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Novelist Neal Stephenson Once Again Proves He's the King of the Worlds

By Steven Levy 08.18.08

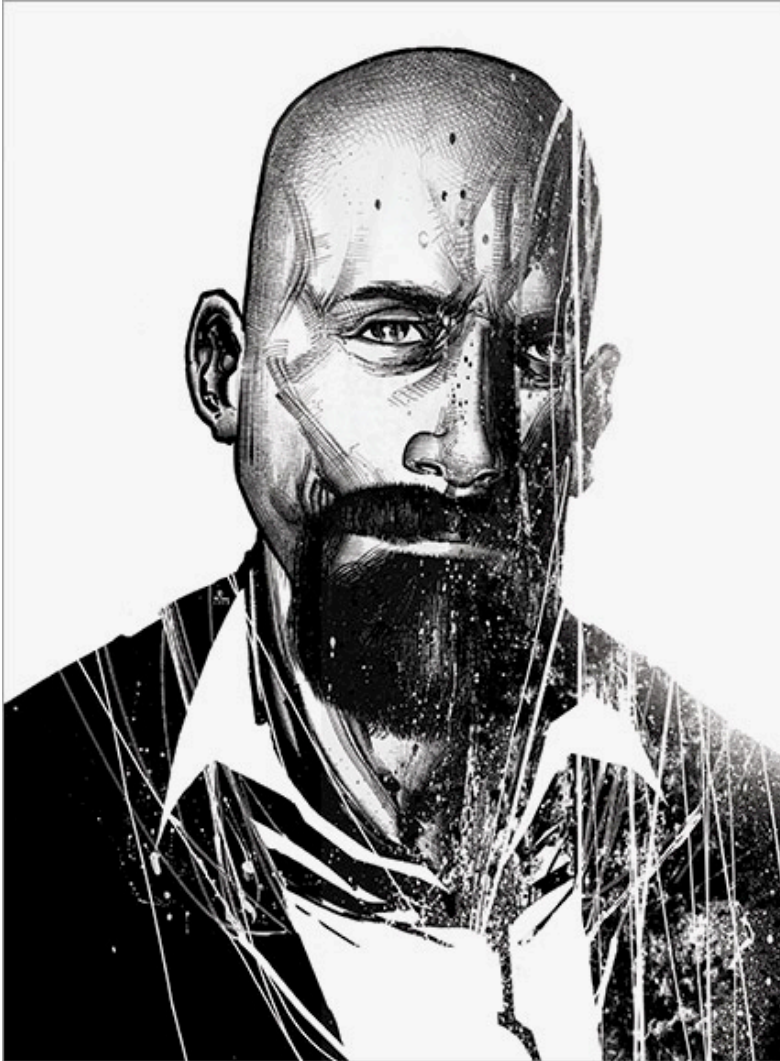


Illustration: Nate Van Dyke

Tonight's subject at the History Book Club: the Vikings. This is primo stuff for the men who gather once a month in Seattle to gab about some long-gone era or icon, from early Romans to Frederick the Great. You really can't beat tales of merciless Scandinavian pirate forays and bloody ninth-century clashes. To complement the evening's topic, one clubber is bringing mead. The dinner, of course, is meat cooked over fire. "Damp will be the weather, yet hot the pyre in my backyard," read the email invite, written by host Njall Mildew-Beard.

That's Neal Stephenson, best-selling novelist, cult science fictionist, and literary channeler of the hacker mindset. For Stephenson, whose books mash up past, present, and future—and whose hotly awaited new work imagines an entire planet, with 7,000 years of its own history—the HBC is a way to mix background reading and socializing. "Neal was already doing the research," says computer graphics pioneer Alvy Ray Smith, who used to host the club until he moved from a house to a less convenient downtown apartment. "So why not read the books and talk about them, too?"

With his shaved head and (mildewless) beard, Stephenson could cut something of an imposing figure. But his demeanor is

gentle, his comments droll and understated. ("He's on the shy side," Smith says. "A strong ego, but nicely hidden.") The session moves out of his kitchen, and a half dozen HBCers—including a litigator, a commercial real estate agent, and a chef/barkeep/PR guy—pull up chairs around the dining room table to talk and compare notes. Harald Bluetooth, Erik Bloodaxe, and Halfdan the Black are dispatched in a couple of hours. But before the members split for the night, they detour to the basement to see Stephenson's workshop, where he has an impressive assortment of metalworking tools to help him on his current DIY project: a scary-looking steel helmet to protect the shiny Stephenson noggin from accidental scalp removal while indulging in his recent passion, Western martial arts. This is the polite term for going medieval with swords and daggers. It's a hobby the author picked up during research for the *Baroque Cycle*, his three-volume, 2,688-page tribute to 18th-century science, philosophy, and swordplay. (Stephenson owns 12 swords.) He proudly demonstrates his welding setup—a bossing mallet to pound steel sheets and a 5-foot-high metal-shaping device called an English wheel. That particular tool once cost thousands of dollars but, thanks to Asian manufacturing, is now available at [Harbor Freight](#) hardware stores for less than \$300.

Unmentioned is the other work performed in Njall Mildew-Beard's basement, the work involving intense eruptions of imagination that result in books the size of cinder blocks. These have made Stephenson the most avidly followed science fiction writer of his generation. His breakthrough 1992 novel, *Snow Crash*, has served as a blueprint for real computer scientists attempting the creation of virtual worlds. His deep understanding of not only computers but the people who go nuts over them has made him a god among the geek set. Salon called him the "poet laureate of hacker culture." Fanboys track his movements on blogs and try to top one another with praise on Amazon.com reviews. But Stephenson's sprawling, Pynchon-esque works transcend his cult status and are having an impact on the mainstream literary world. His last four books have all hit the *New York Times* best-seller list.

Only a few months ago, another epic bubbled up from his basement. *Anthem*, Stephenson's ninth novel, is set for release on September 9. The Nealosphere, of course, is over the top with anticipation. This time, Stephenson has given himself the broadest stage yet: a world of his own creation, including a new language. Though he's been consistently ambitious in his work, this latest effort marks a high point in his risk-taking, daring to blend the elements of a barn-burner space opera with heavy dollops of philosophical dialog. It's got elements of *Dune*, *The Name of the Rose*, and Michael Frayn's quantum-physics talkathon, *Copenhagen*. Befitting a novel written by a founding member of the History Book Club, its leitmotif is time—and its message couldn't be more timely.

Oh, and Stephenson manages to do it all in only 960 pages.

Set on a planet called Arbre (pronounced "arb"), *Anthem* documents a civilization split between two cultures: an indulgent Saecular general population (hooked on casinos, shopping in megastores, trashing the environment—sound familiar?) and the super-educated cohort known as the avout, who live a monastic existence defined by intellectual activity and circumscribed rituals called "auts." Freed from the pressures of pedestrian life, the avout view time differently. Their society—the "mathic" world—is clustered in walled-off areas known as concents built around giant clocks designed to last for centuries. The avout are separated into four groups, distinguished by the amount of time they are isolated from the outside world and each other.¹ Unarians stay inside the wall for a year. Decenarians can venture outside only once a decade. Centenarians are locked in for a hundred years, and Millennarians—long-lifespans who are endowed with Yoda-esque wisdom—emerge only in years ending in triple zeros. Stephenson centers his narrative around a crisis that jars this system—a crisis that allows him to introduce action scenes worthy of Buck Rogers and even a bit of martial arts. It's a rather complicated setup; fortunately, there's a detailed timeline and 20-page glossary to help the reader decode things.

Stephenson says the story was inspired by the real-life [Millennium Clock](#), a project thought up by inventor Danny Hillis and developed by the [Long Now Foundation](#). The nub of the endeavor is the construction of a clock that has the mother of all warranties: It's built to last 10,000 years. Hillis conceived it to mitigate the mega-rapidity of the digital world. He was working on a massively parallel supercomputer, the Connection Machine, designed to scale to a million processors, and found himself obsessed with speed, slicing seconds into billions of pieces. "I was going for faster, faster, faster. But something in me was rejecting that," Hillis explained to me back in 1999, when he launched the project. "It wasn't clear that the world needed faster, faster, faster. So I began thinking about the opposite. Working on the fastest machine in the world got me thinking about the slowest." How slow? Hillis' timepiece would tick once a year, its insides would bong once a century, and the cuckoo would appear once a millennium.

Building the clock, it turns out, has been an antidote to the toxic fixation on short-term thinking that permeates our culture. Hillis and the friends who joined him—like fellow Long Now cofounders [Stewart Brand](#) (who wrote a book about the project) and [Brian Eno](#) (who composed a CD of chimes inspired by the clock)—found that its design and construction required recalibrating one's own mental clock to envision what things would be like in the distant future. Ideally, that mindset encourages behavior that tends to preserve the environment for clock customers in the year 12000, instead of gobbling up resources and leaving behind trash that tends to mess things up for those folks. Or so goes the thinking of the project's goofily optimistic supporters. Back at the launch, Brand marveled at the notion of looking so far beyond the temporal horizon. "It's the only 10,000-year-forward thing I know of," he said, "outside of science fiction, where it's fairly

common."

Enter Neal Stephenson. He first heard about the clock from Hillis and Brand at the annual [Hackers Conference](#), and in 1999 the Long Now asked him and a few others to share some thoughts for its Web site. "In my little back-of-the-napkin sketch, I drew a picture showing a clock with concentric walls around it," he says over lunch in downtown Seattle the day after the book club meeting. "I proposed that you could have a system of gates where it was open for a while at a certain time of year, or decade, or whatever, when you could go in and out freely. But if you were inside it when the gate closed, you'd be making a commitment to stay in until it opened again. And I talked about clock monks who would tend the clock. I put that idea in cold storage because I was working on the Baroque Cycle. When I recovered, I decided, what the hell, I'm just going to try writing this."

Stephenson measures his novels not by word count but by visually assessing the printout. "You've got manuscripts that are relatively short, and *then* you've got manuscripts that are taller than they are wide, and then you've got ones that are taller than they are long." *Anthem* falls into category three. "I was thinking shorter, but once you've done all the work to build the project and get the reader into it, there's the temptation to keep it going," he says.

In a sense, the length of *Anthem*, as well as its challenges to the reader, are part of its theme. Despite the monastic trappings of the clock-tenders, the avout are not driven by faith. What binds them is a commitment to logic and rationality. The robes and rituals, Stephenson says, are not religion but "their way of glorifying and expressing respect for ideas and thinkers that are important to them." Outside the walls ("extramuros," as the term goes—by the time you're a couple of hundred pages in, this language thing begins to fall in place), people zip around in an ADD haze of fast-food joints, persistent gadgets (instead of CrackBerry, they are addicted to handheld "jeejahs"), and evangelical religion. Stephenson sees a parallel to the George W. Bush-era wars between science and religion, made possible because the general population is either indifferent or hostile to extended rational thought. "I could never get that idea, the notion that society in general is becoming illiterate, out of my head," he says. "People who write books, people who work in universities, who work on big projects for a long time, are on a diverging course from the rest of society. Slowly, the two cultures just get further and further apart."

Hillis is thrilled about Stephenson's choice of subject matter. "One of the more interesting things about the project has been what anybody adds to it," he says. "Clearly, Neal's imagination is extraordinary. He creates a whole world in his mind; he's got every building imagined in more detail than it's described in the book." Long Now executive director Alexander Rose is also delighted but makes it clear that Stephenson's ideas aren't exactly in sync with the foundation's plans, which include construction of the clock inside a mountain in eastern Nevada, where it will draw power from temperature changes and visitors stopping by to wind it. "We're not planning on locking up people for thousands of years," he says.

In every Neal Stephenson novel, there are characters who regard the world with an insatiable yet bemused curiosity; they are fascinated with the way things work and are forever eager to lay on hands, tinker, tweak, and obsess. In other words, they're hackers. In *Anthem*, the narrator, Erasmus, though not a techie, shares this trait. So does the author. Stephenson was born in 1959 in Fort Meade, Maryland, a son of academics (his dad taught electrical engineering; his mother was a biochemistry researcher). He grew up in the college town of Ames, Iowa, a self-described theater geek who also had a streak of the hacker in him. "I played the role of Mephistopheles in Christopher Marlowe's *Doctor Faustus* and on the technical side made a full-size mechanical Kong hand that, at one point in the play, reaches through a window and drags somebody offstage," he says. He graduated from Boston University in 1981 and moved to Seattle with his wife, Ellen, who did her medical residency there.

His early books, a satire about big universities and an eco-thriller, were well received but not huge sellers.² In 1991, Stephenson says, his career "was moving along at low rpms." Then he wrote *Snow Crash*, a book that postulated the Metaverse, an exquisitely fleshed-out vision of a digital alternative world, and Stephenson found himself at the front ranks of cyberpunk authors. "I was sort of going for broke with *Snow Crash*," he told me a few years back. "I had tried to write stuff that was more conventional and that would be appealing to a large audience, and it didn't work. I figured I would just go for broke, write something really weird, and not be so worried about whether it was a good career move or not."

Other triumphs followed—*The Diamond Age*, a near-future chronicle set in Shanghai in which a young woman owns a nanotech book that puts the Kindle to shame; *Cryptonomicon*, a multithreaded excursion into the wonders of cryptography; and the ultimate steampunker, the Baroque Cycle, which rocketed the mathematical conflicts between Newton and Leibniz to best-sellerdom.

Stephenson spends his mornings cloistered in the basement, writing longhand in fountain pen and reworking the pages on a Mac version of the Emacs text editor. This intensity cannot be sustained all day—"It's part of my personality that I have to mess with stuff," he says—so after the writing sessions, he likes to get his hands on something real or hack stuff on the computer. (He's particularly adept at Mathematica, the equation-crunching software of choice for mathematicians and engineers.) For six years, he was an adviser to Jeff Bezos' space-flight startup, Blue Origin. He left amicably in 2006. Last year, he went to work for another Northwest tech icon, Nathan Myhrvold, who heads Intellectual Ventures, an invention

factory that churns out patents and prototypes of high-risk, high-reward ideas. Stephenson and two partners spend most afternoons across Lake Washington in the IV lab, a low-slung building with an exotic array of tools and machines to make physical manifestations of the fancies that flow from the big thinkers on call there.

"In Neal's books, he's been fantastically good at creating scenarios and technologies that are purely imaginary," Myhrvold says. "But they're much easier imagined than built. So we spend a certain amount of our time imagining them but the rest of our time building them. It's also very cool but different to say, 'Let's come up with new ways of doing brain surgery.'"

That's right—brain surgery is one of the things Stephenson is tinkering with. He and his team are helping refine some mechanical aspects of a new tool, a helical needle for operating on brain tumors. It's the kind of cool job one of his characters might have.

Which indicates that Stephenson's afternoon job, besides letting him get his hands dirty on weird machines, is maybe not so different from the activity he undertakes in his basement. Myhrvold, while making sure his company is decidedly commercial, is still a sucker for big ideas from big brains. He's also a major funder of the Long Now and even has a prototype of the 10,000-year clock in his home.

It makes sense that people like Stephenson and Myhrvold are drawn to the Long Now's cosmically improbable but cerebrally galvanizing effort. "It's an insanely ambitious project; it is a total folly," Brand says of the clock effort. "It presents itself as rational, but that's like presenting the pyramids as rational. You can argue with it, but if you put it out there as this gonzo, over-the-top-crazy but weirdly plausible, adventurous thing to do, then people want to be part of it. About two out of 10 light up, and the other eight are going, 'Don't you have something better to do with your time?'"

Hey, that sounds like the reaction to a Neal Stephenson novel.

This fall, Stephenson will reluctantly break from his cherished routines to promote *Anathem*. "If I had to do a book tour every day it would kill me. But four weeks every four years isn't too much to ask," he says. The tinkerer in him has stuffed some extra elements into the final package. The book includes three appendices consisting of passages that didn't make it into the text—fascinating digressions involving puzzle-like conundrums (sort of the hard-copy equivalent of the bonus deleted scenes on a DVD). Another subsidiary project is a CD that re-creates the spooky a cappella hymns, based on mathematical proofs and behavior of cellular automata, sung by the clock-tenders inside the conents. David Stutz, a former Microsoft techie now involved in early classical music—and an HBC member—composed and produced the effort, which is being considered for widespread release. "It's a pseudo-liturgical use of mathematics and higher thinking," Stutz says. Actually, to the untrained ear it sounds like the neo-Gregorian chanting that accompanies ritual baby sacrifice in horror films.

Anathem asks a lot of its readers, but Stephenson's got a lot of devoted ones. The hardcore (Brand's "two out of 10") will just buy his books no questions asked. It will be interesting to see what the rest will do. "It's really about the difference between people who can sit down and focus their attention for a long period of time on something complicated in a patient and steady way—versus people who never read anything longer than a sentence or paragraph and who get very impatient if you try to go on at any length," Stephenson says.

The author himself concedes that's he's got one foot on either side of the Saecular/mathic divide. He's trapped in his own theme, our society's secret war between the Long Now and the now. "When I'm working on a book, I need to be uninterrupted—a long-attention-span kind of thing. On the other hand, there are a lot of things in my life that are important and keep me communicating over email. It's harder for me even to read books than it used to be, and there's an obvious irony there." But after the *Anathem* tour ends this fall, he fully expects to be back in the basement, using a fine-nibbed fountain pen to fill up another cinder block of paper.

Senior writer Steven Levy (steven_levy@wired.com) also writes about the *Chumby* in this issue (16.09) of Wired.

Correction:

¹The original posting of this article misspelled *Arbre* and *avout*.
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²The chronology in this paragraph has been simplified to make it accurate.
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