

“Technology Could Bring Heaven on Earth, or Create Hell” - interview with futurist Gerd Leonhard

Gerd Leonhard is an acclaimed European futurist; his popular [video](#) was recently featured at IEET and he will soon be an IEET contributing writer. To introduce him to our audience, I interviewed him on his forecasts, ideas, and values.

IEET: Can you expand on your comment in the video, where you say: “we will see more changes in the next 20 years than we did in the previous 300” ?

Gerd Leonhard: This is a statement I use to exemplify the increasing exponential nature of what we are seeing in technology, today: it is increasingly true that almost everything that used to be ‘impossible’ or ‘far away’ is now becoming increasingly doable; indeed - witness genetic engineering, driver-less cars, cognitive and quantum computing, the rise of solar energy and powerful batteries etc. The timeframe for many of these dramatic pivot points to occur is not even in the dozens of years - it’s maybe ONE dozen years - and many are already palpable. The advent of the steam engine was a huge deal, yes, and so was the invention of the Internet - but compare that to quantum computing and the possibility of ‘re-programming’ the human genome, and the order of magnitude is obviously so much larger. Plus, the changes are not just exponential they are also combinatorial (i.e combining effects) see <https://www.youtube.com/watch?v=78mFhpOk6vE> plus interdependent.

IEET: Can you tell our audience what you predict in regards to personal privacy and surveillance?

Gerd Leonhard: it is clear that the tools and computing power to monitor every data point, every movement, every image, every word and possibly every thought that we have, will exist in the very near future - for all 10 Billion+ people that we may have on earth. Many good things about that, too, but if unchecked this could lead to massive abuse, wide-spread manipulation via digital media and ‘big nudging’, an utterly totalitarian system of perfect monitoring and limitless surveillance (see the new surveillance law and ‘credit sesame’ in China), and in short, to an utterly inhuman society where no anonymity, no secrets, no surprises, no deviations from the norm, and of course.... no real democracy could exist. The power of exponential data technologies, the cloud, the IoT, and of quantum computing and AI (both basic as well as general , and even IA) urgently needs to be counterbalanced with rules, social contracts, treaties and regulations that balance all the algorithms with what I like to call humarithms - ie that which makes life worth living for HUMANS (most of which is simply not about ‘data’ and logic). see <http://www.futuristgerd.com/tag/humarithm/> I believe that a society that no longer allows for ‘imperfection’ and general humanness would be very short-lived (and indeed.. probably our ‘last invention’)

IEET: Your film mentions “connectivity” several times. Can you explain how this will impact our day-to-day life in 10 years, and 20 years?

Gerd Leonhard: Connectivity is becoming like water or air: it will just exist, everywhere, anytime, anyhow - and it will not be limited to devices. We will eventually transcend having to use any interface at all, i.e. after brain-computer interfaces / BCIs we will be able to connect electronically between humans, as well. AR and VR is just another step in the evolution of ‘mobile computing’. Connectivity is also a huge game changer because it makes all information, all data, all media and all other digital assets abundant and therefore enables a whole new set of human collaborations and businesses, but it also challenges us because of our limited (i.e., linear) ability to hyper-connect in the same fashion as machines do; in other words, connectivity is a good thing, hyper-connectivity might become a burden to us, and over-connectivity would lead to certain collapse - I

sometimes call this the shift from MAGIC to MANIC to TOXIC— connectivity at its extreme would be toxic to us because, as the famous psychologist Daniel Kahnemann once said “cognition is embodied - we think with the body not the brain’. See attached image. Right now we are still struggling to connect at high speeds, everywhere, but in 10 years the struggle will be how to DISCONNECT because our biological system needs ‘digestion’ i.e., contemplation and reflection.

IEET: You predict that an Artificial Intelligence will develop Consciousness by 2027. Can you tell us what leads you to determine this date, and how a conscious AI will impact humanity?

Gerd Leonhard: I actually don’t predict that nor would I propose that to be pursued. I am just riffing off Kurzweil’s aging ‘singularity’ theme here - the key event is a single computer having the same ‘processing power’ as the human brain; which I believe will be achieved even before 2025 given the recent advances and new technologies that IBM and Google and Baidu et al are throwing serious money at. I don’t believe that machines will achieve CONSCIOUSNESS because of that, however we define this term. They will be able to simulate human feelings, though - and maybe this will be good enough for some basic AGI functions. To be clear, I don’t think machines becoming conscious, or humans becoming machines to be more powerful, is a good idea or a desirable path to pursue. My key message here is ‘embrace technology but don’t become it’.

IEET: You remind us that, “we create the future.” Can you provide advice or a warning on how to create the best future?

Gerd Leonhard: We create the future because we invent tools which sometimes, then ‘invent us’ (McLuhan), or at least re-frame our entire reality (see nuclear fission). The key point today is that we need to question the assumption that all tools aka technologies are good to deploy just because they can be turned into reality. In many cases, our ‘best’ or most desirable future may actually mean NOT doing something. A big role falls to ecosystem-thinking and to a holistic worldview, IMHO: when we create the future, we don’t just create technology but also SOCIETY. Riffing off

Honegger a bit “Technology is not what we seek but HOW we seek.’

IEET: Your film ends with various futurist topics in bold CAPS. Can you provide a bit more detail on those terms?

Gerd Leonhard: “Singularity: Heaven or Hell” refers to the hellven meme (<https://twitter.com/search?q=%23hellven%20%40gleonhard&src=typd>) which is a big part of my view: it is clear that these technologies could bring heaven on earth (ie solve many problems for us), but their unintended consequences could also create hell. Imagine beating cancer but then having genetically engineered humans as ‘the new normal’.

“Towards Abundance” is a riff off Peter Diamandis’ book and basically states that just like we have abundant media now (90% cheaper and 9000% more of it), we will have abundant financial services, health care and even energy in the near future - this will shake up our capitalist economic systems to the core.

“Sustainable Capitalism” is what we will need to invent when almost everything becomes abundant—i.e., not a world based on scarcity. See Jeremy Rifkin and the Zero Marginal Society.

“Robot Love” is just a hint at the fact that simulations of humans will be feasible and widely used in the near future: first, intelligent digital assistants, then robots and then humanoids. How we will interact with them is a huge ethical issue (and ‘love’ or sex will be one of those pivot points).

Basically describing how everything is becoming networked and therefore interdependent. There is no future in ‘egosystems’ - all depends on a holistic view.

Image #2: Drawing by Jeremy Sutton