**Narrator:** We are all happy when we hear on news reports that the stock market has risen. What does that mean, an ever rising stock market? If our economy is based on unlimited growth, is that a good thing?

**Text:** What Happens on the Rise?

**Narrator:** What kind of curve is that? What happens when stocks – in the systems dynamics sense, pun intended – rise this way?

To answer this question, let's review. What is the basis of our human economy?

**Text:** The Human Economy

**Narrator:** That's right, the basis of all human economies and activities is pure water, clean air, fertile soil, a stable climate, biodiversity, natural capital, intact ecosystems, a healthy ocean, capacity to detoxify pollutants, etc., etc., etc. Are there unlimited “stocks” of clean air, fertile soil, abilities of Earth systems to stabilize the climate, natural capital, biodiversity, Earth systems capacity to detoxify pollutants, etc.?

**Text:** Growth Limits

**Narrator:** Of course not, the Earth is finite! It ain't growing any bigger!!

Are there limits?

What have you learned so far in this course about them?

About exponential growth, about tipping points?

Of course there are limits – we cannot violate the laws of physics, the principles of chemistry and geology and ecology – those laws are a fixed and permanent part of the way this universe works, they are inviolable and unchangeable, unlike human laws and customs and paradigms which can be changed!

**Text:** The Anthropocene

**Narrator:** If the only way our economy can function is by ever increasing growth, are we in trouble since there is not unlimited natural capital to convert into more and more consumer products?

The authors of your textbook write that, “The belief that growth in the human economy is not limited by the productivity of the land, is the central driving belief of the Anthropocene” – the era of Earth’s history characterized by human civilization acting as an immense force that is changing the nature of the Earth as much as any comet, or geological event.

Let me repeat that. “The belief that growth in the human economy is not limited by the productivity of the land is the central driving belief of the Anthropocene”.

What are the consequences of that erroneous belief?

**Text:** Hubbert's Blip

**Narrator:** Look around you! Consider Global Climate Change, massive species extinctions, unequitable treatment of the lands, and people who make our food and consumer goods in remote places.
In 1956, M. King Hubbert delivered a speech and presented a graphic to Shell Oil that shook the oil industry to the core. He suggested that we would soon run out of oil, and he predicted very accurately when the “peak” oil would occur.

He was right! And this is the way the stocks of all nonrenewable resources behave, as discussed previously in this course.

**Text:** The Paradigm of Limitless Growth

**Narrator:** A blind faith in the magical appearance of new, replacement resources is part of the paradigm of limitless growth.

Author Edward Abbey wrote, “Growth for the sake of growth is the ideology of the cancer cell!”

We all know the problems that cancer causes an organism – the unlimited growth can destroy or seriously damage the organism affected. If not stopped, the cancer uses up more and more of the creature’s resources, obliterating critical tissues and organs until the creature dies. The critical feedback to stop growing, received by all normal cells, is missing in the cancerous cells.

**Text:** Unlimited Growth is a Fairy Tale

**Narrator:** Do you see an analogy to the missing feedback to urban dwellers about the condition of the distant lands and peoples who supply all their needs!

When bacteria are placed into a Petri dish filled with a limited supply of growth media, this is what happens: rapid growth, leveling off, and then decline. The only way to avoid the decline is to remove waste materials and supply more growth media. If we use up the finite, limited resources of Earth faster than Earth’s systems can replenish them, if we produce pollutants faster than Earth’s systems can decontaminate them, if we use up non-renewable resources rapidly, this will be the fate of civilization. The Paradigm of Unlimited Growth is a fairy tale!

**Text:** How Big is Your Slice?

**Narrator:** The Earth and its resources are finite: it’s not getting any bigger. The Earth is like a pie. Americans make up about 1/20th of the population of Earth, but use about ¼ of its resources, leaving the rest of the world to share what’s left.

How big is your slice? How big a footprint do you and I make? How many Earth’s would it take to meet the needs and wants of all 7 or 8 billion of us, if we all lived like average Americans?

**Text:** Can Technology Fix It?

**Narrator:** A blind belief in unlimited technological fixes is some sort of logical fallacy – a hasty generalization without consideration of all the facts. Just because sometimes in the past there have been technological fixes for problems based on cheap, readily available energy, it doesn’t logically follow that there will be clever technological fixes for all our problems in the future. This is also part of the paradigm of unlimited growth.

Ponzi schemes are based on a belief in unlimited growth.

**Text:** Where “Ponzi” Came From

**Narrator:** Charles Ponzi was a Boston businessman and swindler who stole millions of dollars from investors in 1919 and 1920. His system is now known as a Ponzi Scheme, most recently and very successfully used by Bernie Madoff, who “made off” with billions of dollars of other peoples’ money! He’s now serving 150 years without parole for his Ponzi scheme.
Text: How it Works

Narrator: Here’s how Ponzi schemes work.

If 1 person recruits 6 people to give them money, and then each of those 6 recruits finds 6 more people each to give money to them (some of which is given to the previous level), and so on, and so forth, everybody gets rich, right?

Wrong, of course. Eventually you run out of people! The people on the bottom levels get nothing! The system collapses.

Ponzi or Pyramid schemes are never sustainable. Eventually they always fail.

Text: Our Relationship to the Natural World is a Ponzi Scheme!

Narrator: According to David P. Barash, professor of psychology at the University of Washington,

“Our relationship to the natural world is a Ponzi scheme!” He writes in the Chronicle of Higher Education, that, “...the horrifying reality is that in our fundamental relationship to the natural world—which is, after all, the fundamental relationship for everyone—we are all Madoffs.” He goes on to say, “Make no mistake: Our current relationship to the world ecosystem is nothing less than a pyramid scheme, of a magnitude that dwarfs anything ever contemplated by Charles Ponzi... Modern civilization’s exploitation of the natural environment is not unlike the way Madoff exploited his investors, predicated on the illusion that it will always be possible to make future payments owing to yet more exploitation down the road: more suckers, more growth, more GNP, based—as all Ponzi schemes are—on the fraud of ‘more and more,’ with no foreseeable reckoning, and thus, the promise of no comeuppance, neither legal, nor economic, nor ecologic.”

That is a powerful indictment of the “Business As Usual” Paradigm!

So, it is obvious that we must change the current global belief in the The Paradigm of Limitless Growth, if civilization is to survive.

Text: References


End of presentation.