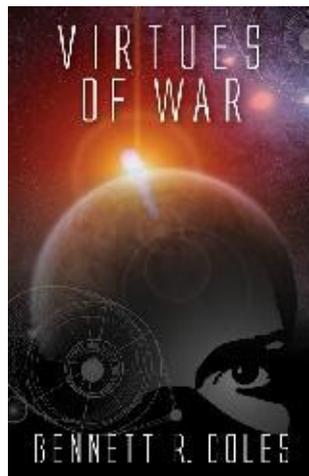


Virtues of War

By : **bennettcoles**

Virtues of War offers a glimpse of humanity's possible future, of our expansion into space and the cultural and emotional baggage that we will take with us. Within an action-packed, high-tech setting with cutting edge science and fantastic worldscapes, this sci fi novel explores the effects of physical and psychological warfare and the ways in which realistic, human characters react to them. Unlike many military sci fi novels, Virtues of War is a story of the personal, rather than the technical. Lieutenant Katja Emmes is a platoon commander who was transferred last-minute to be the leader of the 10-trooper strike team carried aboard the fast-attack craft Rapier. Although fully trained, she has never led troops in real operations before, and she is haunted by the shadow of her war-hero father. Sublieutenant Jack Mallory is fresh out of pilot school, reluctantly doing his duty in the mysterious world of extra-dimensional warfare while pining for the glamour of a fighter pilot position in the space fleet. Day-dreaming his way through life, Jack is in for a rude awakening. Lieutenant Commander Thomas Kane is poised for promotion, and he knows that this six-month deployment in command of Rapier is the single, best chance to secure his rise to stardom within the Astral Force. He has already learned that performance alone isn't enough and actively dabbles in the subtle politics of his professional world, but he will learn that there are far more dangerous foes than the ones he can see. Set far enough in the future to present a society that has evolved and splintered from our own, Virtues of War is a sci fi novel that reveals the traits common in any age, and ultimately looks at the heart of what makes us human.



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Virtues of War

Virtues of War

By Bennett R. Coles

EXCERPT: CHAPTER II

Finding an object the size of a boulder in the vastness of space was no easy task. This, Sublieutenant Jack Mallory concluded as he eased his control stick to the left and moved his little ship into another slow turn, was probably why micro-asteroid mining had never really taken off, despite all the gaian propaganda over the years. Checking the settings on his dipping probe one more time, he hypothesized that those â save the worldsâ protestors had never actually suited up and tried to pinpoint â let alone rendezvous with â one of the millions of micro-asteroids that infest every star system.

And with micro-asteroids you only have to deal with three spatial dimensions: childâs play, really.

Jack centered his control stick and settled into his new course. Training automatically drew his eyes up to sweep the starry sky before him, then down to sweep his flight controls and hunt controls. Everything was clear. His new course had put Sirius astern of his Hawk anti-stealth plane, and it was a relief to not have the sunâs glare in his eyes. The Hawk was steady on course, with enough fuel for another few hours of hunting. No sign of his quarry yet, but with a bit of luck that was about to change.

â Viking-Two ready for dip,â he said over his radio.

â Rog, Two, go for dip.â

The other Hawk, flown by Lieutenant Dan â Stripesâ Trifunov, was holding position at the edge of the search sector. Often the two birds would work together to prosecute a contact, but Jack needed to be proficient at solo searches if he was to earn his permanent anti-stealth wings. And today his target was a boulder-sized, automatic device that would simulate the movements of an enemy stealth ship.

â Deploying big dipper.â

He tapped the button on his console and waited for the expected readout of the probe as it began to trail away from his boat. Instead, a red warning light began flashing. Jack cursed and stopped the probe deployment. His eyes scanned the flight controls, the hunt controls and then up for a visual. Nothing seemed

Virtues of War

out of place. He tapped the button again. The same red warning light flashed. He pursed his lips in frustration. Deploying the damn dipper wasn't supposed to be hard!

It was not only hard but impossible, he suddenly realized, if the safety lock wasn't released. Snapping off his restraints he floated out of his seat and pulled himself aft through the Hawk's cramped interior. Behind him there were two more seats for observers, then two benches lined fore-and-aft along the four cubic metre passenger/cargo space. The dipping probe was mounted on the belly of the Hawk, two-thirds of the way along the hull, and Jack moved with purpose until he was floating above the appropriate deck hatch. He clicked it open, made a simple turn to unlock the dipper, then retraced his path forward to his seat.

He pressed the button to start the dipper deployment, then strapped back down into his seat. Exhaling a long, frustrated sigh, he watched as the familiar blue digits of the probe readout began to populate his hunt control readouts.

â Viking-Two, what's your status?â

â Big Dipper deploying.â

â A little slow. What's up?â

Jack shook his head, and forced himself to smile. No point in getting angry there were lots of other people who were plenty capable of doing that.

â Forgot the safety lock.â

There was a slight pause.

â Rog.â

Not a good way to start the day. Jack turned his attention to the multi-dimensional picture that was now beginning to form on his hunt controls. Despite its innocuous name, the big dipper was one of the most sophisticated pieces of equipment in the entire Terran arsenal. It had already phased into the Bulk and was relaying gravimetric information via its brane-straddling relay system. Jack's eyes did one last sweep of the visual and the flight controls, then focused in on the hunt controls.

Anti-stealth warfare had not been Jack's first choice in flight school, but once the choice had been imposed upon him, he had learned to appreciate the wonder of the revealed Universe. Perched in the three-dimensional brane that made up humankind's perceived existence, Jack could now look deep into the Bulk where gravity ruled and the laws of physics displayed their true nature. Humanity had known of the Bulk's existence for centuries, but only in the last fifty years had men and women actually begun to venture forth from their sheltered brane. Stealth ships risked their very existence every time they dove into the Bulk, but their complete invisibility in the normal three dimensions made them powerful military weapons. Terra had been the first to develop such ships, but some of the more advanced (and ambitious) colonies had not been far behind. And with these ships had come a whole new arena of warfare one which Jack was now learning to be a potent part of.

Studying his 3D readout, Jack identified the knuckles in spacetime that indicated gravity wells. Viking-One was too small to really bend spacetime, but because Jack had a recent radar fix he was able to pinpoint the minute knuckle. A larger knuckle was moving slowly across the brane on a bearing low off the bow â *Kristiansand*, the Terran destroyer to which both Vikings belonged. Irregularities down one bearing suggested recent activity at the jump gate back to Terra; the dark energy used to hold open that

Virtues of War

extra-dimensional portal emitted weak but very specific waves in the Bulk when a ship passed through. A shallow bending to starboard gave evidence of the large terrestrial planet Cerberus, detectable even at this distance, and the entire region was warped slightly by the background gravity wells of both Sirius and its tiny (but massive) white dwarf companion.

Jack paused the big dipper at seven peets, which was the ideal depth for an initial search at this particular place in the Bulk. In general, the deeper the big dipper moved into the Bulk the clearer the spacetime curvature became, but Jack knew he had to tread carefully with his depth depending on the depth of his target. Targets on the brane were best tracked between five or ten peets, but stealth ships could move above or below a second brane in the Bulk, the *weakbrane* which could mask their movements. The weakbrane varied in opacity at different places in spacetime, and could exist anywhere from ten to fifteen peets. Jack didn't know where his target was resting for today's exercise, and standard procedure was to look shallow first. Things started to get weird in the Bulk past twenty peets and only a very brave or desperate stealth captain went even close to that far in.

â Dipper steady at seven, confirm you have my picture.â

â *Affirm picture. Report.*â

Jack studied his hunt controls carefully. His Hawk had uplinked its info to Stripes, and the senior pilot was looking at exactly the same information as Jack. There would be no blaming the equipment if Jack missed something that Stripes could detect.

â Initial sweep is nominal â only contacts are Viking One and Longboat.â

Mentioning *Kristiansand*'s callsign suddenly reminded Jack that the destroyer's anti-stealth team was observing the exercise as well. He breathed deeply: no pressure.

Stealth ships were specially designed to minimize their own gravimetric signature, but even so they had to move slowly to avoid causing ripples in the spacetime curvature. A stealth ship at full speed might as well drop gravibombs in its wake for all the spacetime *noise* it created, but a stealth ship moving at slow speed in the Bulk was like a particularly quiet fly's shadow moving in a pitch black stadium. Jack doubted that the training pod in today's exercise was expecting to do any sprints. Jack was too advanced in his training for things to be that easy.

He studied the spacetime curvature lines that traced across his 3D display, and compared his own intuition to the hunt control info screens. With his Hawk on a steady course and slow speed he was in good shape for detection, but nothing obvious was leaping out at him as a possible contact. There was a slight irregularity on a bearing low off his starboard quarter â perhaps an indication of stealth ship movement. He tapped in a series of quick commands and a red line stretched away from the center of his 3D display along the bearing in question.

â Viking-Two fishing true one-four mark one-two.â

To navigate, all ships worked in a coordinate system based on two imaginary, perpendicular 360-degree circles fixed in space. Jack's bearing line was 140 degrees clockwise in the horizontal by 120 degrees clockwise in the vertical. The coordinate system was anchored on the main star â in this case, Sirius â and gave all space ships a common frame of reference. It was invaluable to navigation, and just as useful to anti-stealth warfare.

Virtues of War

No military term ever survived long without being reduced to a TLA (Three-Letter-Acronym) and anti-stealth warfare was no exception. ASW, as it was called in official documentation, had grown in importance over the last two generations from being a curious and confusing peripheral of Fleet doctrine to being the premier arena of astral war-fighting. Or at least, Jack thought wryly, that's what the instructors at the ASW school on Pluto had preached. While no-one doubted the deadly effectiveness of stealth ships, the pace of the hunt left most Astral Force members yawning and reaching for more coffee. Fleet-wide, ASW was known as Awfully-Slow Warfare and Jack often wondered if his surprise assignment to ASW was due to his laid back nature. The thorough psychometric exams that all members of the Astral Force undertook in their early years were generally praised for their accurate placement of members in the best-suited occupations, and as he started lowering the big dipper for a sub-weakbrane sweep, Jack pondered not for the first time whether he should have adopted the arrogance expected of a star fighter pilot during his tests.

The big dipper was just passing 11 peets when Jack noticed something. He halted the dipper and let the picture sharpen.

A shallow but unusually elongated knuckle was warping spacetime along a bearing 09 mark 10. It was moving fast enough for Jack to actually see the relative bearing shift before his eyes, which meant either that it was very close or moving very, very fast. His eyes darted to his flight controls, then up through the cockpit windows for a visual sighting. There was nothing but stars to see.

â This is Viking-Two: one fast-mover zero-eight mark one-zero, drawing left. Investigating.â

â *Viking-One, rog.*â

Jack shifted in his seat, suddenly interested. Stealth hunting was very different from regular astral warfare because all information was based on bearings: distance was impossible to judge based on one observation only. And while most normal contacts were moving slowly enough that Jack could maneuver to get multiple bearings, this contact was tearing across spacetime. Jack locked in the last thirty second's worth of readings, then pushed forward both his control stick and throttle. The Hawk shuddered with the sudden acceleration and Jack grinned as he felt his body being pressed back against his seat. He sprinted at full speed for twenty seconds, then reversed thrust to kill his speed and stabilize on a new course.

Within moments he was able to re-establish his spacetime picture. The fast-mover was still blazing across his scope, and his computer quickly compared his new readings with those from his previous position. The triangulation was rough at best, but Jack estimated the contact's distance at somewhere between two and three million kilometers. His eyes widened. Even before he read the computer's calculation of contact speed he knew it was going to be high. His hunt controls confirmed it: the contact was moving at nearly one tenth the speed of light.

There weren't any natural objects that moved that fast, and very few civilian ones out in this neck of the woods. Jack immediately began comparing the gravimetric signature of the contact - allowing for the warping caused by its high speed - to known military contacts. The computer narrowed the search to less than a dozen in seconds, and Jack scanned each - spacetime fingerprint - carefully. It was impossible to be sure, but sometimes in this job you had to take your best guess.

â This is Viking-Two; identify fast-mover as one Terran fast-attack craft, *Blade*-class. Speed point-one-c, distance between two and three million. She's going somewhere in a big hurry.â

â *Viking-One, affirm: one Blade FAC. Longboat and I triangulate to make her distance three million. Not bad, Jack. I'm sure you appreciate us putting a little bit of reality in today's exercise.*â

Virtues of War

Jack smiled. He watched as the fast-attack craft bent spacetime across his display, marveling at its speed. Normally such a small ship would barely register on his big dipper, and certainly not at three million kilometers, but her huge speed was high enough to affect her mass so that she had the spacetime cross-section of a Martian mining platform. Stripes couldn't have arranged a more dramatic display of the effects of speed on mass in the anti-stealth world.

A new, female voice came onto the circuit.

â This is Longboat: for your info, guys, that FAC is Rapier, based on spacetime signature. EM suggests she stirred up quite a hornet's nest on Cerberus. Just thought you'd like to know. Longboat silent.â

Jack wondered for a moment what kind of secret mission *Rapier* had been conducting on Cerberus. He'd only seen pictures of the Fleet's fast-attack craft, but he'd heard that they were quite something to fly. And there was no doubting they did some of the coolest missions around, getting into the thick of it while the rest of the Fleet conducted exercises and sovereignty patrols. Jack made a mental note to find out more about transferring to fast-attack.

â Viking-Two, we still doing ASW here?â

Stripes's voice shook Jack from his thoughts. He did a sweep of the visual, of his flight controls, and then focused again on his hunt controls. The faint disturbance in spacetime he had marked before *Rapier*'s sudden appearance was gone. Then Jack reminded himself that he had displaced his own vantage point considerably since his first bearing line, and he shifted his focus. Sure enough, the disturbance was still visible down a new relative bearing. He typed in a second line. The red bearing popped into view on his display, intersecting the old bearing from his previous position.

â Viking-Two fishing true one-four mark zero-niner.â

He now had two lines of bearing on his possible contact, but there was still far too much uncertainty to start drawing conclusions. Despite the claims of the Fleet promotional material, his instruments were really only accurate to within fifteen degrees either side of the bearing when searching the Bulk. Some contacts, such as attacking gravi-torpedoes (or fast-attack craft on full burn) were easy to pinpoint, but ships in general were too small and too slow to nail down unless they were very close. Multiple bearing lines and a whole lot of time were required to prosecute a stealth contact.

In other words, Jack didn't have much at all to go on so far.

But he was just getting started. Since he couldn't have help from Viking-One or Longboat today, he would have to make his own multiple vantage points.

Loaded aft in the Hawk were fifty devices known as barbells. Like the big dipper, these barbells could reach into the Bulk to search for gravimetric readings while still maintaining a link to the brane. Disposable items, Jack could drop them at intervals behind his Hawk and leave them to listen at whatever Bulk depth he pre-programmed them to. They could last for days before their batteries finally died, and were invaluable in protracted stealth hunts. Jack's main concern was that he only had a limited number of them, so he had to pick carefully where he dropped them.

â This is Viking-Two, I'm going to sow a barbell line to investigate bearing crossover two.â

â Roger.â

Virtues of War

Jack knew he wouldn't get much feedback from Stripes today, as the purpose of the exercise was to test Jack's initiative as a solo hunter. Only when the exercise stealth pod revealed itself—either through his successful efforts or through a simulated attack on *Kristiansand*—would Jack know how successful he had been.

He set off on a course perpendicular to the bearing of interest where his two red lines intersected on his display. He kept his speed down enough so that his big dipper still had some ability to track in the Bulk, and he struggled with his greatest weakness in ASW—impatience. Based on his initial bearing crossfix, he needed at least a thousand kilometer separation between his barbells; ideally he needed more like two thousand. Prudence just managed to triumph over impatience, and he dropped a barbell every two thousand kilometers on a dead-straight run. This cautious approach took thirty agonizing minutes, but as the fifth barbell deployed Jack was able to come hard right and increase speed to separate his own sensors from those of his drones. If he had calculated right, his five barbells would now offer a good radial cross-section of the target. By re-positioning himself down another axis he could improve his chances of a pinpoint.

A short sprint to displace himself from the barbell line later, Jack slowed his Hawk to give the big dipper maximum clarity.

At first, the signals from the barbells were unclear. His hunt controls gave a separate readout for each drone, and it took time for Jack to interpret the slight fluctuations in spacetime. He lifted his helmet an inch and ran his fingers through short, sweaty hair, breathing deeply. He now had to pick any disturbance of note from each barbell and input the bearing into his display. It took about a minute per barbell, and when he finally looked up at his 3D display, he sighed in frustration: the crossfix was a mass of red lines all pointing in vaguely the same direction, with no more than two ever intersecting at once.

He checked his Big Dipper, focusing the search down a bearing that went through what best approximated the cross-fix of barbell bearings. There was certainly something out there, but whether it was natural or man-made, on the brane or in the Bulk, there just wasn't enough information to tell.

â Viking-Two, whatâ s your status?â

Jack seated his helmet properly again and stared out through his windows at the stars beyond. This is Viking-Two! He struggled to think of a suitable report to give, considering he had probably just wasted an hour of his time.

A star blinked.

Jack froze, any possible words dying in his throat. One of the stars in the void before him had blinked. That meant that something had passed between him and the star. Something had passed close enough to him to actually eclipse a fiery ball of gas bright enough to be visible thousands of light years away. Every space pilot appreciated the inconceivable distances involved in space travel, and every military space pilot knew this one simple rule: stars don't blink.

Jack kept his eyes frozen in place, dropped his visor and tapped the visual lock button on the side of his helmet. A red square appeared in the inside of his visor, marking the bearing and relaying the information to the Hawk's computer. He transferred the image captured in the red square of his visor to one of the hunt screens formerly displaying barbell info.

He activated the Hawk's long-range camera and pointed it down the bearing. The live image showed nothing but the usual starry background. He switched to infra-red. The picture became even more confused as the residual heat from thousands of suns mixed together in the cosmic background. He started shifting the

Virtues of War

viewer through the EM spectrum, looking for something that might stand out.

â Uhh, Viking-Twoâ † Say again your status?â

â Viking-One, stand by. I think Iâ ve got something.â

The view revealed nothing in the visual spectrum of light, nor through the ultra-violet. It was only when it reached microwaves did the mystery object emerge. Everywhere in the Universe there is a background murmur of microwave radiation, a remnant of the Big Bang visible in all directions from everywhere. Stars and other celestial objects outshine this backdrop, but only two things actually make the microwaves dim: the coldest of deep space debris, and spaceships trying to hide.

â Uhh, Viking-Two, rogerâ † Jack, weâ re getting a little low on time here. I suggest you start your search again down a bearing from you of one-seven mark zero-eight.â

Jack recorded the microwave image.

â This is Viking-Two, tally-ho, one viper bearing three-five mark zero-eight. No duff.â

â Say again?â

Jack repeated his report of a visual sighting, and forwarded the image to Stripes and *Kristiansand*.

Several moments of silence followed on the circuit, but Jack was already rushing to gather more information on this mysterious ship he had spotted. He had little doubt that it was a ship. Although the microwave silhouette was fuzzy, there was no mistaking the symmetry of form found only in man-made objects. And this man-made object was probably up to no good, considering how hard it was trying to hide itself. No EM emissions, no artificial gravity, no speed of note. This ship was moving in the brane, but it might as well be a stealth ship for its lack of signature. Civilian ships routinely blared across the full EM spectrum, and those with artificial gravity dug huge wells in spacetime. And even military ships maintained an ID beacon during peacetime.

Jack grinned. Those gaians could hunt their mini-asteroids all they wanted: heâ d just bagged himself a bad guy.

Bennett R. Coles served 15 years as an officer in the Canadian Navy. His deployments took him around most of the Pacific Rim and included such highlights as being in the first Canadian task force to visit Vladivostok since the fall of the Soviet Union, and being selected as the liaison officer to the Chinese Navy for its first ever visit to Canada. He was the first Canadian officer to set foot aboard a Chinese warship in Canadian waters, advising the Chinese captain and admiral for the day-long passage.

Throughout his career he undertook a variety of roles such as bridge officer, boarding party officer, warfare officer and navigator. He served several years in staff positions, including the start-up team for Operation APOLLO, which initiated Canadaâ s decade of support to the post-9/11 mission in Afghanistan. The highlight of his career was a pair of tours in the Middle East as a UN Military Observer, the first in the Golan Heights and the second in South Lebanon.

Virtues of War

He retired from active duty in 2005, but quickly realized that his new career as an author wasn't going to follow the path he'd envisaged. With the traditional publishing industry broken and the self-publishing industry stillborn, he eventually found himself heading up a maverick publishing company that takes the best of both worlds and creates something better. He makes his home on Canada's West Coast with his wife and two sons.

Learn more by visiting www.bennettcoles.com

Virtues of War

Virtues of War

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