## Propheteering: A Review of *Next: A Brief History of the Future*

***By Robert Edison Sandiford***

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In his recent book, *Next: A Brief History of the Future* (Gefen Publishing House, Paperback, 9789657023754, 236pp, 2022), author Avi Jorisch is a very hopeful man. Maybe as hopeful as any man can be in our present age. He's "optimistic not just about the future but about the ability of technology to make the world a better place." And he comes by this optimism honestly. The starting point for his second book, *Next: A Brief History of the Future*, is March 2020, the first days of the global coronavirus pandemic, which we only just officially emerged from in May this year with the WHO's declaration of the end of COVID-19 as a global health emergency.


As reported by Jorisch, prophet-like, we have reason to feel good about our chances as a species facing all kinds of threats, from the effects of climate change on our ecology and coastal areas and weather patterns, to wars, crime, bigotry, human trafficking, and avarice. Jorisch's writing is easy, almost breezy; journalistic, yes, but his hundreds of interviews and references are harnessed with the appeal of a personal essay. He tells us about his three young sons (who could have been mentioned more throughout the book), and visiting a tech convention in Washington, D.C., with "the kind of stuff small children love." Adults, too, as it so happens.

**Mouth-gaping Innovations**

We're talking mouth-gaping innovations, head-scratching science fiction made science fact. Innovations we thought were well into our future are clearly possible today.

Jorisch, a Senior Fellow at the American Foreign Policy Council and the author of *Thou Shalt Innovate: How Israeli Ingenuity Repairs the World* (Gefen, 2018), at first tells such stories about human innovation to his kids, Eiden, Oren and Yaniv, to whom the book is dedicated. "Then, as much to satiate my own curiosity as theirs, I found myself looking for more. Who are the most

impressive innovators out there today, shaping the history of the future?" *Next* seeks to answer that question.

Are we "closer than we've ever been to driving ourselves to extinction"? It certainly feels that way on dread days, when the news is less tambourine-shaking good. "But we're also in an era of abundance – and remarkable wealth…." Similar to *Thou Shalt Innovate*, Jorisch's new book "tells the story of thirteen game-changing innovations that are poised to transform our species from a society of takers to a society of givers." A tall claim, the stakes are indeed high.

Humanity's talent for exploitation at the expense of all others (including ourselves in the absence of) is exceptional. So, many of our problems are related to wastage or the poor management of ample resources. And the lack of understanding that "ample" does not mean "inexhaustible." Moore's Law, by Intel cofounder Gordon Moore, "posits that the power of microchips will double roughly every two years while their cost remains about the same, [and it] has held up ever since." But is Jorisch a little *too* optimistic? Have, for instance, "advances in microfinance…helped lift millions out of poverty" and stay that way?

Among inventor-author Ray Kurzweil's several significant predictions for humanity is this one: "We won't experience 100 years of progress in the twenty-first century…it will be more like 20,000 years of progress." Yes and no; his numbers are comparative. Progress takes the time it takes. Sometimes we move quickly, other times slowly or very little or apparently not at all. Progress happens nonetheless, incrementally, over time.

We'll see how many of Kurzweil's predictions materialize. His claims that "[a]rtificial intelligence will [lead us to build] real human computer relationships" strikes a chord of concern. Recent appeals from SpaceX founder Elon Musk, among others involved in AI, have been for us to slow our roll on its wider implementation. The same may be said about the genetic engineering tool CRISPR, "the first technology truly capable of changing the fundamental chemistry of who we are," writes Jorisch.

The question may not be so much are we ready for space-age innovations, rather which are we ready for and when? Musk, and Jeff Bezos' Blue Origins, would say we are undoubtedly ready to push to Mars and beyond in our solar system. Brian Weeden, as director of program planning for Secure World Foundation, advises caution based on the "significant challenges ahead," many we have not yet thought of. Because we may not see the effects of CRISPR for generations, it may be wiser to move at impulse power – easier to shift course and sidestep potentially Titanic crashes.

Two factors propelling our push into risky areas are big business, i.e., the money to be made there (potentially in the trillions), and advances in "rockets, robotics, communications, and 3D printing technologies." Jorisch claims that "space offers us a second chance to change our relationship with nature." But where's the evidence of this so far? According to Christian Sallaberger, the CEO of Canadensys Aerospace Corporation, for "the first time…our species has come together to design things that benefit our entire society and improve the quality of life for all on Earth." Who is benefitting now, and who stands to benefit in the future?

**Is There a Catch?**

There is always one, or more. Here, it is the massive work ahead of us. "Above all, three megatrends are the driving forces behind the issues tackled in *Next*; the growth of a global middle class, rapid urbanization and increased physical and technological connectivity. By the end of the decade, the world's population will reach 8.5 billion…." Truth is we're already having trouble managing the 8 billion we presently are.

There are "thirteen critical areas outlined by the United Nations as key sustainable Development Goals: space, learning, shelter, the environment, hygiene, medicine, disaster resilience, energy, prosperity, food, water, governance, and security." Current innovators in each area are the subjects of Jorisch's 13 chapters. Despite the remarkable work he highlights, though, we have not kept pace with these goals, which are only a partial list of what we must do.

Funding has been a drawback as well to leaps in progress. Khan Academy, founded by Salman Khan, "opens the world of knowledge to learners of all ages, giving them critical tools and the confidence to learn any subject, anytime they want." Evolved from website to YouTube math tutorials to aid family members, Khan went from ready to give up because of depleted personal finances to a $10,000 donation and then hundreds of millions in months. It took the right connections and input at the right time by the right people, but first a quality product.

Ethan Brown, the founder of Beyond Meat, tells a similar story about getting his plant-based meat substitutes to market: "Eventually, other big players joined in, including Taiwan's Tsai family, Morgan Creek Capital, DNS Capital, and Honest Tea founder Seth Goldman." This was after "Brown had already run through his 401K [pension] and savings accounts, and even sold one of his houses." Money, and lots of it, is always needed to aid society-enhancing ingenuity. Along with it, a mind bent toward sustainability on the ground, continuity, resilience not just easy-access quick fixes – helps the process. Financial officers must be as innovative with their budgets as those being funded.

No less a challenge to our progress is unchecked ego. Some "educators who are critical of Khan's approach" call it simplistic at best and unexamined at worst. Khan, an "ex-hedge-fund guy," is not "the world's teacher," regardless how widely used his platform is. Even he must acknowledge that. And not everyone who and has made contributions to society counted basic math among their skills. Conversely, many excellent mathematicians have contributed their share to the horror of living. The critics are to be heeded when they remind us that we still – and will always – need to look at how we learn and why.

All the math skills in the world, without writing, reading, social studies, vocational knowledge, and so on, give us a less well-rounded individual than we would like. *All* of these human activities affect and influence us, our understanding of how to better our world. Shigeru Ban, seen in "Chapter 7a – Disaster Resilience: The Ring of Fire," developed "easily constructed paper homes…used all over Japan – and around the world – [for] when natural disasters strike." He did this by "integrat[ing] design thinking and innovation, which has already saved an untold number of lives."

The best final analysis of Khan Academy, and other innovations like it, is that it is "a wonderful and important supplement to – though not replacement for – traditional classroom education." The practice of mastering material before moving on to a next level is important to consider. The free access to tutorials makes this possible even when teachers have gone home or, worse, suffered burn out.

Jorisch's goal with his books has been to "give readers hope about our lives. About our future as a species." He's done his research. He's a generous sharer and storyteller, with genuine enthusiasm for his topic and a sense of adventure, of discovery. (We can forgive him the occasional corny punning in his chapters' subheadings.) *Next* is popular in its recounting, rigorous enough in its accounting. I don't think I was aware that "[t]he driving force behind [the International Space Station] is to preserve life on Earth and build colonies in space."

What remains to be faced here, in appreciating our innovations and avoiding their potential pitfalls, is our own past performance and ongoing imperialistic tendencies as peoples.

Why do we never think enough is enough, that so far is far enough, at least for the moment? Why do we, or would we, need to realize all Kurzweil sees us capable of with, say, computers – especially if we're not ready to handle it, or we *know* the potential of certain pursuits to destroy us? Because we can do something doesn't mean we should do it, at least not without serious reflection. And the bigger and more immutable the thing, the longer and deeper the reflection. Given Jorisch's own concession that "our world has also changed at such a rapid pace that we've struggled to adapt, and in the trade-off for progress, we've been all too willing to accept or ignore the more sinister ramifications," the outright caution of futurists like Nick Bostrom seems more advisable.

**Is There a Tomorrow?**

Yes, always. What role will we continue to play in its expansion or erosion? That seems less clear. *Next* is something of a rallying cry. Look see what these few are doing. Now imagine if more of us were doing the same, buying into the same, taking the long view. Exhibiting, say, the same kind of honour and commitment to cause as the members of Muhammad Yunus' Grameen Bank, "the bank for the poor" that provides microfinancing.

Here we come back to ego, and perception. In "Chapter 3 – Shelter: Let There Be Light," Sivan Yaari's goal through her shrewdly managed Innovation: Africa nonprofit is to bring Israeli solar and water technology to the African continent. Access to safe drinking water is as crucial to a people's development as access to education and electricity. "Approximately half the citizens of Africa are without electricity…." Yet the notion that African poverty is in some way "true" or "representative" poverty skirts caricature.

"Chapter 5 – Hygiene: There Will Be Blood," reminds us how outdated prejudices and taboos, in this case in a contemporary Indian community over sanitary napkins, can impede advances for the larger society. We need to think of our survival and the health of the planet as more than just another "opportunity," business or otherwise, to prove ourselves right. What is demonstrated throughout *Next* and its individual stories is that simple solutions that reflect the realities of an environment *and* its people are often effective.

Innovators don’t always set out to innovate. They might not even be aware there’s a need to do so. They open doors, for themselves and others, when they open a dialogue about a situation or problem. Simple or not, the path to solutions isn’t always straightforward: there is a stumbling toward, multiple trials and errors. Whether with microfinancing, electric cars, sanitary napkins, or plant-based burgers, the story or thrust is the same: reach the masses, make the product accessible to them, and you just might start to make a difference. Technology doesn’t make us better. That’s our responsibility.