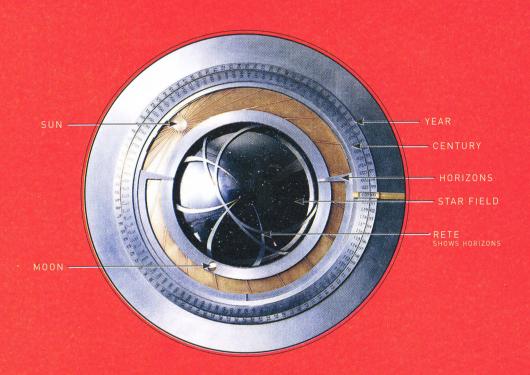


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STONEHENGE II

FRESH THOUGHT IS ALWAYS A GREAT THING ESPECIALLY WHEN IT LOOKS AHEAD. HOW AMERICAN FUTUROLOGIST STEWARD BRAND WANTS TO SHARPEN OUR SENSITIVITY TO LONG-TERM THOUGHT

TEXT Dirk Maxeiner
PHOTOS Rolfe Horn, Long Now Foundation
II LUSTRATION seidldesion

66 Tou've got to move", sang the Rolling Stones, "when you're low." An existential dissatisfaction drives mankind since it learned how to walk upright. Politics and religion, economics and ideology, wars and cultural rivalry all drive change and of course technology has entered the equation ever more. The first steps of evolution took around half a billion years, the development of the nervous system then only took a mere hundreds of millions of years. The evolution of language took less than one million years and civilisation developed over some 10,000 years. Printing books starting changing our lives some 550 years ago and the industrial revolution took place over just two centuries. In the meantime, information technology and decoding the genome changed life over a few decades. An autocatalytic process has developed from which none of us can emerge.

An example of this often quoted was one that took place at a fairground. At around midnight, a group of drunken revellers reached an abandoned chairoplane and climbed aboard. One of them set the ride in motion with a lever and climbed on as last rider. To cries of encouragement, the machine continued to accelerate until they realised that were was no way of switching it off. The fairground showman found the group circling the following morning in a somewhat bemused state. People always start things off that they cannot bring to a stop, so how are they to handle it, what type of rationale will provide a responsible prediction?

One person who has been looking into such questions for many years is the American multi talent Steward Brand. This graduate biologist is seen as one of the inventors of the Earth Day and in 1968 created the "Whole Earth Catalog", which bore the sub-title "Access to tools". With this catalog, Brown provided the up and coming hippie and alternative scene with the practical and philosophical tools for a self-determined and economically-independent life, as 'dropouts' sought this as a popular alternative to the consumer-oriented world of economic miracles. "The idea occurred to me when on an acid trip. 200 microgrammes of acid and reflecting on a lecture by Buckminster Fuller when up on a roof gave birth to it. (Fuller was a designer, scientist, researcher, developer and writer who was an early proponent of global viewpoints, e.g. the "Operating Manual for Spaceship Earth".)

The first readers and customers of the Whole Earth Catalog were communes that wanted to build a new society. "I tried to prepare the tools for it", says Brand. But the retreat to a romantic country life proved to be the wrong track: "It didn't lead far and was essentially a cul de sac, just like drugs."

Instead of that, Brand relied upon decentralised technologies that were available to all and that welcomed all, as did the hippie movement. This included solar energy and particularly computer technology. He describes the move from hippies to hackers as follows: "One of the principal legacies from the Sixties was to understand everything that had to do with

computers as an open system." Brand was the first to use the definition "Personal computer". He recalls: "Computer science in 1968 was a cool new area and networking was funky", adding: "the hackers won and hippies lost." They were the same group of people in many ways, with the same length of hair, but hackers did computers instead of drugs.

The fusion of cultural bohemians from San Francisco with the hi-tech industry from Silicon Valley followed and Stewart Brand started the online community "The Well" with a server on a houseboat in Sausalito. He founded the "Global Business Network" and subsequently the "Long Now Foundation", which had the objective of making people more aware of long-term phenomena. "I believe that people are scared of acceleration" says Brand, "and civilisation is approaching pathologically brief attention spans. Long-term thought, as shown by as the formulation of the American constitution or the build-up of the railway network seems to be in retreat. Brand is convinced: "I see no problem in living fast. It will, however, become a problem if it keeps us away from taking care of the really important and slower things There is a hierarchy of levels in our civilisation that changes at different speeds. Fashion and business change constantly, whereas nature and culture take their time and if we overlook the slower levels, we shall experience serious crises."

Paradoxically, high-speed progress is making it possible for us to recognise the longer processes in life that takes aeons to happen. "The climate and the variety of species are classic examples and we are an important part of these dynamics", says Brand. "We should be aware of this responsibility because the consequences of our present-day actions could only unfold in centuries from now." Thus changes are taking place beneath the Antarctic icecap that were probably triggered 10,000 years ago. The kilometre thick icecap insulates so well that temperature changes on the surface will only have influence upon the deep streams of ice in thousands of years. The memory of the poles and climatedefining oceans is long and patient and can therefore not be underestimated. It is possible that the consequences of our present-day actions are not felt until many generations later.

The human individual struggles against the horizon of years and families over decades. Tribes and nations want to stake their claim over centuries and cultures want to do that over millennia. As a species, human existence strives for success over tens of thousands of years and millions of years are the essence of the biosphere. Each human being is a product of adaptation to various timescales which is why conflicting objectives are so deep in our nature. What seems to make sense for the next 20 years could a catastrophe for 200 years - or the other way round.

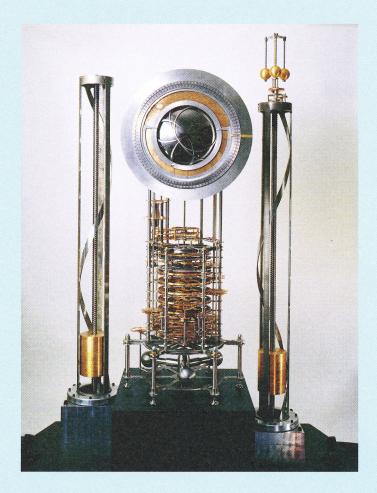
Steward Brand therefore considers it necessary that we understand long time periods as the present. Human civilisation originated roughly over the course of the last 10,000 years. "If you suggest 25 years per generation then these will be 400 generations" he says, "the Pyramids were built 200 generations ago". For a person seeking the future, this is as much applicable to the present as it is to the next 10,000 years. He refers to this period as the "long now". Together with members of the cyberelite, such as Danny Hills, inventor of the parallel computer ("Connection Machine"), as well as the avant-garde rock star Brian Eno, he therefore founded the aforementioned "Long Now Foundation".

The foundation's projects all run over long periods. Thus an attempt is made with the Rosetta Disk to conserve as many languages of the world (a cross reference to the Rosetta Stone which played an important part in deciphering Egyptian hieroglyphics at the beginning of the 19th century). This idea of a "10,000 years library" is of similar calibre and would safely conserve the knowledge of today for this period. The limited durability of digital information processes could otherwise lead to the knowledge of humanity today being lost within few centuries; some maybe even within decades.

A good case in point is that of old film stock. Historical film material is on the list of endangered species and indeed marked with several exclamation marks. Virtually 90% of all silent films that were produced before 1930 are already seen as irreparably damaged and even many post-war productions are already in great danger. The symptoms are chemical self-catalysis or acetic acid syndrome, fungus and bacteria get at the material, as well as mechanical wear and tear, while physical damage caused by fire or incorrect treatment add to the destruction of heritage film. According to UNESCO, are some two million kilometres of film archived around the world. An entire continent of knowledge and skill is sinking without trace and for the entirety of mass media of the 20th century, this could be tantamount to its suddenly suffering from Alzheimer's disease.

The "Long Now Foundation" wants to put up some balanced correction to current short-sightedness. "We need a mechanism or myth that encourages long-term responsibility," says Steward Brand. The most spectacular result of this chain of thought is the slowest clock in the world, known as the "Clock of the long now". Similar to the circular stone formations at Stonehenge, it is intended to last for millennia. The clock is intended to click once annually at the change of the year, ring once in a new century and make a cuckoo noise when a new millennium starts. There is a prototype at the Science Museum in London and the final clock is planned to be installed inside a dry desert cave in Nevada. The clock is made from a new type of binary digital mechanical system that is meant to last for 10,000 years.

But can Stewart Brand and his associates be sure of this? "If somebody asks this question", says Brand, then we have achieved what we sought - people will be starting to think in the long-



term." Here the next question arises: which institution in society could take on the responsibility for the clock for 10,000 years? None have survived such a long time and even the Catholic church seems a youngster in such terms. It is hardly likely to see kingdoms or supermarkets surviving for 10,000 years.

Future researcher Richard Sloughter considers such forward thinking games to be extremely productive and recommends to all of us: "For a human being, it is, for example, a moving situation to formulate a message which they know will not be opened and read until many years after their death." The thought alone lets our house of cards of assumed certainties fall apart: "What are we say to people who will be alive in 2,000 years? Will mankind still be alive and how and in what language should one communicate? On paper or recorded tape, on a CD or video film? To whom should this message in a bottle into the future be assigned? Where is the letterbox for transport to future generations?" Whoever wants to write to the future will rapidly grasp the dynamics of the development of human life and the various paths that it could take. www.longnow.org