

3 - Hope - The Author lives in a state of engagement - Not despair  
12 "So Far" - things are working out - say the elites - one of the biggest drags on change

Nov 2017 Warning, 15,000 Scientists from 184 countries  
13 - Yet - Nothing slows us down - just the opposite.

44 1972 was "The Limits to Growth" - Club of Rome  
35 Robots and AI are not just progress they are a replacement technology - of us.

49 - Air is Worst in New Delh. - But Chinese Putting up LED Screens to let city people see the sun rise

22 - Extra heat trapped = to 4 Hiroshima's per second.

Carbon Burned - Make a 25 meter diameter column of graphite to the moon

When most life went extinct (end of Permian)

CO<sup>2</sup> rose only 1/10 as fast.

30 Permafrost MELT - by itself could raise Temp 1.5°F

33 - Deep in our hearts - We think it will happen Somewhere Else  
Very Bad like -

① Heat stops phytoplankton from producing oxygen.

② As ice melts - earthquakes volcanoes

③ Cognitive abilities decline with more CO<sup>2</sup> (particulates) and temp

Mostly in 1) Crisis response 2) Information use to

But strategy - umm omiged

1) Food - get enough, get it distributed, then it has less protein.

damage from pests will go way up - w/ heat

45 There are many ways to be poorer - and we are going to find every one.

47 - Each year, on the ocean bottom, wet raw/level an area twice as big as the US. Invisible/No Protest

48 Great Barrier Reef - mostly dead, shades of murk.

49 CO<sup>2</sup> is heating and acidifying the ocean Ph ↓

By 2050 - Coral Reefs dead  
51 - Mass extinctions (5) - Common thread - CO<sup>2</sup>  
53 Now Filling Atmosphere with just the gasses that caused First 5 extinctions  
58 NOW - No more frontiers - our space is beginning to shrink  
64 - Near "Garden of Eden" wont be livable.  
65 1988 was James Hansen testimony.

- 67 - We have gone on, more or less, as usual.
- 70 Physics doesn't compromise  
Human psychology is not designed to cope with it.
- 72 - in 1977 Exxon's scientists knew about the warming.
- 73 - in 1959 Edward Teller told Am. Petroleum Institute  
1968 - President's science advisors told them.
- 1977 guy said Hard decisions need to come "in 5 to 10 years"
- 74 Once the effects are measurable they might not  
be reversible.  
Shell oil knew the changes would be greater than anything  
seen before. Oil companies knew Hansen was right.
- 76 BUT - Fuel is the most lucrative thing - Companies  
teamed up for the "most consequential lie" ever.
- more CO<sub>2</sub> would "end world hunger"
  - "Smoking gun" paragraph for oil companies.
  - "Formed" "Global Climate Coalition" / disaster
- 77 Frank Luntz - Continue - emphasize "scientific uncertainty"  
SO that is when First World Scientists warning to humanity"  
- Companies continued to fund climate deniers & front groups.
- 79 SO - This disinformation cost us the generation that could have  
made the difference
- "predatory delay" - the blocking of needed change - for profit  
- a reversal of trends in 1990 could have saved civilization.
- 30 yrs. Both sides knew it was real. One was willing to lie.
- 84 - Income share going to very wealthy has doubled?
- 86 - 1/10 of 1% - 1916 - made 40% of campaign contributions.
- 88 Life expectancy falling - Disbelief, - working class -  
deaths of despair up?
- Ayn Rand - The Gateway drug to life on the right  
So Influential, Destructive  
- Childhood / Distrust
- 98 WOW - on Ayn Rand - Childhood / Distrust
- 99 - in the Culture wars - you would not have bet on Rand ...  
on Benzedrine - Died - Lung Cancer - after lecturing that  
the evidence on smoking was wrong.
- 103 - A systematic idea about the world emerged in last 1/2  
of 20th C. Govt. was bad - people & corp. should be free
- 104 Koch bros. dad - got rich building oil refineries  
for Stalin - And Hitler's best fuel. Loved Nazi's
- 105 Then went over to the John Birch Society
- 107 - Thesis - Democracy may mean robbery from  
the rich people

107 The Rich are oppressed - unfairly taxed to support  
The lazy. Altruism the "poison of death"

123 Utilities worked to reduce incentives for solar.  
Koch warned of "utilities death spiral"

125 Even Phoenix AZ - solar came to a halt

Trump is killing clean energy research

127 - The politics of one country for one 50 yr. period  
will rewrite human and geological history

1) We will have phenomenal AI Artificial Intelligence

2) And Cheap Gene Editing - with CRISPR we could  
direct the evolution of our own species.

153 With Custom babies - you could have genetic  
as well as economic social stratification. "until  
the "genrich" class rules all - the "naturals" provide labor,

154 - Humans crave connection NOT only individuals

158 - With Genies that grant wishes? What is  
the usual moral? → Be very careful what you

An intelligence greater than our own could  
develop "instrumental drives" ... fossil fuel wish for.

AI - (self improving) to make paperclips ... runs loose  
→ processes earth into paperclips. (Sorcerers Apprentice)

170 Genetically engineered people - will be lonely?  
— disconnected?

The randomness of genetic inheritance allows  
some mental freedom from determinism. But that  
freedom disappears when we know we are genetic products.

172 (ME) BUT as life becomes bleak, suicide, depression  
We may have to engineer a mood elevation  
genetic procedure - unless we create a "drug".

173 - We are happiest when we are fully engaged and  
at the limit of our skills (not over it). This  
"flow" / one ness / does it increase if you have  
more ability.

176 And in a dystopian environmental future we may  
want to stay immersed in our screens videogames.

87% of people w/ smart phones wake up and go  
to sleep with them. 2617 Average touches per day

177 - We spend 10 hrs. on screens - 17 min of exercise

177 Fewer get together with friends  
178 Facebook Time → depression & suicide 3x

179 Or we could just smoke weed. (A) - yes we will need substitute drugs & behaviors during the dark times.

(A) Actually Says - The superintelligence might just smoke weed.  
The more they see Facebook the unhappier they feel

184 Silicon Valley - Lots of Work or Never Dying.

185 Cryogenics company has 147 on ice. No "Death" they are "in need of rescue"

186 Kurzweil would like to reactivate his father also

OK if nobody dies. AI will soon provide bounty for all.

188 - Those who value humans too much de-value humanity

188 World without death is without time or meaning.

193 If we see ourselves mainly as individuals we will never overcome the power & focus of great wealth.

"Welfare states" do produce happiness.

(A) 194 Again - need for "some drug" Check Brave New World  
Rebel? Can't Rebel against your genes - if they get the Dopamine just right the idea will never occur.

201 Idea Only way (Not drug) to stop CC enough to serve us

is to genetically engineer us to be more altruistic, willing to sacrifice. Wow. "We have a

moral obligation to overcome moral limitations"  
3 combinator - gene altering drug, ... "moral enhancement (genetically) extends freedom/overcome bad urges

202 - Greed of a tiny few kept CC from being addressed.

210 Energy exec's hate starting with solar - they talk of

coal solving "energy poverty" in the world.

212 Rapidly falling prices for renewables.

Energy Transition is only a political question.

Solar - what are Michigan's laws.

215 Tesla Power wall batteries

217 - Nonviolent Politics is a technology for change  
A movement / A bulldozer for reshaping the zeitgeist

A movement that changes hearts and minds.

220 - A movement that changes hundreds of thousands of people into the streets

221 We can put hundreds of thousands of people into the streets

226 - No more Growth - Lets have Technologies of Maturity  
Mature Behavior sets limits.

229 People are most fully human when they manage some  
restraint on ego and desire.

231 WOW "inefficiency" is often just another way of  
saying that you are trying to serve more than one  
end ! yes! "don't know what we've lost + it's  
gone - by then - accustomed to the replacement.

233 Now - we need Maturity, Balance, & Proper Scale.  
New goals must be repair, security, protection.

Lets slowdown - for quality - & NOT wreck everything  
Given that there is No Finishing line - Why always speed up?

235 I.Q. used to be rising - FALTER - but now it is falling.

243 Close relationships with other people are our  
greatest existential resource.

244 So many efforts to weaken society (and institutions)  
so that it cannot control dominant individuals.

A non violent campaign has no effect on robots.

247 Stephen Hawking - Humanity could wipe itself out  
in 100 years

249 - Going into space will not save us - NOT healthy <sup>send</sup> robots  
idea a pernicious moral hazard.

255 - Our Great Gift is the possibility of restraint, our  
super power - Only creature who could decide NOT  
to do something we were capable of doing.

We could wreck the earth or we could not do that  
We need human solidarity and love - to see we are  
Not the most imp. thing, to be happy with that