

Limits to Growth and the Possibilities of Breakthrough

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Since the Second World War, the official image of the future of every nation in the world has been *Continued Economic Growth*.

No country has been more spectacularly successful in fulfilling the expectations of that image than Korea. From one of the poorest nations on the face of the Earth in the 1950s to one of the richest in 2014, it is the poster child of successful economic development, and justifiably the envy of the world.

What lies ahead for Korea?

I have said many times that it could be that Korea is becoming the first *Dream Society* in the world. Not only did Korea move swiftly from having only an agricultural base to becoming an industrial society, and then to becoming an information society. Since the early and continuing success of the Korean Wave of popular culture a decade ago, Korea now may be showing the world how to be a Dream Society, a Creative Society.

That is certainly one possible future, and from my point of view a highly desirable future.

But is THE future of Korea a Dream Society?

I am not so sure.

I have also said that Korea might instead become the world's first *Conservator Society*; that the future for Korea—and the world--is not more and continued economic growth along the lines of the past fifty years, but instead a revitalization of an image of the future that first became visible about fifty years ago—a society that is based on an understanding of the limits to growth, and the folly and impossibility of continued economic growth: a Conservator Society. A Disciplined Society.

This conference today focuses on those options: Limits to Growth, or Breakthrough.

The origins of the idea limits to growth go back to Aurelio Peccei. Peccei was a freedom fighter against fascism in Italy during the Second World War. He was a very successful entrepreneurial businessman thereafter. He was President of Olivetti (a pioneering information technology company), a chief executive of Fiat (a pioneering

automotive corporation) and a founder of Alitalia (the national airline of Italy)—about as well-rounded a businessman as you can imagine. All he needed was to found a biochemical company and a media conglomerate to have it all.

But Peccei was far more than just a successful businessman. He was a human being who cared about the futures of humanity. As such, he well-knew that, even fifty years ago, sheer economic growth was dangerously unsustainable.

In 1969, Peccei's book, *The Chasm Ahead*, was published in English. As the title suggests, it warned that humanity was rushing mindlessly headlong over a cliff to its own destruction. I remember being extremely impressed by the way he combined rapid population growth, looming resource exhaustion (especially of water, energy, and food), mounting environmental pollution, and economic and political dereliction into what he called "The global problematique" and "the predicament of mankind."

Knowing that a mere book could not alert humanity to the reality of the yawning chasm ahead, Peccei engaged the famous systems engineer at MIT, Jay Forrester, to develop a quantitatively-based computer model of the various interrelated elements of the problematique. Forrester in turn asked a team headed by Dennis and Donella Meadows to adapt his "system dynamics" computer program to the variables expressed qualitatively in *The Chasm Ahead*.

Their work resulted in *The Limits to Growth* (1972), probably the most famous book in the world of that decade. Its publication was announced with great fanfare from the steps of the prestigious Smithsonian Institute on the Mall at Washington, DC. It was translated into all major languages and was discussed very widely across all academic disciplines and cultures.

The computer model upon which the book was based (and many scientific and technical publications surrounding it) showed that by interrelating just five variables—world population, industrialization, environmental pollution, food production, and resource depletion—our civilization would collapse during the first third of the 21st Century. The researchers struggled to find values and interrelations of variables that could result in a stable world.

Collapse, they said, was possible to avoid, but would require very different actions from the ones most people were engaged in at the time.

The authors insisted that *The Limits to Growth* (LTG) was not a "prediction" of what WOULD happen, but a statement of what COULD happen if humanity did not change its ways. It was written in the hopes that humanity would indeed change its ways, so as to survive and thrive.

In spite of their insistence, the book was usually read as though it were a prediction.

As such, it was widely hailed—and as widely condemned.

I myself wrote an article at the time that also was widely reprinted titled “The Limits to *The Limits to Growth*”. I said the programmers failed to include new technology in their computer model as a variable that could alter its forecasts.

Others pointed out that they had no role for political decision-making.

Others complained that it ignored the role of the market.

For a decade *The Limits to Growth* was a focus of considerable debate. Several alternative models were produced

The discussion was eventually killed by the same economic and political forces that also successfully changed the world from 1980s onward—global neoliberalism.

How the perspectives of the limits to growth were successfully killed during the 1980s onward is too long a story for me to describe in detail here, though I know the story personally very well.

The authors of the *LTG* published another book soberly titled, *Beyond the Limits*, as a 20-year update that showed that, in spite of some positive actions, basically the world in 1993 was “Beyond the Limits”, and that we should acknowledge and adjust to that.

They were ignored.

In 2004, they brought out yet another book, titled, *Limits to Growth: The 30-year update*.

They were once again ignored.

More recently, several scholars have re-evaluated the data and assumptions underlying the *LTG* model. They have compared the projections from 1972 (and subsequently) with the realities of the early 21st Century of population, industrial production, food production, resource depletion, and environmental pollution, and concluded:

The Limits to Growth was basically correct.

Even though it was meant to be a warning, and not a prediction, because we did not heed the warnings—but in fact engaged in policies that made matters even worse—we are now in the early stages of the civilizational collapse the *LTG* warned us against, many people have concluded.

I myself long ago reconsidered my original technological optimism. There is no doubt in my mind that we COULD have avoided the Chasm that is now even more obviously ahead if we had followed the advice of the *LTG* and many scholars and futurists in the 1970s.

I spent two years working for TVOntario, the educational television network of Ontario, Canada, in the middle 1970s. I was brought to Toronto to assist the national Science Council of Canada in carrying out its program of changing Canada from being a *Consumer Society* into being a *Conserver Society*.

I produced and assisted in many TV programs, and visited every university and many schools, businesses, and nongovernmental organizations throughout the entire vast nation of Canada, talking with faculty members and students about the goals of the Science Council, and recruiting them to join the effort.

The major research work was done by Kimon Valaskakis and his team called GAMMA at the University of Montreal. Thousands of scholars and activists met, studied, and produced scores of monographs, reports, and books on what a “Conserver Society” might be in Canada—there are many possible variations.

But the entire effort was also killed by the political and economic forces in North America that only favored unrestrained economic growth with no real concern for the environmental, resource, or societal consequences.

Now let me be absolutely clear here.

Neither I nor anyone else can predict what THE future will be. That is impossible in the world we live in now.

My fifty years of work in futures studies has convinced me that there are many “alternative futures” lying ahead of us. Each alternative is based on differing images, beliefs, hopes, and fears about the futures that are in the minds, plans, stories, and actions of all institutions and individuals in the world today.

Continued Economic Growth is certainly one plausible “alternative future”. Many nations in the world are still trying to achieve it, and others struggle to maintain economic growth.

“Collapse” is also a very plausible alternative future.

And thus, a “Conserver Society” as an alternative both to Growth and to Collapse has gained in popularity.

While a high-tech “Transformational Society” that I once clearly yearned for and thought possible remains an attractive alternative.

No country or company should commit to any one future until it has considered each of these the major alternative futures.

However, I think the possibility of Collapse is so great and the resilience provided by a Conserver Society is so compelling, that for the past decade or so, I have been calling the attention of decision-makers in Korea and elsewhere to what I call “The Unholy Trinity, Plus One”. This is a future without cheap and abundant energy; with wildly unstable climate, insufficient food and water, severe environmental pollution; with global population growth and local population decline; without an economy that distributes wealth fairly; and with governments that have lost the ability to govern.

Unless the challenges of the Unholy Trinity are addressed sincerely, you may have no dream society, and no information society, or even no industrial society. You may re-enter an agricultural society once again, at best.

And that is by far too big a risk to take unknowingly.

No one can predict the future. I cannot, and neither can you or anyone else in the world. We live in a world beyond prediction. But the future is within our influence and perhaps even our control in important ways. We must understand that Korea can no longer follow the leadership of other countries. There are no leaders to follow any more anywhere in the world. That time has come and gone. Korea did well during it, but it is over.

I once saw a poster in the office of the Australian Commission on the Future. It was largely in blue, with the so-called “sails” of the famous Sydney Opera House almost covered by rising waves. On it were written these words:

If we act as if it matters
And it doesn't matter,
Then, no matter.

But if we act as if it doesn't matter
And it matters,
Then it matters.

I think it matters. It is far wiser and safer for you to assume it matters too, and to learn to live joyously within the limits to life. If technological breakthroughs emerge—and it is good to support research into them too--and a path towards benign sustainable growth opens up, then that is wonderful. No harm done. It doesn't matter. But if no breakthroughs occur and we collapse, then it matters.