

## Book Review: Marc Wortman's Excellent 'Admiral Hyman Rickover'

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*“All progress depends on the unreasonable man.”* – George Bernard Shaw

Back when future Hall of Fame coach Bill Belichick was a former head coach after a largely failed stint with the Cleveland Browns, he famously offered his opinion in a very tense moment about an upcoming play over the mic that connected all the coaches to one another, including head coach Bill Parcells. His analysis proved correct as the subsequent play revealed. An exasperated Parcells replied with “Yeah, you’re a genius, everyone knows it, a goddamn genius, but that’s why you failed as a head coach.”

Belichick’s light or heavy insubordination came to mind while reading Marc Wortman’s fascinating new biography, *Admiral Hyman Rickover: Engineer of Power*. In the U.S. military culture, being right has been known to be the path to bad fitness reports and a failure to advance in an up-and-out culture. As a consequence, officers are known to be *political* as opposed to *officious*. Oh well, as Wortman’s new book makes plain, Hyman Rickover was the opposite of political. And the U.S. Navy enjoyed immense progress during his service as a result.

Though this will surely elicit debate given the advance that Rickover oversaw as the “Father of the Nuclear Navy,” he was in many ways the personification of the Shaw quote that begins this review. In his own words in the days before the distant object of a nuclear-powered Navy became a reality, he responded to his many critics that “You guys are always telling me I should be more reasonable. Well, I don’t see any advantage to the Naval Reactors program of being reasonable. Suppose they start talking about cutting back the Reactor Development Division budget [as part of across the board cuts]. Everybody is supposed to be reasonable and absorb part of the loss. Do you think anybody’ll say, ‘Let’s talk to Rickover, he’ll be reasonable?’” Rickover was even unreasonable about being reasonable, and as readers of this book will realize, he had to be. Full disclosure about my analysis of the book and its subject: my father was one of the 5,000 officers Rickover chose to serve in the nuclear Navy (USS Henry Clay) over the years, which explains my keen interest in Wortman’s book. More on Rickover’s brutal officer-selection process later on.

For now, Wortman writes at book's beginning that in the U.S. Navy of the World War II era and beyond, all "existing submarines cruised along the surface with noisy diesel engines or, if underwater, on electric power at slow speed for no more than a few hours before they needed to resurface to charge their batteries." The problems with this kind submarine movement were many, including most notably that "these boats were easily hunted – and often swiftly sunk." The solution? To Rickover, it was nuclear power. Wortman explains that "a nuclear submarine would be able to slide into the depths and maintain top speeds for weeks or even months without the need for recharging fuel, air, or battery." A simple change, right? Not so fast.

Lest readers forget, "the same energy that incinerated Hiroshima and Nagasaki" was the energy the extraordinarily contrarian Rickover intended for the transformation of surface and undersea ships. Except that visions of what took place in Japan were still very much seared in the minds of civilians and military brass alike. Much more challenging, there was little certainty that what Rickover envisioned had a chance of working. As Wortman puts it, Rickover aimed to preside over a "warfare leap as fundamental as that from sail to steam."

It's a popular question or quip today that "we put a man on the moon," so why can't we accomplish all manner of simple things? True enough, but as Rickover labored to turn his far-fetched idea into something real, the consensus view about harnessing "atomic power to drive a ship beneath the waves for previously inconceivable distances was a notion as preposterous as a voyage to the moon."

More terrifying, the path to "discovery" about capturing nuclear energy to move ships wasn't one of the typical technologist in Silicon Valley whereby business ideas frequently "fail completely," only for the failed visionaries to gain crucial experience that propels their next big step in pursuit of the commercial information that drives progress. Put another way, failure for Rickover would be gruesome and tragic, it would include an "out-of-control nuclear chain reaction" that "would melt the reactor cauldron until it exploded," thus "killing the men inside the land submarine's hull."

Basically, an attempted leap as impossible as the moon landing would take place on May 31, 1953, and if Rickover was wrong he would lose much more than his career. *People would die*, the Idaho landscape where the experiment was staged would be "poisoned," and "the public backlash to such a catastrophe would put atomic propulsion off the table for decades, if not forever." All of this helps explain the broad dismissal of Rickover inside the U.S. Navy. According to Wortman, the typical refrain about nuclear-powered ships was "nice toy, but it will never be practical." This is why we so desperately now need the unreasonable, the odd, and perhaps "the borderline crazy" as venture capitalist Peter Thiel describes the successful technologists in Silicon Valley who, by virtue of earning billions with their startups, do so by discovering an all-new future that average minds quite simply cannot conceive.

Which brings up a question: why is the U.S. populated by so many unreasonable, opposite, entrepreneurial thinkers? The view here is that it's a consequence of who Americans are. We're not a race as much as we are or we're descended from a collection of people from around the world who somewhat uniquely decided to risk everything (including their lives) to cross oceans

and borders in pursuit not of security, but freedom. Americans aren't Albanian, British, Chinese, French, Indian, Greek, Japanese, Mexican, Russian, Syrian, and Turkish" (or name your country) as much as they're outliers from those countries who had the drive and courage to make the ultimate entrepreneurial leap: starting over in an all-new place. Rickover was one of them.

Born Chaim Godalia Rykower in Poland in 1900 (or perhaps 1899), Rykower's life in the Polish shtetl of Makow-Mazowiecki was defined by "grinding poverty" and "antisemitic violence" that his family escaped when he was young. That Rykower and his desperate family made it to the U.S. brought to mind Cato Institute co-founder Ed Crane, and his deep belief that people who would sacrifice so much for freedom should be made American citizens upon arrival based on what they endured to get here. In other words, the *getting here* was what stamped them as *American*. Amen.

One imagines that a family escaping horrid poverty didn't look too appealing upon arrival at Ellis Island (the Rykowers eventually settled in Chicago), but that's the point. The U.S. won the so-called "War on Poverty" in the late 18th century by virtue of the principles of freedom that it was founded upon. Poverty isn't cured by handouts as much as freedom is always the answer. The Rykowers (Americanized as Rickover once in the U.S.) had freedom upon arrival, which was all they needed to move on from the tragically impoverished circumstances they came from. Again, their getting here made them *American* through and through.

Rickover in particular changed his circumstances. At the age of 18 he secured an appointment to the U.S. Naval Academy. About this, not every arrival is Hyman Rickover, but what an American story! Notable is that he was so unlike the traditional naval officer in physique. In Wortman's words, he was a "wisp of a man at barely five and a half feet tall and 125 pounds." Brutal hazing was the norm at the Naval Academy of that era, so it's hard to contend that Rickover uniquely had it bad given "the four years of hazing, marching, antisemitism, and hard study" that the "little Jew" suffered. Still, the speculation here is that difficult Academy life was an improvement on what Rickover was born into.

Better yet, it turns out Rickover wasn't just different for his diminutive stature. He was rebellious in a Navy that prized conformity. Whereas the Navy had long been defined by deference toward those at the top, Rickover was on a mission to transform an entity reliant on technologies no longer sufficient in an increasingly dangerous world. Wortman quotes Rickover as saying that "there is not hierarchy in matters of the mind." Pedigree didn't matter to him either. Realistically, the latter hurt candidates for the nuclear Navy in his eyes. Eugene Wilkinson was the first Captain of what was the first nuclear submarine (*Nautilus*), and Wortman writes that he "ticked off another column for Rickover: he had not gone to the Naval Academy. He was an independent thinker, outside naval orthodoxy." Along these lines, upon seeing a Naval Regulations book, Rickover yelled "Get the hell out, and burn it." He was rarely in uniform, and detested saluting, marching and other cosmetic activity. "What the hell is there about standing up and saluting and dressing up in uniform? You can put dummies to do that job."

Needless to say, Rickover's impolitic nature didn't win him many friends. Wortman writes that "tradition-bound Navy officers detested Rickover and all that he stood for." Robert McNamara

“wanted to court-martial him,” which probably just increased Rickover’s stature in the eyes of some readers. About his Navy colleagues, Rickover quipped that “If I were on fire, they wouldn’t piss on me.” Love him or hate him, his personality clashes meant that he was twice passed over for Admiral, which means he was essentially “fired” in an up-and-out U.S. Navy. Despite efforts to push him out, with the help of powerful people outside the Navy he was able to “turn back the Navy’s effort to oust him.” Interesting here is that while he made mostly enemies in the Navy, the famously impolitic Rickover had many allies in Congress and the Senate who ultimately forced a review of his being passed over. Rickover would *thankfully* make Admiral, only to continue to serve. Perhaps more exciting for this immigrant son of Poland who escaped poverty and violence in his native country, Rickover sat in the Oval Office with more than a few U.S. presidents. Again, only in America.

Thankfully is italicized up above in consideration of what Rickover’s obstreperous ways meant for the Navy’s evolution. Indeed, his contribution to the service branch cannot be underestimated. Rickover’s highly unlikely 1953 development of nuclear power for submarines meant that they “were almost impossible to detect and track and could stay down for months at a time.” For surface ships, nuclear power meant that aircraft carriers and their escorts could move about speedily “without being slowed by accompanying oilers or the need to put into port, and once on station, they could remain in combat operations indefinitely.” This remarkable leap in technology for submarines “meant that the Soviets could not attack the United States or its allies without facing certain catastrophic retaliation.”

After which, Rickover’s achievements against all odds arguably saved the Navy from obsolescence. Indeed, while it would be interesting to see how others in the post-WWII Navy would address Wortman’s analysis of same, his expressed opinion was that the days of the Navy’s prominent existence were numbered. In his words, “What use was a navy in the Atomic Age? Just two airborne atomic bombs had driven Japan to surrender; the German rocket technology that had rained missiles down on London would surely carry atomic payloads before long, and then there were the jets that the soon-to-be-independent U.S. Air Force would one day fly. What seagoing defense would stop them?” Even Rickover “fretted to a colleague” at WWII’s conclusion, “What do I do with the rest of my life?” Not only had Rickover not been a traditional officer of the shooting, bombing and combat kind (from the earliest of days, this iconoclast who rejected the “juvenile rituals” of the Naval Academy and the Navy itself was an engineer and machine type in overalls, not a physically imposing Officer), what would ship engineering skills mean after a war that revealed traditional ships as somewhat dated?

Interesting in retrospect is that while government is regularly defined by waste and the perpetuation of what’s no longer needed in the name of “jobs,” the Navy’s seeming postwar obsolescence started to factor into budgeting. Wortman reports that by 1955, “fully half of the U.S. defense budget was by now going to the Air Force in support of its atomic-bomb-carrying aircraft.” In short, budgets rapidly began to reflect the “fading horizon for the Navy’s national security mission.” Basically, Rickover wasn’t just trying to achieve the impossible with nuclear power, he was also trying to achieve it inside a branch of the military that was enduring a light version of the Schumpeterian “creative destruction” that real businesses endure in much rougher

fashion. About Wortman's analysis that is seemingly supported by budgetary evolution, it would once again be interesting to know if there's another side to this fascinating bit of history whereby the U.S. Navy's existence as a sizable branch of U.S. national security was imperiled.

It would also be interesting to see the above addressed economically. As your reviewer regularly makes plain about government spending more broadly, easily the biggest problem with it is not the "deficits" that the economically confused focus on; rather the shame of the spending is that the spending is so often *forever* at ever larger numbers. Forget about whether the spending takes place in deficit or surplus conditions, and instead understand that the spending itself is *the tax* as politicians arrogate to themselves power over how resources are allocated versus the market-disciplined private sector. Why is the spending forever? It is because it's hard to mothball programs, military branches and other creations of politicized resource allocation precisely because money spent quickly develops political support. And as these various consequences of government spending always employ people, the bureaucracies are forever in search of a perpetuating purpose. Though Rickover was known to be extraordinarily thrifty with taxpayer money, he as previously mentioned asked "what will I do with the rest of my life?"

Applied to his own situation inside a military culture that he despised, Rickover was the longest serving officer in the U.S. Navy's history. While his brilliant discovery of a remarkable way to power warships is beyond impressive considering the long odds he was seen as up against, his doing what he did arguably gave the U.S. Navy a new funding lease on life. Nuclear submarines that could remain submerged for months at a time, and that could launch nuclear missiles, ultimately lifted the Navy back to the top of the military-branch heap. Furthermore, the advances achieved with nuclear power soon enough spread to sea-level ships, including aircraft carriers. While the Air Force had seemingly lapped the Navy in the post-war estimations of Congress, a Navy that could launch jets with nuclear missiles on them from aircraft carriers all over the world in a sense revealed the limits of a more landlocked Air Force. What would economic types say about all this? Competition lifts all boats for sure, but enormous sums were spent on the development of nuclear technology that perpetuated the Navy's existence, and propelled it into a better future. What to make of it?

What to make of it in particular in light of Wortman's acknowledgement that "nuclear propulsion for commercial ships" ultimately "fell short." Thrifty as Rickover was with taxpayer dollars, the simple truth seems to have been that what was doable for entities capable of drawing on taxpayers was not doable for businesses disciplined by actual market forces. As for nuclear power more broadly, it's no doubt evolved since the 1950s and 1960s, but the initial nuclear power plant built by Rickover et al with taxpayer funds in 1957 in Shippingport, PA cost "nearly \$116 million." What did we get for this massive expenditure? Electrical output that "cost eight times that of a typical coal-fired plant."

All of it speaks to the many contrasts within Rickover. There's no doubt that he was very protective of the taxpayer, but perhaps not so protective such that his work that he clearly loved would be imperiled? About this, he can't be blamed for wanting to perpetuate work that he was smitten about, but it again brought about contrasts or contradictions. Protective of the taxpayer in ways that would perhaps appeal to libertarians in the Center, or conservatives on the Right,

Rickover at the same time didn't fully trust the private sector that he worked closely with in building the nuclear Navy. Wortman writes that he "never lost his worry that business executives would fail to keep their reactors safe"; the implicit point there that the profit-motivated would be focused on money over safety. The view wasn't serious. Even if business executives were lax in their approach, that's the beauty of the marketplace. Investors aren't. They enforce discipline precisely because they want to achieve investment returns. Rickover also thought U.S. industry overall to be incapable of competing. He died in 1986. His views were already incorrect when he died, only for subsequent commercial history to render them absurd.

Rickover's opinions about U.S. business extended to education. Supposedly the Soviet way of teaching was better, and the individuals created by it better given the hardships they endured under communism. Ok, but even with the Russians largely free today, please name the Russian exports Americans can't live without. Tick tock, tick tock. This odd worship of pain as the driver of progress long appealed to Rickover. He wished that the Great Depression would last a "little longer," and "We shall have a fine country if it does." More realistically, an economy isn't a blob. It's a collection of individuals. Extraordinary wealth hasn't held back the desire among Americans to create more of it. Not at all. And for obvious reasons. As wealth grows, so do the range of ways in which people can showcase their true skills in the marketplace. Your reviewer referred to it as "Tamny's Law" in his 2018 book, *The End of Work*; a book that ironically leads with a quote from Rickover himself ("having a vocation is something of a miracle, like falling in love.") about falling in love with one's job. In short, soaring wealth will drive *greater* work ethic not less, simply because the wealth that Rickover saw as sapping initiative actually makes it possible for exponentially greater numbers of people to do what they can't get enough of.

As for education, where do the world's greatest students yearn to be educated? To answer the previous question would be a waste of words, at which point it should be said that Rickover vastly overstated the importance of education as is. By definition they're teaching yesterday's news, and probably not very well.

Really, who in academia could have taught the future that Rickover envisioned? Lest readers forget, what he saw was rejected by the wise. Nuclear-powered ships were "nice toys" with no practical, safe applications. The doer in Rickover eventually forced a Naval Academy that promoted a "liberal education" of frequently well-born men to start teaching the hard sciences like math and physics, but even there it's worth pointing out that Rickover attended the Naval Academy of old (USNA '22) where his own "poverty" and "grinding study habits" separated him from midshipmen who frequently "came from well-to-do families," and for whom the path to getting into the Academy was much more paved and clear than Rickover's unlikely arrival in Annapolis. Yet somehow Rickover oversaw remarkable engineering advances without being educated in that way. It raises an obvious question: does the education that Rickover took so seriously make the man, or would those skilled in engineering disciplines thrive in the space regardless of how they were educated? The view here is that Rickover's life itself supports the latter supposition, and that Rickover's focus on education was largely time wasted for someone not known to waste a lot of time.

Other contrasts included how Rickover operated the ships of the pre-nuclear Navy that ran on oil and diesel. Consumption of either required pulling into ports and other cessations of mission, at which point he “removed light bulbs” until the U.S.S. *New Mexico* was “dark as hell.” He “refused to relent” on the heating of the *New Mexico* even as officers were reduced to “heavy coats and scarves” to ward off the cold. And having found out that water pressure burned fuel excessively too, he “reduced water pressure until shower and sink faucets at full blast produced only a trickle.” Despite this, “he made sure that seagoing accommodations were far better for submariners” who operated his nuclear subs relative to the horrendous conditions that prevailed in the diesel submarines of the past. Even better, the nuclear submarines he presided over the creation of included jukeboxes, soft-serve ice cream machines, assigned bunks over the “hot” ones of the past, along with mess halls that could be converted to movie theaters holding 50. To be clear, this is NOT to say that life was easy for those in the nuclear Navy (how many readers could endure close quarters underwater for *months* at a time?), but it is to say that Rickover wasn’t completely heartless. Impossible as his standards were, as much as he never gave compliments, he seemed to recognize deep down that attracting the best of the best required compensations.

Another odd contrast was in Rickover’s personal life. Married to a well-born Episcopalian named Ruth Masters, the Rickover who got along with very few in the Navy and who did not socialize with the other officers, was a very different person away from the Navy. During one of his tours overseas, Rickover and Ruth traveled widely, only to stay in hostels like college students. While traveling, Wortman quotes Ruth as having said “We talked with everyone – natives as well as resident whites.”

When introducing himself to Edward Teller, the eventual “father of the hydrogen bomb,” Rickover led with “I am Captain Rickover. I am stupid.” There was modesty within someone who was wildly complicated, and who seemingly didn’t lack for self-regard.

Eventually the Soviets caught up to nuclear-power naval fleets, and Wortman contends that the U.S.S.R.’s joining of the U.S. in the “silent services” meant that both nations were held “back from direct armed conflict that could potentially escalate into nuclear war.” It all makes sense, but it would be interesting to see a discussion or debate among military experts as to the truth or lack thereof of mutually assured destruction. On its face it sounds compelling such that the advances Rickover made possible very much enhanced world peace, but a debate would be interesting. There have to be some who would disagree with what makes sense to the non-expert eye.

Mentioned earlier was the interviewing process of prospective nuclear submariners that Rickover oversaw. As readers can probably imagine by now, they were much less than easy given what a difficult man Rickover was. It’s no revelation that in his day-to-day existence, he was prone to “frequent curses,” plus he “never uttered a word of praise.” Rickover “personally selected” his officers, and the interviews were “sometimes abusive, even borderline-illegal, and always intimidating.” They included “embarrassing personal questions,” plus to throw interviewees off more he sawed “off a couple of inches from the front of the interviewees’ chair.” For those

whose answers to interview questions didn't measure up, some suffered "hours-long banishment to a broom closet."

Was all of this right and proper? Looked at modernly it perhaps seems barbaric, but that's why it can be problematic to judge the past based on present standards. The world was a more dangerous place then, and then please keep in mind the previously discussed implications of an accident of the nuclear variety. Rickover's room for error was exceedingly narrow, which meant he had to find out as much as he could during interviews. And while correlation is not always exact, or even close to exact, Wortman cites U.S. Navy public records which indicate that "the nuclear Navy never experienced an incident resulting in an uncontrolled radiation release." This wasn't true for the Soviets, who "suffered multiple accidents, causing numerous radiation-poisoning injuries and deaths and environmental contamination that lingers." Is the correlation exact, or did the primitive Soviet economy result in sub-standard everything for its nuclear Navy?

Digressing from the Soviet Union briefly, Wortman's account isn't hagiography. There was the U.S.S. Thresher tragedy that resulted in 129 deaths, and while the tragedy wasn't nuclear, Wortman notes that Rickover was all-controlling until it wasn't advantageous to be. In this case, he claimed full control over the nuclear aspects of his submarines, but not as much their construction. On the subject of Rickover's failure to twice gain promotion to Admiral, Wortman doesn't take the theoretically easy route of blaming antisemitism. No doubt some or a lot did exist in the Navy of old, but that's not what held Rickover back. In Wortman's words, "what is clear is that he was obstinate, egotistical, abrasive, a specialized engineer indifferent to and sometimes actively in rebellion against the Navy's chain of command, protocols, and culture."

To me, the best Rickover line by a man who had many was his presumably frequent command that his underlings not "tell me what's going great. I only want to know what's going wrong." If only politicians, pundits, and economists understood the bigger meaning of what Rickover said. Recessions are the market's way of telling us what we're doing wrong. Which is why efforts to fight downturns with the money of others invariably elongate the pain. It's the rushing to the mistakes that ends the depressions, not economy-sapping government spending.

Wortman concludes that the "collapse of the Soviet Union resulted in no small measure from the Soviets' inability to sustain the its costly technological race against Western aid, and particularly U.S. nuclear fleets." Rickover didn't live to see the collapse, but how ironic that the individual who felt the Soviets were strengthened by desperation born of a lack of economic freedom were ultimately vanquished by a country founded on freedom, and because it was free, it possessed the resources to outspend the unfree. This freedom was the initial lure for the family of Chaim Rykower. Yet another contrast in a remarkable book about a remarkable person. As always, only in America.