

The Next Chapter

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(Shortwave broadcast only: Roll 'Simple Gifts' id)

(Announcer:) The following program is a production of the North American Service of Radio Alexandria. (Begin domestic broadcast: Roll open theme, then under for:)

Hello Team Humanity. I'm Roland B. Hunt & you're listening to The Next Chapter. (Theme up, then under for:)

The Next Chapter looks at where we seem to be headed as a species on this little blue planet, do we really want to go there, & what are our options? On today's program we'll examine the profound threat to modern civilization posed by the most recent round of global cyberattacks. Then we'll look at a supervolcanic eruption that may have come close to wiping out our species. & finally we'll consider the arguments for & against the idea that human civilizations follow a repeating cycle of growth, decay & collapse. It's long been a controversial theory with roots going back to the ancient Greeks, Hindus, & Chinese. (Pause for stations airing 4 min. newscast.)

The Next Chapter is about ideas. It's not about any particular religion, or joining some movement or cause, or buying gold coins or land in Belize. But if you want intellectual adventure, if you like trying to answer tough questions & solve tough problems, you've come to the right place. & if you go away from this broadcast without feeling challenged or even annoyed by some of what you've heard then I have failed in my effort to rattle cages & stimulate original thinking. We live in a dangerous age but also are full of opportunity to advance humankind to our fullest potential. Let's seize that opportunity while we still can.

Before we get started let's quickly review the ground rules we follow on the Next Chapter. First, we don't do religion on this program. I'm not a theologian & make no claims to be wise. Everyone is welcome here though, whether you're a fundamentalist believer, militant atheist, or anywhere in between.

Second, The Next Chapter doesn't pay much attention to conspiracy theories, Big Foot, UFOs, or who killed JFK. It's all very entertaining but this is a serious program about serious issues. I keep an open mind on these subjects & once in a while I might touch on them but generally I let George Noory, Alex Jones, & others carry the black briefcase on such matters.

Third, we have nothing to sell here. No books, no MREs, no gold coins, no land in Central America. We might look at the pros & cons of owning gold, or if you're thinking of moving overseas, what factors you need to consider. But in the end it's up to you to do your own homework & make your own decisions.

Fourth & last, The Next Chapter is neither anti-government nor pro-government. After living & working for much of my adult life in more than a dozen poor & often war-torn nations, I've come to the conclusion that all governments, ours included, are going to do whatever it takes to

keep themselves in power. That's what governments do. What we as individuals do tho is up to us, not blind, impersonal historical forces...or men in black.

Unlike our ancient ancestors who lived day to day & had no way to anticipate mega-disasters, now we not only anticipate & plan for them, we humans can & hav built vast underground bunkers in many countries that wil allow thousands of humans to live underground for years until conditions on the surface improve. The US has them. So do the Russians & the Chinese.

Switzerland reportedly has bunkers that can shelter its entire populashun of eight milyun for up to two years. That kind of capability is a game changer but it doesn't alter the reality that our species has cum up against som extremely dangerous problems for which we curently appear to hav no solushuns. Weapons of mass destrucshun, bioterrorism, & mass unemployment caused by the rise of inteligent machines ar just three examples.

So if for whatever reason modern civilizashun does pass into history, there wil be survivors. The question is, wil those who cum after us be able to learn from our mistakes & not repeat them?

The Next Chapter is for the elite but in this case the elite is self selecting. It's anyone who enjoys thinking deeply about serious issues. Some liseners may find some of the subjects we talk about on this broadcast disturbing but u can be sure that elites in governments & private research institutes around the world ar also thinking about these issues. Our goal is to bring as many people as posible into the conversashun. In a complex technological society we can't hope to meet tomorow's chalenges unles we understand them. (pause for stations carrying a newscast to rejoin the program)

I want to begin today's edition of The Next Chapter by reaffirming what I have said on a number of past broadcasts. No matter what catastrophe may hit us in the not so distant future there wil almost certainly be survivors & some of u listening ar likely to be among them.

This program is broadcast domestically on FM but also on shortwave radio & the reality these days is that a large proporshun of shortwave listeners ar preppers, people who for a multitude of reasons believe that this present civilizashun is not likely to last much longer. The Next Chapter is about alternative futures & we're not shy in admiting that wun of those futures cud wel be the end of civilizashun as we have known it. For us this has absolutely nothing to do with biblical prophecy or psychic predictions in tabloids & everything to do with hard scientific facts.

So when I open the program with a statement reaffirming that no matter what happens there wil be survivors u can sure there must be a reason. There must be some new information out there that's sounding alarm bells. & u wud be correct.

Last month the world was hit by the Wanacry computer virus. Many thousands of computers were locked up by hackers demanding a ransom if the users wanted to regain access to their data. Computer experts said then that given the small ransoms being demanded, typically \$300, this was not a true ransomware attack but rather a cover for much mor dangerous threats to critical computer networks, both local & global.

Then on June 28 cam another global ransomware atack caled NotPetya that seriously disrupted even big corporashuns that had first rate virus protecshun & al software updates in place. Case in point: AP Moller-Maersk, the largest shiping company on the planet. Companies prefer to keep attacks by computer hackers secret if they can becaus it cud afect customer confidence & futur busines. I'm sure Maersk is no excepshun. Unfortunatly when the virus prevents giant cargo ships from being unloaded at ports around the globe the problem is readily visible for al to see.

There's a lot more to this story than just Maersk but let's stick with this example because it illustrates just how profound the threat is from these new cyberattacks to the continued existence of civilization. Believe me my friends this is not hyperbole & you'll begin to understand why in the course of the next ten minutes. It's not just about shipping & commerce. It's about loss of control over the local city water system & the national power grid, & the railroads, & the airlines, & perhaps even the several hundred nuclear power plants around the world.

Cybersecurity experts have been warning for years about such threats but now those threats are becoming real, thanks to the fact that some of the most powerful hacking tools ever developed, in this case by the National Security Agency, have found their way into the hands of the bad guys.

But let's go back to look at Maersk as a case study. AP Moller Maersk is a \$36 billion dollar company based in Denmark. I'm using annual revenue as a measure of size. If you use the combined value of its 600 ships it's worth a lot more. Maersk operates a fleet of the largest container vessels on earth. Some of these ships are longer than a nuclear powered aircraft carrier by a full football field in length & can carry up to 18,000 containers at any time. The engines that drive these giant ships are five stories high.

Maersk also operates 76 big ports around the world including those in Los Angeles, Miami, Tacoma, Portsmouth, Virginia, across from the US Navy's Norfolk Navy base, the largest in the world, & the vast container facility that is part of the New York Port Authority. Other ports of note: Shanghai & Mumbai, the commercial hubs of China & India, as well as numerous ports in Europe & South America.

Maersk is a huge company & by all accounts extremely well run. It's considered a leader in IT technology. So what happened in the global cyberattack that began on June 28?

The South Florida Container terminal said no dry cargo could be delivered & no container would be received. Over in India the head of the port facility serving Mumbai (which used to be called Bombay) told Reuters he didn't know when exactly the terminal will be running smoothly. Other ports affected included those in Spain & the Netherlands.

How long did it take Maersk to recover? On July 7, nine days after the cyberattack, the head of the company's Asia-Pacific division told reporters that the loading of containers had not been affected. It was data-reliant operations like arrival notices for customers & obtaining customs clearance. I note here that customs clearance is critically important. You can't unload a ship without it. In the last two days, our Maersk executive was quoted as saying, just about every company managed port in the world is back in operation.

So just what does that mean? Did it take most of a week for the company's IT people to find workarounds for the data that was locked up by the hackers. Or was it the case that the computer breach was so bad the company finally gave up & paid the ransom, which almost certainly would have been a lot more than \$300. We don't know.

Maersk executives don't believe their company was deliberately targeted but a senior official warned that it would be difficult to prevent future attacks. & he is no doubt correct. Here's why.

To understand the true danger of these latest cyberattacks & how they could potentially bring modern civilization to its knees you need to hear the story of IDT Corporation & its global chief information officer Golan Ben-Oni. IDT was hit two weeks before the WannaCry attacks & after powerful hacking tools developed by the NSA had found their way to the internet.

The IDT attack was unusual in that it involved two NSA cyberweapons. Some IDT data

was compromised but nothing like what might have happened, in large measure because Ben-Oni had installed an Israeli made black box that recorded everything on the company's network. With that information he was able to determine when the ransomware was installed & the fact that it had successfully bypassed all of the computer system's defenses without tripping off any of them.

Then as a means of disguising that it was really intended to penetrate to the core of the computer network's operating system & thereby take control of it, the IDT employee's data was locked up & a ransom demanded.

Golan Ben-Oni had never seen anything like it & he quickly sounded the alarm to the FBI & the New Jersey Attorney General's office. He then contacted internet security providers & major companies like Google, Amazon, & Microsoft. Of 128 malware detection feeds that are publicly available & that his company subscribes to, not one caught the attack on IDT. There are now available YouTube videos showing criminals how to use these tools & even an automated hacking tool that allows anyone to attack a computer or computer system with the simple click of a button.

In the case of WannaCry western experts believe that North Korea was behind it. I think there's a good chance it was also behind the more recent NotPetya attack, the idea being able to hold an axe over the head of the US & its allies if they should ever move to destroy its nuclear program. & of course, unlike an orbiting satellite carrying an EMP device or an EMP tipped rocket launched from the hold of a cargo ship in the Atlantic, such a devastating cyberattack could be launched at anytime from anywhere in the world, potentially by just about anyone, not just a rogue nation.

So is there any defense at all against these cyberweapons? Apparently replacing Microsoft Windows with a different operating system such as Linux won't be enough. The NSA developed a tool to penetrate Linux also. The only safe operating system might be Apple's but then you would have to replace all your existing equipment with an Apple product.

In any event tests conducted by other internet security companies have found tens of thousands of computer systems infected using the stolen NSA Double Pulsar tool. That means that any of them could be taken over & controlled by hackers at any time until the malware is removed. & those of course are just the ones we know about.

So in a sense it's not unlike the genetic editing tool Crispr. We're living in a world where just about anyone can tinker with DNA, the basic chemical code of life. Now just about anyone can play computer hacker, using tools stolen from one of the most powerful & secretive agencies on earth. With Crispr in principle any high school kid could accidentally create a rapidly spreading bacterial infection. Now any disgruntled malcontent could in principle shut down your town's water supply or electric utility, or worse.

Is there any defense against these vulnerabilities? One defense would be to redesign systems to be operated manually by hand if necessary but that would be difficult & costly. Companies & public utilities will not do it unless forced to by the politicians & so far in a system corrupted by Big Money industry lobbyists along with campaign finance bundlers have defeated most such efforts.

In the case of big companies like Maersk I think at some point they will create their own free standing control systems totally independent of the Internet. They may not have their own satellites like the US, Chinese, & Russian militaries but like those militaries they can lease satellite channels & transponders & in the case of global transport companies like Maersk combine those with the use of high frequency digitally encoded & encrypted radio signals to link

their assets, both ships & ports. Just like the military they'll continue to use the Internet for distributing press releases & the placement of orders by companies & individuals. But when it comes to day to day operations all systems will be completely independent of the web.

But all of that is for the future & it's not likely to come soon enough to prevent a catastrophic breakdown of the systems on which modern society depends. When the dominos start to fall they'll fall quickly & hard. That's the harsh reality. We can always hope for the best but the truth is the vulnerabilities are multiplying faster than the solutions. The tough minded & disciplined among us will plan accordingly.

Let's take a break & when we come back I'll have some additional thoughts on these & related subjects. I'm Roland B. Hunt & you're listening to The Next Chapter, a production of the North American Service of Radio Alexandria.

PSA: Listener feedback

Feedback is important here at Radio Alexandria so I hope you will take the time to email or write & share your ideas. Did you find yourself agreeing in part & disagreeing in part? Did we make you cheer or did you want to throw something at the radio? The whole point of Radio Alexandria & The Next Chapter is to get people to thinking. Send us an email & tell us your opinions. Please be concise & to the point. We can't respond personally to every email but with your permission we may include some of your comments & ideas in future broadcasts. You'll only be identified by first name & the name of the state, or province, or region you're writing from.

Radio Alexandria is named after the greatest library in the ancient world, one that was founded several hundred years before the common era. That center of learning was burned to the ground by religious zealots in the fifth century AD so almost all of its books were lost to posterity. Radio Alexandria's mission is to make sure that doesn't happen again. The goal is to spread ideas far & wide across the globe to the remotest village & mountain top, ideas about government, society, & the future of our species on this planet.

As a radio station we can't physically spread the great books of today but we can share the ideas contained within them. Our goal is not to tell listeners what to think but how to think, how to use logic & evidence to make rational decisions about the future drawing upon lessons learned from the past.

We live in a busy world so if you tuned in late or have to leave early you can always listen to today's program as a podcast. Just go to radioalexandria.net & click on programs. Transcripts of all the programs in The Next Chapter series are also available on the website. Once again the web address is radioalexandria.net. If you have comments or questions our email address is radioalexandria@yahoo.com. That's radioalexandria@yahoo.com.

One more reminder. Radio Alexandria is in the demonstration of concept phase right now. We're distributing our programming domestically on FM & internationally on shortwave radio while we evaluate the feasibility of buying & equipping a radio ship & deploying it to the central Pacific.

If you know something about shortwave you've probably already figured out why we would choose such a location. It has to do with the physics of shortwave broadcasting. Unlike conventional AM or FM radio, a shortwave signal can travel thousands of miles by bouncing off a layer of charged particles in the atmosphere called the ionosphere.

The signal may bounce between the earth (or sea) & the ionosphere several times before reaching an audience 5,000 or even 10,000 miles away. Sea water to a shortwave signal is like a polished glass mirror compared to a very dirty windshield. It is a thousand times more reflective

than ordinary earth. If u want to put a powerful radio signal into Pacific Rim countries lik China & Russia using medium sized shortwave transmitters there is no better location than the central Pacific.

The reason for puting Radio Alexandria on a ship is safety. Pacific islands may bring to mind swaying palm trees & white sandy beaches but the reality is the Pacific can be a dangerous place, what with volcanoes, typhoons earthquakes, & tsunamis. The place to ride those out is not at anchor in a harbor. A small ship lik a converted trawler or lightship can put to sea on short notice & has the endurance to withstand severe punishment on the open ocean.

The programs u hear now ar typical of what u wil hear if we decide to go ahead with the next phase but first we need to know if there wil be enuf liseners to justify such a large project. If u hav som ideas or suggestions for foundashuns or other organizashuns which mite fund a project lik Radio Alexandria pleas feel free to share them with us. Also we're accepting donashuns from liseners so if u wud lik to suport our eforts to build a mor enlightened world just go to radioalexandria dot net, klik on 'programs', & then the 'donate' button.

Rite now our greatest out of pocket expense is paying for airtime. If we had additional funding we cud buy mor airtime to beam Radio Alexandria into Europe & Russia. The longer term plan is to ofer The Next Chapter not only in English but in other languages as wel. The goal is not to mettle in the domestic politics of countries. They hav to solve their own problems. What we at Radio Alexandria ar trying to do is look at issues al modern governments ar confront- ing & see if there mite be some common solutions.

Transparency is such an issue. It's wun of the best ways to combat political corruption & boost popular confidence in democratic government. There's a major anti-corruption campaign going on in China rite now becaus the curent administrashun understands that they're not going to be able to keep the Mandate of Heaven unles they govern responsibly.

The USA is also sufering from a major lack of public confidence in its political institu- shuns. The presidential elecshun here in the US as wel as elecshuns in Europe show deep disatisfacshun with elites & the kind of leadership they hav provided in recent decades.

Humanity is entering a period of profound change, driven by technological forces we hav never befor encountered as a species. Radio Alexandria's mishuon is to explore solutions that wil benefit all in society, both individually & colectively.

In the coming months we may try some crowd funding to begin raising the money to implement these plans. In the meantime al of u as liseners can do ur part by spreading the word. Tell ur friends about our website, transcripts, & podcasts. Also the podcasts ar available free for rebroadcast on non-comercial stations in the US. If u'd lik to see The Next Chapter mor widely available in ur community tel ur local community or public stashun about us.

If u see somthing u think ur friends wud find interesting, copy it off the website & share it with others. Maybe u see something u disagree with. That's fine too. Radio Alexandria is not the source of al truth. We're al about looking *for* the truth, wherever it may be & whether or not it's politically correct.

By the way free Radio Alexandria buttons ar now available so if u'd lik wun just send us ur mailing address & we'll get wun off to u. U can see a sample on our website radioalexandria dot net. Just klik on 'resources'. The butons ar an experiment so supplies ar limited. Our email address once again is radioshipalexandria at yahoo dot com.

If u find value in what we ar trying to do & wud lik to help financially just go to radioalexandria dot net, klik on programs & then the 'donate' button. Any financial assistance u

chose to mak wil be gratefully appreciated. Radio Alexandria is radio for the future. (end promo)

Before the break we were considering the implications of the latest round of global cyberattacks & what they mean for the future. In a highly interconnected & interdependent world such attacks using our advanced communications technology seem to just reinforce the validity of the Hunt-Strangelove Paradox. The Paradox states that the mor advanced an intelligent species becomes the mor likely it is to destroy itself.

But even before a species reaches such an advanced state it's very much subject to the forces of nature, sometime immensely powerful ones. Wun threat that nearly did finish off the human race was a supervolcano in what is today Indonesia. There ar some twenty known supervolcanoes around the world including wun of the largest located in Yellowstone National Park in the western US. A super-volcano when it goes off throws out vastly mor ash & lava than ur standard everyday type. Yellowstone for example has erupted twice in the last 1.2 million years, covering much of the land area west of the Mississippi River with volcanic debris.

About 70,000 years ago on the island of Toba in Indonesia a supervolcano blasted some 500 cubic miles of ash & dust into the atmosphere, causing world temperatures to drop by eight or mor degrees & leaving huge deposits of debris from the South China Sea al the way to India.

For point of reference Toba emitted wun thousand times the amount of volcanic ash & lava as Mount St. Helens in Washington State & wun hundred times the amount of ash & lava as the Tambora volcano in 1815. Tambora is the largest eruption in recorded history & caused freezing temperatures in July as far away as the Northeast United States & Western Europe. Crops failed and famine conditions followed.

Today many scientists believe the Toba super-volcano caused what is known as a genetic bottleneck in the development of our species homo sapiens. Biologists have known for some time that al humans alive today have a set of genes that can be traced back only as far as about 70,000 years ago. At that time it is believed that the human species cud have been reduced to as few as 1,000 breeding pairs.

The question has been what cud have happened to almost wipe out al humans on the planet. The Toba eruption is close enough in time to supply what appears to be the answer.

Wun of the scientists at the center of developing this hypothesis is Professor Michael Rampino of New York University. Professor Rampino is a biologist working with NYU's Environmental Studies Program & a research associate with NASA's Goddard Space Institute.

In addition to his work on the Toba event & its effects on the earth's environment, Professor Rampino has also studied other major volcanic eruptions like :the Permian-Triassic extinction 250 million years ago. Even mor devastating than the asteroid that destroyed the dinosaurs 65 million years ago, the Permian-Triassic extinction is estimated to have killed off 96 percent of al living species in the oceans & most life on land as well.

I asked Professor Rampino if scientists had discovered any warning signs of an impending super-volcano eruption.

(Insert Rampino "The predictions forperfect match." 19:29)

(Sumary: Super-volcanoes like Toba erupt about every 50,000 years whereas volcanic eruptions like Tambora in 1815 , the largest eruption in historical times, might happen every two hundred years. Both types of eruptions can cause significant drops in temperatures worldwide resulting in major disruptions of agriculture and loss of crops. Tropical plants like rice are especially sensitive but even grains in Canada and the Ukraine can be seriously damaged by a drop of only 2-3 degrees C. The Tambora eruption in 1815 caused a serious shortage of food in the

northeastern US, the so called 'year without a summer' and starvation in Europe. Tambora was about a hundred times smaller than the Toba eruption 70,000 years ago but since they are so much more common we probably should worry more about Tambora-like events than super-volcanoes. Scientists have been working on predicting eruptions but with limited success. Once an eruption is underway there is no way to control it. (end of interview)

Professor Michael Rampino of NYU. If u wud like to read a good overview of what we know about super-volcanoes & the Toba event check out Professor Rampino's contribution in *Global Catastrophic Risks*, edited by Nick Bostrom & Milan M. Cirkovic & published by Oxford University Press. It's on Radio Alexandria's list of 25 essential books. Let's take a break & when we come back we consider the theory that human civilizations follow a repeated cycle of development, decay, & collapse. It's a controversial theory with many critics but plenty of supporters too. I'm Roland B. Hunt & u're listening to The Next Chapter, a production of the North American Service of Radio Alexandria.

PSA: Shopping for a good shortwave radio

Many of u ar listening to this program as a shortwave broadcast but others ar listening to it as a podcast. If u're an internet listener I'd like to encourage u to invest in a portable shortwave receiver. Someday the worldwide web may not be available. Besides there ar quite a few shortwave stations broadcasting to North America, many of them with programs u're not likely to hear on the domestic media.

There ar a number of good AM-FM-shortwave sets on the market now, many with advanced circuitry only the military wud have had just a few years ago. If u've listened much on the shortwave bands u know that it's not like tuning in a standard AM or FM station.

Reception conditions can vary greatly even over the span of a few hours or days. That's why advanced features like PLL, digital tuning, & double conversion ar important. They help bring in weak signals & filter out stronger stations on adjacent channels. As u read customer reviews on the web & ar trying to decide between models, be sure to select a radio that is highly rated for sensitivity to weak signals. When it comes to shortwave listening that's probably the single most important criterion.

If u want to listen to ham radio operators u'll need to spend a little mor & get a receiver with SSB or single sideband capability. That's a special type of voice transmission pioneered by the hams & now also widely used by military organizations. Without an SSB switch on the radio, the conversations & reports of hundreds of thousands of ham operators around the world will be totally unintelligible.

Lastly, u probably want to avoid inexpensive so-called 'emergency radios' with plastic cranks to provide power in place of batteries. The cranks ar usually flimsy & unlikely to last mor than a few weeks or months under daily use. Also the electronic circuitry inside the radio itself is usually primitive & out of date. These crank radios may be okay for AM & FM reception but certainly not as ur primary shortwave receiver.

Someday shortwave radio cud be ur only source of uncensored news & information. If a state of national emergency is ever declared, al domestic broadcast stations wil be under the control of the national government. If u want to hear anything other than the oficial vershun of what's going on u'll hav to lisen to shortwave radio & if u're serious about it u'll want to hear what ham radio operators around the world ar reporting.

By the way, besides the radio there ar three other important items to buy: some rechargeable batteries of the size that fits ur radio, usually double As, a battery charger that can run on

12V, & a solar electric panel that also puts out 12Vs. Generally I wud stick to high capacity name brand batteries. The charger u want wil come with a little power supply that plugs into the wall socket in ur house & puts out 12 volts DC. u then connect it to the battery charger. A charger of that design wil also come with a separate 12 volt cord so u can charge the batteries for ur radio either from the cigarette lighter in ur vehicle or from the 12 volt solar panel. Keep in mind that many of the chargers sold at discount stores only plug directly into a 115 volt wall socket so u wud not be able to use them with a solar panel.

As for a solar electric panel, if u buy the fold-up portable kind expect to pay up to wun hundred dollars for a good wun. Just be sure it either has or can be fitted with a plug that wil mate with ur battery charger. Put the whole system together & u'll be connected to the outside world no matter what happens to cell phones, the internet, satellite TV, local broadcast stations, or the power company. Shortwave radio, in the past, in the present, & in the future, ur window on the world. [end psa]

As we say at the begining of each edition of The Next Chapter, this is a program about ideas. Unlik most of the mainstream media we're not afraid to look at the very vexing problems that confront us as a species on this obscur litle planet. Al solushuns to problems must rest on a set of basic assumphuns so let's review som of the basic assumphuns we mak on the Next Chapter.

To begin with we try always to remember that we ar a carbon based biological species at a particular stage in it's evolution. Although we do not know with certainty al the available scientific evidence is pointing to the conclusion that there ar probably a substantial number of other inteligent species out there in the galaxy, possibly even numbering in the millions.

Even if the number is considerably smaller it is not unreasonable to assume that some of these species must have advanced beyond our level of development with al its dangers. The Hunt-Strangelove Paradox, as regular listeners to this broadcast know, states that the mor technologically advanced a society becoms the mor likly it is to destroy itself. If there ar biological species in the universe mor advanced than we ar, they must have found a solution to the Paradox.

When we use the term inteligent species we mean one whose members, at minimum, ar self aware of themselves as beings distinct & separate from their environment. They have an understanding of time as past, present, & future. They have mastered the use of complex language; ar able to fashion & use tools to improve their chances of survival in their environment; & ar able using memory to verbally pass down knowledge gained from wun generation to the next.

It is this last ability, complex language, & the ability it gives to pass informashun from generashun to generashun, that separates us as homo sapiens from other species.

With these capabilities we can hav human societies but we do not yet hav a civilizashun. For that we need a writen language & we need a divishun of labor so as to create enuf efficiency in food produceshun to mak cities possible. In other words we need enuf agricultural surplus to mak posible the creashun of a class of individuals devoted to codifying & expanding knowledge.

We can take this logic wun step further but we'll need to mak an aditional asumpshun, that a inteligent, carbon based species organizes its members into civilizations that go thru a repeating cycle of birth, growth, decline, & collapse.

If we look at the written traditions of ancient Greece, China, & India we see that al three describe such a process in remarkably similar terms. From anarchy we gradually see the formation of fuedalism & warlords, followed by aristocracy, then dominance by a commercial

class, & finally decay, collapse & a return to anarchy. The exact details of the cycle may vary from tradition to tradition but this is in broad stroke the cyclical view of civilizashun.

So summarizing what we've said so far: to have a civilizashun u must replace hunting & gathering with agriculture, u must have a written language, & u must have enough division of labor to allow the formation of cities & with them a class of scholars with enough leisure time to engage in intellectual pursuits.

Not al historians, archeologists, & anthropologists agree with the cyclical view of civilizashun but many do & in any event that is the view to which we adhere on The Next Chapter.

So we have intelligent species forming civilizations each of which follow a mor or less predictable pattern of formation, development, a peak period of achievement, followed by decline & disintegration. Keep in mind I am not saying these social structures ar alive in any biological sense but that they appear to follow a repetitive pattern akin to a living organism.

But now we introduce a key difference between biological organisms & civilizations as social organizations. Once civilizations appear in the evolution of an inteligent species, members of these civilizations can keep historical records of activities over a period of years & centuries so that if a civilizashun does collapse there is a chance that a written record describing that collapse wil enable those who found a new civilizashun to learn from the mistakes of the past & not repeat them.

That is where we ar today with modern Western civilizashun. Note that I am not making a distinction between North & South America, Europe, China, & Japan. There may be some cultural differences, & social scientists can argue how significant those differences ar, but unlike earlier periods in human history al of these societies have very similar governmental, financial, & intellectual norms.

Kingdoms ar rare. Most al of these societies, both east & west, have some form of mor or less popular government with parliaments & constituences, banking & financial institutions with similar rules & proceedures, universities which teach similar curricula, militaries with similar organizations & armaments, & so on.

That is why I am saying that China & Japan ar part of western civilizashun. They ar run by technocrats who believe in science & modern modes of management & decision-making. Chinese leaders may profess to believe in the socialist ideology of a nineteenth century European philosopher but in reality they ar state capitalists interested first & foremost in profits & market dominance.

Al the nation-states that comprise modern civilizashun on this planet ar faced with the same problems of competition for scarce resources, the dangers of weapons of mass destruction, the chalenges of keeping their citizens employed in some form of meaningful economic activity as the growing power of inteligent machines makes their labor unnecessary, & the prospect of how any society can continu to funcshun when scientists learn how to stop the aging process.

These ar not made up or contrived chalenges. They ar real & they threaten the continued existence of civilizashun as we have known it. I contend that al carbon based inteligent species past thru this stage of development. I wud expect that some species rise to occasion & meet these chalenges without destroying themselves & others do not.

So it is not as tho we ar in some impossibly mysterious new world never befor encountered by sentient beings. & it also wil do no good to simply give up & wait for disaster to strike & bring & end to civilizashun as we have known it.

Even if our present civilizashun does colapse there almost certainly wil be survivors & they wil go on create a new civilizashun. Sooner or later it wil arrive at this same point of development with the same problems that demand solushuns. So there is no point in puting our heads in the sand & ignoring these issues. Nor is it safe to assume that everything wil turn out alright & we don't hav to do anything to insure our survival.. Why not tak up the chalenge & see if we can solve the Strangelove Paradox?

To do this we need to identify the crux of the problem & then list som posible solushuns. So let's try a thought experiment & see where it takes us.

Supose we say that there ar just too many people on the earth today chasing too few resources. The rest of the problems lik the danger from weapons of mass destrucshun or a global totalitarian dictatorship cannot be solved until the populashun is reduced.

Okay, so a small team of mad scientists creates in the lab a deadly flu strain that gets released into the biosphere. The resulting pandemic wipes out 90 percent of homo sapiens. That means that instead of seven billion humans, the world's population is reduced to seven hundred million.

A much smaller population mite take some of the pressure off natural systems so that less food must be produced, therefore less chemical fertilizers must be manufactured, resulting in less runoff polluting streams & rivers. Less carbon fuels ar burned, resulting in a cleaner & mor sustainable ecosystem.

While such a future wud seem mor manageable we still haven't solved the problem of misuse of scientific knowledge in the form of weapons of mass destrucshun. So another team of scientists produces another killer virus that reduces the population again by ten fold down to seventy million.

Obviously the size of the populashun is not completely irrelevant but it is not the central problem of managing dangerous knowledge. Unless of course there is a way, currently unknown to science, to mak humans immune to al viruses. We can't rule such an advance out but it seems unlikely. & even if we cud eliminate the danger of deadly manmade viruses there ar still nuclear & chemical weapons or potential new dangers from the misuse of nanotechnology.

At present the only solution I see for the problem of misuse of dangerous knowledge is a powerful & widely held sense of species consciousness among humans. Today the most likely cause of misuse of dangerous knowledge comes from clashes based on nationality & religious values. If we can substitute species consciousness as the overarching mode of human self-identification then we have a chance at solving the Strangelove Paradox & successfully reaching the next milestone for human evolution: conscious control of our own genetic destiny. Couple that with Singularity, when machine intelligence equals human intelligence, & with friendly A.I., to insure that artificial intelligence does not overwhelm our carbon based lifeform, & we wil be able to transform ourselves into a truly advanced species, what I call Novo Sapiens or New intelligent Species. But first we have to mov beyond the nationalism & religious fundamentalism that so dominate world politics today. That's not likely to be easy.

A shared vision of species consciousness is the key, a vision that must transcend our identity as members of a race, or ethnic group, or nationality. It's not that those ar not important or that we should give them up. But in an age that understands the immensity of the universe & our small place in it, the time has come to adopt a new & mor sweeping vision of human existence.

If we can spread the idea that we ar members of wun intelligent species among many in

the universe, working toward a common goal of greater enlightenment...if we can spread that idea to the remotest village, to the most isolated hamlet on our planet, then no matter what catastrophe might befall us in the coming years, those who survive will have a common vision of humankind, a shared ideal of who we are & where we want to go in this adventure we call life.

This is our planet & we are its stewards. Everyone has a part to play in the drama that is human existence. & that's what Radio Alexandria is all about. You, our listeners, are the wild cards. History could someday turn on your knowledge & insight. Until next time think deeply & act wisely. The future is in our hands Team Humanity. Let us embrace it! (music up until end)
(announcer:) You've been listening to The Next Chapter with your host Roland B. Hunt.
A transcript of this broadcast is available at our website radioalexandria.net.
Tune in again next week at this time for a new exploration into alternative futures on The Next Chapter, coming to you from Radio Alexandria.

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Definitions of commonly used terms on The Next Chapter:

The Hunt Paradox, sometimes called the Strangelove Paradox, was inspired by the famous 1964 motion picture *Dr. Strangelove or How I Learned to Stop Worrying & Love the Bomb*. The more advanced an intelligent species becomes the more likely it is to destroy itself.

The Hunt Paradigm is a conjectural premise that states there are quite a few carbon based intelligent species in the universe. After reaching a certain level in their evolution they all go through a similar process of development until the point they encounter the Hunt-Strangelove Paradox. Some find a solution to the paradox & advance to a still higher level. Others do not & destroy themselves.

Note: It is not necessary that the conjecture be true. It is merely a useful mental construct for integrating ideas about evolution with ideas about the rise & fall of civilizations.