



Artist's view of ATV-5 reentry | © ESA-D. Ducros, 2014

The Future Is What We Make of It—But What Will That Be?

Jeremy Lent

Imagine a satellite being launched into orbit, but its controls aren't working too well. If the trajectory gets too steep, it will breakthrough Earth's gravity field and soar into outer space. If it accelerates too rapidly, atmospheric resistance will cause it to come crashing down in a fiery ball. Only if everything is managed with great care will the satellite achieve a stable orbit.

The trajectory of our civilization is a lot like that satellite.

At the accelerating rate of technological innovation, artificial intelligence may soon transcend our own, and human DNA might be re-engineered to produce a genetically enhanced species—like the satellite leaving its home planet forever.

On the other hand, the rate at which we're exploiting the earth's resources is unsustainable. In addition to climate change, there's a rapidly accumulating list of equally daunting crises, such as capacity limits in crucial resources, deforestation, and a massive extinction of species. With the convergence of these multiple threats, our global civilization could face a total collapse—like the satellite hitting too much resistance and crashing down.

To me, and perhaps to you too, neither of these scenarios is attractive. But is it possible for our civilization to manage its trajectory capably enough to reach a stable orbit?

On Wednesday, June 6, [at Kepler's in Menlo Park](#), MAHB founder Paul Ehrlich and I will be discussing humanity's possible future scenarios and—most importantly—how the actions we take today might affect them. I hope you can join us there.

In the final chapter of my book, [The Patterning Instinct: A Cultural History of Humanity's Search for Meaning](#), I explore three possible trajectories for our civilization. Here they are:

Civilizational Collapse

If our society were to succumb to climate change, it wouldn't be the first. Studies have shown a correlation between the declines of ancient civilizations and periods of significant climate change. If you broaden the scope to include general environmental decline, the correlation with the collapse of civilizations gets even more striking. The implications for our civilization are immediately apparent. In addition to climate change, we're facing [myriad environmental pressures](#) arising from exponential growth in consumption.

Anthropologist Joseph Tainter has offered a theory of collapse that applies to every complex society including our own. At their core, societies can be understood in terms of energy flows. If a society is fortunate to discover a new source of energy, it will naturally grow in size and complexity as it exploits that energy. The source of energy can vary considerably. It can arise from a new technology, such as the irrigation systems of ancient Mesopotamia, or be the collective energy of conquered nations forced to submit to a military power such as the Roman Empire.

As a civilization gets more complex, it needs ever more energy to maintain its growth, and will generally keep doing what it has done successfully in the past. Tainter describes this as a society's investment in complexity. However, after the first easy pickings, the next steps in the society's growth become more difficult and costly. At a certain point, the society's return on investment in complexity peaks, and it finds itself spending increasing resources for ever more meager returns. In effect, as the society gets more complex, it has to run harder and harder just to stay in the same place. "With continuation of this trend," Tainter concludes, "collapse becomes a matter of mathematical probability."

It's difficult to consider this model without drawing parallels to our own civilization. Whereas Rome's primary energy source was conquered nations, the primary energy source of our

civilization is fossil fuels. Whereas they encountered increasing costs of administering their empire, we're confronted with the global impact of rising carbon emissions. Where they chose short-term solutions that created insurmountable problems for future generations, we're doing the same by permitting carbon emissions to keep increasing, even when we know it will lead in the future to runaway climate change.

The stakes could not be higher for humanity. If our current civilization collapses, the human race will continue, but we're most likely condemning our descendants for time immemorial to lives without the benefits we've enjoyed, to societies bounded by the limitations and values of agrarian norms, where draft animals and human slaves become the energy fodder for small, powerful elites. What can we do to avert this catastrophe?

Technosplit: The Bifurcation of Humanity

The solution, to many, is simple. Technology, the fruit of human ingenuity, will save us. What about Tainter's argument? A frequent rebuttal is that the continuously accelerating feedback cycle of modern technology has created a unique dynamic. Perhaps Moore's Law, combined with the explosive potential of converging technologies, has given our civilization in effect a new energy source, one that is potentially limitless and therefore doesn't conform to Tainter's theory.

However, solutions based purely on technology tend to [miss deeper structural issues](#), often creating even bigger problems down the road. Instead of saving humanity, our society's current headlong pursuit of technological wizardry is more likely to lead to an ever-increasing gap between the world's affluent minority and dispossessed majority.

The chasm between rich and poor in the world has become so extreme that it is frequently difficult to grasp. The wealthy OECD countries, representing less than 20% of the global population, consume 86% of the world's goods and services, while the poorest 20% consume only 1.3%. These numbers translate into the shameful reality that a billion people go hungry every day and nearly another billion remain chronically undernourished.

Meanwhile, advances in genetic engineering offer the possibility that, within a few decades, the gulf between rich and poor might extend beyond economics and technology to become part of our biological makeup. Eventually, the affluent and the dispossessed will become—effectively, if not literally—two separate species. One species, genetically and technologically enhanced, exploring entirely new ways of being human; the other species, genetically akin to us, left behind to struggle in a world reeling from resource exploitation and environmental degradation. It's a scenario I refer to as [Technosplit](#).

The UN Declaration of Human Rights affirms that “all human beings are born free and equal in dignity and rights... Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized.” The Technosplit scenario would be a fundamental betrayal of these core human values. It would be equivalent to the rich minority building a luxury lifeboat and deserting a rapidly sinking ship that’s taking down those who can’t afford the entry ticket.

A “Great Transformation” of Values

A scenario where humanity remains resilient requires something deeper than economic and technological solutions to our current crises. These are undoubtedly necessary to avert disaster, but even if they’re fully effective, they wouldn’t avoid Technosplit. That would require a more fundamental shift in our core values, along with structural changes to the global economic system that is causing the inequalities wrenching humanity apart.

In a scenario where our shared humanity remains intact, our economic system would need to be transformed, along with its underlying values: the pursuit of never-ending material growth and the glorification of humanity’s conquest of nature. In its place, we need to nurture new values, ones that emphasize the quality of life rather than material possessions, our shared humanity, and a commitment to the flourishing of the natural world.

What would the latter part of this century look like if our global civilization took the path of a Great Transformation?

It’s likely we’d see a reorganized United Nations, with powers to enforce a more responsible approach to our global commons. The legal structure of corporations would incorporate a triple bottom line of profits, people, and environment. While there would still be massive income inequality between rich and poor, that gap would be decreasing as a result of economic structures based on fairness rather than untrammelled exploitation. And the flourishing of the natural world would be given a high priority in global decision making. There might even be an enforceable UN Declaration of the Rights of Nature, putting the natural world on the same legal standing as humanity.

This future, driven by an understanding of the interconnected nature of global systems, would embrace continued technological innovation in a form that enhances sustainable consumption and shared access for people around the world.

It’s a relay race against time in which every one of us is part of the team. It’s a race that humanity can win, if the two visions of progress—technological and moral—that underlie

modern cognition can fuse into one vision of harnessing technology for the benefit of the collective human spirit.

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More information about *The Patterning Instinct* is available at www.jeremylent.com.

The MAHB Blog is a venture of the Millennium Alliance for Humanity and the Biosphere. Questions should be directed to joan@mahbonline.org

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