that OP 29–42’s miscast intelligence estimate, combined with Mitscher’s headstrong attitude toward not wanting to take orders from black shoes such as Spruance or Fletcher, biased the course of the actual battle from the get-go toward the appearance of Bad Hornet.

In each of the counterfactual scenarios in Bongers and Torres’s paper (i.e., 4 vs. 3 and 5 vs. 3), the Americans end up inflicting more firepower-kills on the Japanese than they suffer in return. In other words, given the American positional and scouting advantages, and with the extra firepower afforded by a third
flight deck, the Americans had every right to win this battle. As the authors point out, “We show that the American victory in the Battle of Midway was neither a miracle, nor caused by sheer luck on the American side; it was not caused by the victory disease or bad luck on the Japanese side or by wrong decisions taken by Nagumo. Indeed, we have shown that Midway was a battle the Japanese probably could never win and that the final result was conditioned by the timing imposed by the earlier attack on the Midway Air Base.”

This last point is important. Bongers and Torres conclude that it was Nagumo’s initial, opening attack against the island of Midway that effectively wrong-footed him and robbed him of half his force’s effective firepower, thereby making his four flight decks temporarily weaker than the three of his yet undiscovered foe. Given the slow pace of carrier operations, once Nagumo got behind the power curve it was impossible for him to recover. Consequently, as Bongers and Torres point out, “Only in the unlikely case in which the IJN fleet were not discovered by USN reconnaissance and the American carriers being spotted earlier, that is, the Japanese attacking the American carriers first, would the Japanese have a chance to win the battle.” “Miracle at Midway” this was not.

Obviously, there are some caveats here. No model can re-create reality perfectly, nor can it replicate all the intricacies of an actual battle. Perhaps most importantly, Bongers and Torres cannot simulate entirely the “luck factor” inherent in how the decisive American dive-bomber strike actually occurred. Recall that not only did Yorktown and Enterprise’s squadrons approach the target along two separate axes, thereby vastly complicating the Japanese CAP’s difficulties, but their approaches were timed almost perfectly to deliver a simultaneous attack. Both the timing and the twin approach vectors were entirely a matter of chance, but they provided one of the luckiest aspects of the entire contest. Instead, Bongers and Torres’s model simply has to assume that, given a sufficient number of aircraft flying around, something good probably will happen. Therefore, no modeling exercise can provide a “final answer” or “the truth” regarding what might have happened in any given counterfactual scenario. Nevertheless, models at least can point to probable outcomes and allow us to explore the underlying reasons for them.

The presence of Yorktown very much appears to have been one of the reasons for the American victory. Bongers and Torres’s model strongly supports the notion that Yorktown represented the difference between just swapping losses and attaining a truly stunning victory. This was particularly true after Nimitz’s June 2 “suggestion,” which committed Fletcher’s forces to battle on Day 1. This move had the effects of improving the American carriers’ striking capacity and maximizing the effect of surprise. But it also sharply curtailed their ability to withdraw cleanly if the battle began going against them—particularly against longer-ranged Japanese aircraft. With the failure of “strong attrition tactics” on the part
of the submarines and land-based air during the actual battle, only the carriers themselves had the requisite firepower to get the job done. That being the case, Fletcher needed all three flight decks to give him the margin of safety required to win, and win big—particularly if something unexpected happened, or one of his carriers performed poorly (as Hornet did). Yorktown made a critical contribution by destroying Sōryū in the morning while Enterprise was demolishing Akagi and Kaga simultaneously, thereby helping to tip the battle decisively in the Americans’ favor. Some of Yorktown’s surviving aircraft also performed important scouting in the afternoon, and then (operating from Enterprise) participated in the final attack that wrecked Hiryū.

Five versus Three

So far, so good, then, for Nimitz and the Americans. At odds of 4 vs. 3, Bongers and Torres’s model strongly validates both Nimitz’s battle plan and his decision to move westward on 2 June. We turn now to Zuikaku and its potential impact on the battle. Bongers and Torres partly address this in their own paper by adding Zuikaku to the mix, then modeling the outcome of five IJN versus three USN carriers. This changes the historical results, but not as dramatically as one might think. Even with Bad Hornet, the Japanese lose 3.28 carriers firepower-killed and the

FIGURE 10

PROBABLE OUTCOME OF 5 VS. 3 CARRIER BATTLE, USING BONGERS AND TORRES’S SEQUENTIAL MODEL, WITH BAD HORNET

Source: Author, adapted from Bongers and Torres
Americans 2.09 carriers—a very expensive American victory, to be sure, but representing an exchange rate that Nimitz and King probably would have accepted. If *Hornet* performs well (which, again, this author considers the less likely possibility), five carriers versus three turns out to be not much of a problem for the Americans at all. Assuming that the Americans get in the first strike, the initial attack most likely firepower-kills four Japanese carriers, leaving the Japanese with a much weaker counterattack. The final tally of 6.08 firepower-kills of the Japanese suggests that all five IJN carriers likely would be not merely damaged but sunk, with 1.37 American carriers firepower-killed in return, perhaps equating to one sunk and another damaged. This is an outcome King and Nimitz most certainly would have accepted.  

**Five versus Two**  
However, when one takes the American carriers down to just a pair versus five Japanese, things quickly begin falling to pieces. In this scenario, the performance of *Hornet* becomes absolutely critical, because there is no “slack” whatsoever in the system. All the American dive-bomber squadrons must score in the first strike to prevent a devastating Japanese counterstrike. If *Hornet* performs historically (i.e., poorly), the model suggests that the Americans lose both their

![Diagram of carrier battle outcome](image-url)
FIGURE 12
PROBABLE OUTCOME IN COUNTERFACTUAL SCENARIO OF FIVE JAPANESE CARRIERS AGAINST TWO AMERICAN, WITH \textit{HORNET} PERFORMING POORLY

Source: Author, adapted from Bongers and Torres

FIGURE 13
PROBABLE OUTCOME IN COUNTERFACTUAL SCENARIO OF FIVE JAPANESE CARRIERS AGAINST TWO AMERICAN, WITH \textit{HORNET} PERFORMING WELL

Source: Author, adapted from Bongers and Torres
carriers sunk (2.88 firepower-kills) while the Japanese lose two sunk or damaged
(1.91 firepower-kills).

Even if Hornet performs well, the best the Americans can hope for is very likely
to lose both carriers sunk while damaging two or three Japanese flattops
(2.44 IJN vs. 2.72 USN firepower-kills)—not at all what Nimitz and King were
hoping for.

These counterfactual outcomes are summarized in the table below.

**ANALYSIS**

This counterfactual approach lends support to the notion that Nimitz's battle
plan was not irrational, at least given what he knew. Nimitz was quite right that
outnumbered forces could prevail, if they were positioned correctly and benefited
from the element of surprise. But this was true only up to a point. Bongers and
Torres's model strongly indicates that, despite Nimitz's best efforts to control
the risk factors around the battle, actually committing to a tactical engagement
at odds of 5 vs. 2 would have been a very bad idea indeed. Five vs. two was “A
Carrier Too Far,” so to speak. Just as Yorktown represented the safety margin in
the real battle, the presence of Zuikaku in a 5 vs. 2 brawl would have created an
unbridgeable disparity in flight decks and firepower. This would have made it
almost impossible for Nimitz to have attained his stated goal of inflicting dispro-
portionate damage on the enemy. Instead, the best he likely could have achieved
would have been swapping losses—the very thing he inveighed against in his
communications at the time. Thus, when examined in cold hindsight, with in-
formation Nimitz did not have in hand at the time, it is clear that his OP 29-42
battle plan was freighted with sizable unknown risks.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Japanese Losses (standard deviation)</th>
<th>American Losses (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USN Attack 1</td>
<td>USN Attack 2</td>
</tr>
<tr>
<td>4 IJN vs. 3 USN</td>
<td>Bad Hornet (historical)</td>
<td>3.01 (1.39)</td>
</tr>
<tr>
<td></td>
<td>Good Hornet</td>
<td>4.87 (0.44)</td>
</tr>
<tr>
<td>5 IJN vs. 3 USN</td>
<td>Bad Hornet</td>
<td>2.28 (1.03)</td>
</tr>
<tr>
<td></td>
<td>Good Hornet</td>
<td>4.72 (0.61)</td>
</tr>
<tr>
<td>5 IJN vs. 2 USN</td>
<td>Bad Hornet</td>
<td>1.85 (0.83)</td>
</tr>
<tr>
<td></td>
<td>Good Hornet</td>
<td>2.32 (0.91)</td>
</tr>
</tbody>
</table>

The “historical” scenario uses Bongers and Torres’s sequential model, wherein the combat is modeled using USN attack 1 → IJN counterattack 1 → USN
attack 2 → IJN counterattack 2. Regarding totals, it should be noted that in principle it is not “cricket” simply to add together two numbers that possess
different standard deviations, particularly when the results of subsequent strikes and counterstrikes are conditional on the outcome of the initial USN
attack. These totals are presented for illustrative purposes only.

https://digital-commons.usnwc.edu/nwc-review/vol75/iss2/8
It is worth pointing out again that in all these scenarios, any improvement in Japanese scouting from the historical norm, which might lead either to a Japanese first strike or even a simultaneous exchange of air strikes, likely would have been disastrous for the Americans. Every carrier in the battle—Japanese or American—theoretically potentially possessed sufficient firepower to disable two enemy flight decks, under the right circumstances. This, in turn, highlights the tremendous importance of good scouting, which, one hopes, confers its most sought-after benefit: allowing one to get in the first effective attack against the enemy, thereby degrading his firepower from the outset. This crucial need to strike first already was well-known at the time of the battle, of course—American prewar exercises had demonstrated this point time and again.91 This, in turn, explains Spruance’s real sense of urgency and impatience as TF 16’s painfully slow launch cycles were unfolding during the morning of the actual battle.92 In other words, with either worse American scouting or better Japanese, Midway might have become an American disaster.

Granted, a counterfactual Battle of Midway with Zuikaku in the mix well may have had a different shape, more closely conforming to the multiphase affair that the distant location of Point LUCK dictated and that Nimitz’s original battle plan envisioned. Without Yorktown available, it also seems unlikely that Nimitz would have issued his 2 June “suggestion” to move TF 16 closer to the likely scene of the action. One also would suspect that HYPO would have confirmed by then that Zuikaku indeed was coming to the battle after all—thereby making Nimitz, Fletcher, and Spruance even more cautious. If those events had come to pass, Enterprise and Hornet probably would have been held at arm’s length as the battle opened and might have withdrawn without firing a shot if the first day’s attacks from the submarines and Midway fell flat—as they probably would have.

However, none of this is certain. The Americans might not have known that their attacks actually had fallen flat, with B-17s and submarines perhaps claiming kills they did not make. Likewise, had HYPO not deduced Zuikaku’s participation it is perfectly conceivable that its presence would have been missed during the first day of combat.93 With the Americans oblivious to Zuikaku’s presence, they would not have known that the odds were stacked so heavily against them, so they might have committed to what they mistakenly thought was a 4 vs. 2 engagement. In sum, given the vagaries of war, reconnaissance, faulty intelligence, and USAAF overclaims, even had Point LUCK been acting as a risk mitigator, Fletcher unknowingly might have misjudged the true tactical state of affairs, thereby precipitating a carrier battle at desperate odds.

Likewise, had Fletcher withdrawn, prudent as that might have been, it also might have been cast as an ignominious defeat—a larger, more humiliating version of Saratoga’s aborted relief mission to Wake at the beginning of the war. This would have been especially true if Midway had ended up falling to the
Japanese—unlikely though that was. All in all, at odds of 5 vs. 2, a carrier battle near Midway almost certainly would not have ended up being a smashing victory for the Americans in the way that the real thing was. And it seems much less likely that Chester Nimitz would be revered today as one of America’s finest admirals.

This brings us back to the question of Nimitz’s judgment and the reasons for his actions. It is unknowable whether Nimitz was being influenced by the grim tidings of world events swirling around him at this time, although he certainly would have been aware of many of them. But he also was famously careful with his emotions, and he would have been disinclined to share any outward appearance of stress with his subordinates.

However, we know more of his dealings with his immediate superior, King. It is clear that King himself was under tremendous pressure at this time, and was demanding action from his subordinate commanders. For his part, Nimitz clearly understood that even though the Americans currently were on the defensive in the Pacific, King expected him to operate aggressively. Indeed, although his boss did not appreciate it fully yet, Nimitz was just as aggressive as King, and was by nature inclined to take risks in any case. Critically, too, with golden intelligence sitting in his hands and a credible carrier force available, Nimitz could not very well offer battle in some fashion. Sitting on his hands was not an option—King would have relieved him. Nimitz’s decision to risk battle at 5 vs. 2 makes sense within this context. That said—as Bongers and Torres’s model strongly suggests—it was an enormously risky decision. And if battle actually had been joined at those odds, it likely would have turned out to be the worst decision Nimitz ever made.

Venturing further down the road of speculation, it also seems unlikely that fighting 5 vs. 2 was a decision that Nimitz would have made just six months later, toward the end of 1942. In May 1942, CINCPAC had far less understanding regarding the true vagaries of World War II carrier battles. Intelligence was rarely perfect. Weather conditions were fickle. Fuel concerns often loomed large. During combat, even good sighting reports were typically off by dozens of miles. Combined with flimsy radio nets, this often meant that getting timely sighting reports to carrier commanders was nearly impossible. Carrier-deck operations were complex and difficult to orchestrate; coordinating launches among multiple flight decks was even more so. Radar was magical but often cranky, and using it effectively for defensive fighter direction was enormously challenging. To these realizations were added the utter inability of B-17s to hit warships from high altitude and (most personally galling to Nimitz) the current ineffectiveness of American fleet submarines.

By the end of 1942, though, all these factors were coming into much sharper focus. By then, too, Nimitz had just fought the Battle of Santa Cruz, in which his
combative subordinate Halsey had precipitated a battle with a pair of carriers against what turned out to have been four (and might easily have been five) Japanese carriers. The Americans were handled very roughly in the process, losing *Hornet* sunk and *Enterprise* badly damaged.\(^96\) Thus, late-1942 Nimitz was a much wiser man than May Nimitz had been. This, in turn, highlights the heightened risks associated with fighting major battles at the beginning of a war, when the real capabilities of both friendly and enemy forces often are understood much less well.

Chester Nimitz ended up prevailing on 4 June 1942. Where there were problems with his plan, they were offset by even worse Japanese planning and reconnaissance, which ended up wrong-footing Nagumo from the get-go. Nimitz also was aided by the flexible leadership of both Fletcher and Spruance, who were aggressive when called for but prudent at need. These advantages, combined with the skill and bravery of American soldiers, sailors, and airmen—and a very healthy dollop of good luck—were sufficient to achieve victory against a seasoned enemy.

In the final analysis, Nimitz deserves every one of the accolades handed to him over the years. No one could have done better in the awful circumstances of mid-1942. I hope that this article illustrates, though, that Nimitz also was human and not infallible. The pressures of war and the imperative to act can push even the most gifted commanders into positions in which the boundary between prudence and rashness may blur—and then be overstepped. Much must be risked in war, and nothing great can come to those who risk nothing. But once the dice are rolled, small changes in circumstance can have very large impacts on the verdict of history.

**NOTES**

I would like to thank Elliot Carlson, Richard Frank, Joel Holwitt, Trent Hone, John Lundstrom, Craig Symonds, José Torres, and Anthony Tully for their continuing friendship, expertise, and insights on these matters over the past several years. I also appreciate the very cogent comments from the Naval War College’s anonymous reviewers, which strengthened the article.

1. For details on these aircraft complements, see Jonathan B. Parshall and Anthony P. Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Washington, DC: Potomac Books, 2005), pp. 90, 94, 96. An additional sixteen float aircraft are included in the Japanese totals, along with the 248 carrier aircraft on Nagumo’s four flattops.

2. Ibid., p. 435.


4. “Captain Steele’s ‘Running Estimate and Summary,’ Covering the Period 7 December 1941, to 31 August, 1942,” vol. 1 of “Command Summary of Fleet Admiral Chester

13. Churchill had foreseen such a possibility, remarking to Gen. Hastings “Pug” Ismay on 2 February, just before the fall of Singapore, “It will be necessary to have an additional number of British troops in India. These need not be fully formed divisions, as they are for internal security against revolt.” Winston Churchill, *The Second World War*, vol. 4, *The Hinge of Fate* (London: Cassell, 1950), p. 85. Indeed, the failure of the Cripps mission in March 1942 subsequently led to Gandhi’s “Quit India” campaign in August, which saw the entire National Congress leadership (including Gandhi) jailed for the remainder of the war. This, in turn, quickly led to domestic rioting that killed hundreds and threw the entire colony into turmoil. Thus, in the eyes of the British at this time, the potential for a general Indian uprising in the face of an ascendant Japan could not be discounted.


18. “HYPO” or Fleet Radio Unit Pacific, in Hawaii (where Nimitz’s headquarters was located), was at that time one of two major Allied signals-intelligence units in the Pacific.


with King making the rather extraordinary request to the British Admiralty to send a carrier to the South Pacific to help cover the area, since the “imminence of enemy attacks on Midway and Alaska perhaps Hawaii has required withdrawal of carrier-cruiser groups from South Pacific.” This is echoed in Layton’s notebook on 18 May (p. 76).

23. Ibid.
25. Layton’s notebook 24-II, 19 May 1942, p. 78.
31. Lundstrom, Black Shoe Carrier Admiral, p. 223.
33. Lundstrom, Black Shoe Carrier Admiral, p. 223.
34. Ibid., p. 226. Yorktown was not dry-docked until the following morning. Ibid., p. 229. However, an advance team of repair specialists from Pearl Harbor’s yard already had been sent out to the ship to assess the damage even before it docked. Craig Symonds, The Battle of Midway (London: Oxford Univ. Press, 2011), pp. 191–92.
35. OP 29-42, p. 4.
36. Ibid., p. 6; “Initial Submarine Patrol Areas,” annex A to OP 29-42.
38. In documents of the time, Nimitz and others always referred to this location as Point “Luck,” with quotation marks.
41. The cruising speed of a TBD Devastator was 111 knots, meaning a likely mission length of 3.1 hours over a nominal 350 nm mission.
42. OP 29-42, p. 6.
43. Commander-in-Chief, United States Pacific Fleet to Commander Striking Forces (Operation Plan 29-42), “Letter of Instructions,” 28 May 1942, in OP 29-42. This letter was given to both task force commanders separately before they sailed, but commonly is found appended to copies of OP 29-42.
44. Hone, Learning War, pp. 156–61.
46. Message from Nimitz to King, 10 May 1942, in ibid., p. 463.
48. Lundstrom, Black Shoe Carrier Admiral, p. 228.
49. Parshall and Tully, Shattered Sword, pp. 487–90; Robert J. Oliver to Thomas B. Buell, 5 August 1971, Spruance Collection, Buell Papers, box 3, folder 12, NHC-NWC. I appreciate Craig Symonds’s insights on these matters.
50. Oliver to Buell.
54. Nofi, To Train the Fleet for War, pp. 34–36; Hone, Friedman, and Mandelles, American & British Aircraft Carrier Development, p. 63. Nofi notes that the percentages for dive-bomber attacks used during the various fleet problems varied between 15 and 35 percent. But since 1938, the figure used in exercises had been 16 percent—which likely would
have been the value Nimitz used as well. This turned out to be very close to wartime dive-bomber performance of 15 percent.


56. OP 29-42, p. 3.

57. Doing so prevented a single enemy strike from destroying multiple carriers.

58. Lundstrom, Black Shoe Carrier Admiral, p. 236.


60. Lundstrom, Black Shoe Carrier Admiral, pp. 242–43, 248; Symonds, Battle of Midway, pp. 258–59.

61. Only Hornet’s torpedo squadron, VT-8, actually located Kidō Butai on the morning of 4 June—and was annihilated.


64. Ibid., p. 508.

65. Nofi, To Train the Fleet for War, p. 233.


67. Ibid., pp. 487, 508, 517.

68. Lundstrom, Black Shoe Carrier Admiral, p. 126.

69. Joseph Rochefort, oral history, pp. 219–20, courtesy of Elliot Carlson. See also Layton’s notebook 24-II, 30 May 1942, p. 111.

70. Arthur McCollum, “Summary of Japanese Naval Activities of May 31, 1942,” SRNS-0048, Record Group 457, National Archives and Records Administration II, College Park, MD. I am indebted to John Lundstrom and Elliot Carlson for providing this document and its citation to me.

71. Carlson, Joe Rochefort’s War, pp. 359, 365. See also Layton’s notebook 24-II, 31 May 1942, p. 112, which specifically notes a message mentioning four Zuikaku Zeros at an air base and urging that further transfers of Japanese CarDiv fighter pilots be expedited.

72. Layton’s notebook 24-II, 2 June 1942, p. 118.


74. Lundstrom, Black Shoe Carrier Admiral, p. 235. Lundstrom’s was the first account of the battle that noted this 2 June “suggestion” and the subsequent westward shift of the American carriers.


76. Lundstrom, Black Shoe Carrier Admiral, p. 236.

77. Parshall and Tully, Shattered Sword, pp. 149–88, 202–204.

78. Ibid., p. 424.


84. The perceptive observer will note that the real battle’s firepower “pulses” varied from this simplistic model in several respects. Among these, first, there was a large number of completely ineffectual American attacks that occurred before the first effective attack arrived. Second, the Japanese actually got in two counterattacks (first Kobayashi’s dive-bomber squadron, followed an hour later by Tomonaga’s torpedo planes) before the Americans launched their second effective attack (which wrecked Hiryū.) Thus, one could...
say that Midway actually conformed more to an American → Japanese → Japanese → American model of firepower pulses.

85. Bonger and Torres, “Revisiting the Battle of Midway,” p. 59; José Torres, e-mail to author, 23 June 2021. Bongers and Torres reran their calculations for the purposes of my article, and in some cases the values changed from those in their original article. I am using the results of their most recent simulations, which are summarized in table 1.


87. Ibid.


89. Bongers and Torres, “Revisiting the Battle of Midway,” p. 63.

90. José Torres, e-mails to author, 16 and 17 February and 23 June 2021.

91. Nofi, To Train the Fleet for War, p. 288.


93. One of this article’s referees expressed a (reasonable enough) skepticism that the presence of a fifth Japanese carrier would have eluded the Americans during the first day’s proceedings, which in turn presumably would have led Fletcher to incline toward a more cautious plan of action. However, several points are worth noting in this respect. First, because of the broken cloud cover over Kidō Butai’s operational area during the actual battle, there never was an occasion before the 1020 dive-bomber attack when American aircraft sighted all four Japanese carriers simultaneously. Throughout the morning, all the sighting reports Fletcher and Spruance had in hand mentioned no more than two carriers. Ibid., p. 134. This is the very reason that the Flight to Nowhere occurred—the Americans were unsure whether they had sighted all the Japanese task forces in the area. Second, during the B-17 attack from 0753 to 0830, despite producing fine photographs of Akagi, Sōryū, and Hiryū, the Americans never photographed Kaga. It may not even have been sighted, owing to the cloud cover in the area. Third, because of the continued confusion regarding the composition of the Japanese carrier forces attacking Midway, and even after having knocked out what he believed were four carriers, Admiral Spruance and TF 16 spent much of the following day (5 June) looking for a mythical fifth Japanese carrier rather than focusing on the damaged Mikuma and Mogami. Ibid., p. 363; and Cressman et al., “A Glorious Page in Our History,” p. 146. Fourth, as late as 6 June, Nimitz still was under the impression that there might have been as many as two more damaged Japanese carriers withdrawing from the battle. “Gray Book,” p. 554. Indeed, it was not until some of Hiryū’s survivors were recovered on the 19th that Nimitz finally was certain that Hiryū had not escaped. Fifth, similar instances of Japanese carriers escaping notice during American air attacks also had occurred at the Coral Sea and Santa Cruz—local weather conditions were crucial in this respect. Taken together, it does not seem unreasonable to assert that Zuikaku’s detection during the first day’s combat was by no means guaranteed. It follows, then, that Fletcher taking a more cautious approach to the battle on Day 2 could not be guaranteed either.


95. Ibid., p. 308.