Clock of the Long Now: Time and Responsibility: The Ideas Behind the World's Slowest Computer

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Using the designing and building of the *Clock of the Long Now* as a framework, this is a book about the practical use of long time perspective: how to get it, how to use it, how to keep it in and out of sight. Here are the central questions it inspires: How do we make long-term thinking automatic and common instead of difficult and rare? Discipline in thought allows freedom. One needs the space and reliability to predict continuity to have the confidence not to be afraid of revolutions Taking the time to think of the future is more essential now than ever, as culture accelerates beyond its ability to be measured Probable things are vastly outnumbered by countless near-impossible eventualities. Reality is statistically forced to be extraordinary; fiction is not allowed this freedom This is a potent book that combines the chronicling of fantastic technology with equally visionary philosophical inquiry.

Clock of the Long Now: Time and Responsibility: The Ideas Behind the World's Slowest Computer Details

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From Reader Review Clock of the Long Now: Time and Responsibility: The Ideas Behind the World's Slowest Computer for online ebook

Otis Chandler says

Giving a high rating because I heard the organizer of the Long Now Foundation speak and it was very inspiring. The Interval Cafe in San Francisco is also awesome and has The Long Library in it.

The part of the story that I liked most was the power of long thinking. How Oxford College has some gorgeous oak tree beams in their dining room, and they were crumbling, and so they wondered how to replace them. They created a search, and happened to ask the Oxford groundskeeper if any of the oak trees on campus would work, and he said yes, they should use the grove that was planted 500 years ago for that very purpose. So they did, and then planted another grove for 500 years from now. That's the power of long term thinking - how many of us are able to think that far ahead? That story is what inspired the clock, which is getting closer to completion and sounds pretty cool.

The book was published in 1999 so I found a bunch of the ideas dated and found myself skimming through them, so only partially read this.

Jack says

I read this the year it was first published. It remains one of the most important books that I have been lucky enough to read. The authors argue that it is increasingly difficult to imagine the future, in part because the technology that surrounds us is changing the world so rapidly. The work we do, the countries on the globe, and the lives we lead are all changing. How we communicate, how we travel, how we think of ourselves is unlike when our grandparents lived and it will be only vaguely like how our grandchildren live. The authors describe this culturally and cognitively unknown future by suggesting that our ability to envision the future creates it. Without some sense of a future, we have a smaller investment in the consequences of today's actions that affect it. The authors believe that the way to address the gap in our imagination and to assure the earth's survival is to build something that will run for the next 10,000 years. That is the epynomous clock.

Philippe says

"We don't know what's coming. We do know we're in it together."

This book muses on the thinking behind the mission and strategy of the *Long Now Foundation*, established in 1996 by a group including Stewart Brand, Kevin Kelly, Brian Eno and Esther Dyson. These San Francisco Bay area pundits, creatives, and entrepreneurs had already a long shared history behind them, going back to the publication of the *Whole Earth Catalog* in 1968 and the founding of the Global Business Network (with which I was briefly affiliated in the early 1990s). That early history is narrated by Fred Turner in his book From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism.

The idea behind the Long Now Foundation was to create a societal concern for humanity's long-term future. 10.000 years ago was the end of the Ice Age and the beginning of agriculture. Hence the group projected an equal perspective into the future. The assumption of Brand and his colleagues was that an awareness of the long-term perspective would help to reframe humankind's predicament and hence promote a culture of stewardship and responsibility.

The core element in the Foundation's strategy was to design an artifact, a clock, able to physically represent that long stretch of time. That piece of 'sublime technology', 'the slowest computer on earth', didn't exist. It had to be designed from scratch. Obviously, the requirement to run over a 10.000-year time horizon created a unique set of design specifications. Inventor Danny Hillis is in charge of the project.

In a motley collection of shortish essays, Brand explores the ideas behind the clock and other elements of the Foundation's strategy: a 10.000-year library, the development of the discipline of 'applied history', the funding of 'slow science' project that stretch over decades or centuries. It makes for compelling reading that feels as fresh as when it was written down more than 25 years ago.

Meanwhile, the Long Now Foundation is still alive. It has built a prototype clock that now resides in the London Science Museum. Work is in hand to build a 'real' clock, about 60 meter high, somewhere inside a Texas mountain. Another site in Nevada has been identified as a potential home for another clock. You can read up on these and other initiatives on the Foundation's website.

Chinarut Ruangchotvit says

I got this book back in October at the Evernote Conference in 2014. Phil Libin raved about the book and now that I've read it - I can see why. As a futurist and a strategist, the book did a fascinating job widening my perspective not only 10,000 years into the future, but also made me very conscious about what got us here. What is it going to take to preserve aspects of our civilizations for thousands of centuries to come? Many great inquiries are posed to make you realize it takes a completely different mindset to think about the consequences of our actions 10,000 years into the future.

The book reads really easy - I don't recommend blowing through the book. The chapters are extremely short, its core point well made and provides the reader for thought. Let each chapter simmer and read no more than 1 chapter a day. You'll find this book a bit of a "tour of the ages" and if you're like me, you'll want to dive into references in the book's bibliography. This is probably one of the first books I thoroughly enjoyed *all* the end notes!

For anyone who strives to leave a legacy and perhaps more importantly, realizes their life's work will not be completed in this lifetime and its fruits will be reaped by later generations - this book is for you!

Paola Quiros says

Love the design principles on the chapter "The world's slowest computer": Longevity, maintainability, transparency, evolvability and scalability.... They all should be our filter for our projects in life/work/love.

Teo 2050 says

Paul says

I just got this back from a friend and seeing it again reminded me how much I loved it. The author and Brian Eno (yes, THAT Brian Eno) had the idea of building an informational repository with a ten-thousand year time line in mind. This simple idea creates some large and fascinating questions. How do you store information for ten-thousand years? What media do you use? What _language_ do you use? How do you make sure that people don't forget about it? You want people to remember it is there, but you don't want them messing with it every day. So, they proposed to build a clock into the facility that would tick once per year, chime once per century, with a cuckoo that comes out once per millennium. But how to build such a clock? Out of what? How much interaction to require? 10,000 years is, after all, a *very* long time...

Completely fascinating, in a nerdy sort of way.

Austin Storm says

Good book... very skimmable collection of essays from a thoughtful, starry-eyed hippie type.

Nick says

An interesting book from an interesting foundation. Lots of good ideas and things to ponder here. I probably should have taken notes throughout, but perhaps I'll just put it on my list of books to reread.

One interesting story, toward the end of the book:
"Another island, Visingso, in the Swedish lake Vattern, has a gorgeous mature oak forest whose origin came to light in 01980 when the Swedish Navy received a letter from the Forestry Department reporting that the requested ship lumber was now ready. It turned out that in 01829 the Swedish Parliament, recognizing that it takes one hundred fifty years for oaks to mature and anticipating that there would be a shortage of timbers for its navy in the 01990s, ordered twenty thousand trees to be planted and proected for the navy."

(Note: the 'extra' 0 in front of the year is because "long now" people like to think... well... long term.)

The book consists of mostly shortish (5ish page) chapters, all of which are interesting and worth spending more time on.

www.longnow.org

Joey says

Some of this book is already getting a bit dated, and much if it was not new thoughts, since I follow the Long Now lectures and have even been to their space in SF. But it was still a worthwhile read.

Particularly useful was the diagram layering Art & Fashion / Commerce / Infrastructure / Government / Culture from fast to slow. It made me think about how I have mostly skipped the commercial in my work and went straight to infrastructure, and what may lie beyond that.

Also enjoyed the detail in a chapter on the burning of the library of Alexandria, which turns out to have not been one fire in one building, but multiple disasters spanning centuries.

I was also highly amused at the standard "no copying" in the front matter of a book which was presumably published on acid-free archival quality paper and partly concerns itself with long-term information preservation. Which is best achieved by making lots of copies.

Janet says

The Clock of the Long Now is an attempt by a group of forward thinkers --engineers, futurists, visionaries-- to create a device to stimulate people to take a longer view of time. An actual physical clock that will "time" the next 10,000 years. Why ten thousand? Because 10,000 years ago, mankind invented agriculture, and with it, civilization began. The enormous leap wherein human beings planted seed for the coming year, rather than eating it. A sense that the future will come and can be cultivated and cared for, with an improved result for the human in current time.

Though the book, a series of meditations with some lectures thrown in, was written by Stewart Brand (of the Whole Earth Catalogue), it was Brian Eno who invented the concept of the Long Now. "I want to live in the Big Here and the Long Now." Not this scrap of dirt and the next three weeks, but the big here, earth, and the long now. The understanding, to quote the book, "that we are not at the beginning or the end but in the middle of history." We are neither the culmination of creation, nor the end point before the apocalypse, nor some kind of reset revolutionaries. I loved this book. I actually took notes--so I could expand my head anew.

One of the most interesting concepts occurs early on--the tension between fast and slow thinking in human culture, an accelerating problem for us. (No one who has read Thinking Fast and Slow by Daniel Kahneman--the Nobel prizewinning economist, will find any of this surprising.) Fast thinking innovates, slow thinking consolidates. Fast thinking is clever, slow thinking is wise. Fast thinking breaks through like a flash of lightning, slow thinking creates deep-rooted civilizations.

I thought the book's presentation of a breakdown of human life/endeavor into six time-scales of civilization--extremely potent. Brand posits six 'speeds' of human endeavor, all of which operate simultaneously. The fastest stream or layer is Fashion/Art. Its 'period' is a season. The Now of this Now. It's all about innovation, novelty, and this particular moment. Beneath that is the layer of Commerce, or Business. This Now is a business cycle, it's the quarterly earnings statement.

Each layer performs a slowing function on the level above it, so the whole thing doesn't spin out into the clear blue sky—by slowing it down (changes, ideas) at least some of the changes can reach deeper and deeper levels, where greater longevity can be established.

The layer below Commerce is Infrastructure, where we're looking at decades to build systems of transportation, energy, water storage and delivery—to build all those roads and bridges and subways and bullet trains and so on. Commerce doesn't have the slow enough thinking to take care of human needs, social needs and so on, that need a longer term of attention. Commerce asks, "where's my return?" and doesn't want to hear, "fifty years." Science is also infrastructure, as is education, and the entire social sector.

Below Infrastructure is Governance, which support life, makes sure that the important infrastructure is in place, which can think of the good of nations, and what needs to be done to insure the well being of the nation for centuries to come. It provides (should provide), the stability upon which the faster layers above it can do their jobs. (This is where we need to think seriously about people who want to run Governance the way they've successfully run Commerce, two levels above it.)

Beneath Governance, and even slower, is Culture—marked at the pace of language and traditional religion. It marks the deep connection to the roots of civilizations. After reading this, I became more aware of the positive aspects of traditional religion and also of the cultures who are sticklers for the purity of language—the French Academy comes to mind. At what a deep level evolved language is our bedrock. The very old stories of a culture provide the stability , without which we careen dangerously like a planet knocked from its axis by a cataclysmic collision in space. Agriculture is culture. Not fashion, not commerce. And the life rituals of religion—birth, death, marriage, provide the stability Culture needs to support the levels above it. This is the LONG Now.

Then, under culture, under everything, are the vast cycles of Nature. Which supports the whole thing. It's measured in eons, it's the viability of Planet Earth. The slowest of all.

The book is thick with different lenses for taking the long view, and I found it profoundly optimistic—we are so apocalyptic these days, our attention fixated on the noisy, colorful top layer, we think of everything spinning out of control, faster and faster. "How can we ever keep up?"

I found it profoundly recalibrating to think in terms of the Long Now, to think about Culture as such a deep, slow layer, to muse about ten thousand years from now. Brand writes dates with an extra zero in the front, to remind himself of the ten thousand years from now. If this is only 02015, then 03500 is possible, and 07500. It encourages responsible thought about life on earth.

It's been a long time since I've read a book so full of ideas. I'm putting it on the shelf next to my favorite book about Time, Robert Grudin's Time and the Art of Living.

mgd says

I think that everyone who has a reason to think about information and everyone who has any concern at all about the environment needs to read this book. I offers an invitation at least to open up our thinking out of the economically bound timescapes that we use now.

Darin Stewart says

this is a wonderfully optimistic book. I have been sinking into severe pessimism about our society and this book helps to take a long view. With that shift in perspective, things do seem to be getting better, just very very slowly.

Paul says

I first heard about the Clock of the Long Now when listening to a radio interview with Brian Eno a few years ago. The name is resonant and stuck in my head. Someone lent me the book when it came up in conversation, and I've finally got round to reading it. Written in 1998, with an afterword from just after the millennium, it's suffused with a certain Silicon Valley optimism that these days can be rather grating, as Zuckerberg patiently tells us of Facebook's mission to make the world a better place while his business model fosters insular bubbles of thinking that are clearly making it a worse one.

But this book was written in the days of Web 1.0, and the great minds behind the Clock of the Long Now have their sights on loftier goals than creating another "social" app that attempts to monetize our attention. In fact, their goal is nothing more than to reset our attention span from very short where it is currently set, to the very long, where millenia are the counting blocks rather than weeks. Why? Because you can't build a better future by only looking at short timescales.

To this end, the minds behind the Long Now Foundation propose building a clock intended to last 10,000 years, together with a library intended to last the same length of time. The book is a set of short essays linked together by the theme of these aims, and a meditation on the different spans of viewpoint we use to experience the world. It talks a little about the engineering behind the Clock of the Long Now ("the world's slowest computer"), and a little about building the institutional structures that can survive 10 millennia.

It's also full of tricks to shift your perspective. You can look at the start of recorded human history as being 10,000 years ago, which seems impossibly long to our attention spans. Or you can think of it as 400 generations ago (25 years per generation), which makes the problems of the next 10,000 years seem more urgent.

Recommended.

Jim says

Ideas in here are 5 stars (even if they seem overly pie in the sky)