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THE SUN

LIGHT FOR ALL

THE FUTURE

Inventing is in this man's blood — and he says tiny robots will soon be in yours

BY LARRY WILLIAMS
[IDEAS EDITOR]

One of the most interesting things about the waves of technological innovation that are changing our lives every day is how unexpected most major trends are.

Sure, we know that computers are going to keep getting faster and cheaper and smaller. And we're confident that we'll do an ever better job of treating deadly illnesses.

But, truth be told, big change sneaks up on us. Suddenly there are hundreds of millions of cell phones, and we're regretting our failure to invest in Google, a once-humble Internet search company that has a larger market capitalization that General Motors.

Let's face it, life isn't linear. We have only the vaguest idea of what the weather will be later this week. Beyond that, who can say?

So it was with some trepidation that I recently picked up a 652-page tome by a very smart, very wealthy man named Ray Kurzweil, who has a clear-eyed, sharply-focused vision of the not-so-distant future.

This new book, *The Singularity is Near*, predicts that within a few decades most of our economic problems will be solved and brilliant computers will be doing much of our thinking for us.

Where most of us see chaos, Kurzweil, who invented the first flatbed scanner and the first print-to-speech reading machine for the blind, high-quality music synthesizers and dozens of other innovations, sees a higher order beginning to emerge at an exponentially rapid pace.

Ever-smarter computers will use reverse engineering to begin to solve the biological secrets that make humans uniquely human, Kurzweil says. Within 30 years they will have solved the riddle of the human brain, he thinks.

Meanwhile, artificial intelligence will find ways to make food, energy and the other necessities of life so cheap that the problems of poverty and disease that have long plagued the world will be solved.

Computer nanobots in the bloodstream will interact with neurons in the brain, multiplying our brainpower and knowledge. Other nanobots will guard our health.

Kurzweil is undeterred when confronted with clear failure of similar predictions made decades ago by other thoughtful scientists.

In fact, while computers have enough raw power to beat some of the world's best chess players and are driving ever-more-useful diagnostic tools in medicine, they are still slaves to their relatively primitive software, hopelessly unable to perform the kind of rapid-fire free-form thinking that makes us human.

That's the reason we aren't working with robots that can do much more than paint a car or worrying about HAL, the selfish computer who locked Dave out in the cold of space in the 1960s movie *2001*.

Kurzweil believes inexorably accelerating increases in computer power and the capabilities of software will soon overcome all of that.

In fact, he suggests that those of us who make it through the next 30 or 40 years could achieve a kind of computer-assisted immortality.

The world might get a little crowded, he acknowledges, but universal prosperity will make it comfortable. He's planning to make a run at immortality himself.

Kurzweil, who is 57, follows a strict medical regime, including large daily doses of vitamins, and appears likely to outlive most of his critics, regardless of the fate of his sunny predictions.

He says only nuclear or biological war can derail the growing power of the coming social and economic revolution, and he's busy lobbying Congress to guard against the biological threat by funding research on a lab that would quickly find cures to manufactured diseases.

Whether we buy Kurzweil's improbably optimistic vision of the future or not, history suggests that we are likely to continue to be surprised by the twists and turns of man's fate.

And we can only hope that path will carry us toward a future filled with endings as happy in their own still-mysterious ways as those in Kurzweil's dream.