

1

00:00:00,140 --> 00:00:16,480

The next speaker is Professor James Swaney. Well he's already got it up there. Well that will help. What Zdravka did not mention the

2

00:00:16,490 --> 00:00:20,230

introduction is that I retired at the

3

00:00:20,230 --> 00:00:28,109

end of December of 2005 and I went to school now I got my PhD at Colorado

4

00:00:28,109 --> 00:00:33,300

State in Fort Collins Colorado, actually kind of fell in love with the mountains

5

00:00:33,300 --> 00:00:40,260

when I was there when I was a youngster on a family car trip in 1958 and we came

6

00:00:40,260 --> 00:00:45,540

through Rocky Mountain National Park so now I live kind of at the door of Rocky

7

00:00:45,540 --> 00:00:51,720

Mountain National Park and so kind of  
for fun and if this all this heavy

8

00:00:51,720 --> 00:00:56,970

theory stuff is too much and also to  
kind of break up want to go from one one

9

00:00:56,970 --> 00:01:04,250

idea to another set of ideas I throw in  
a mountaineering slide, just for fun, so.

10

00:01:04,250 --> 00:01:12,610

Actually some of it ties in a little bit  
with my talk as well. I am I'm not going

11

00:01:12,610 --> 00:01:16,290

to read all my slides, especially as  
mountaineering ones, you can read them if

12

00:01:16,290 --> 00:01:21,650

you're interested. Oh, I've got, um, here  
let me. They were nice enough to make some

13

00:01:21,650 --> 00:01:22,790

copies. So let me just pass these around.

14

00:01:22,790 --> 00:01:34,830

Maybe, you know, if your not really interested  
there is obviously more that 25 people. [inaudible]

15

00:01:34,830 --> 00:01:56,860

Also I would be happy to email you this presentation.  
Ok-okay that has a title of my talk, Environmental

16

00:01:56,860 --> 00:01:58,260

Sustainability Social  
environmental sustainability should

17

00:01:58,260 --> 00:02:02,780

Costs Perspective. Here's an outline of  
my talk and I'll just be going through

18

00:02:02,780 --> 00:02:12,150

this stuff in order. Sustainability, I've  
got a couple of definitions here one is

19

00:02:12,150 --> 00:02:19,659

mine principle of coevolution

sustainability, published that some year as

20

00:02:19,659 --> 00:02:21,370

[inaudible] which for some reason

21

00:02:21,370 --> 00:02:27,139

that has gotten cited a lot more than

mine has. Can you imagine that? Brundtland

22

00:02:27,139 --> 00:02:29,620

Commission those paths of social,

economic and political progress that

23

00:02:29,620 --> 00:02:34,010

meet the needs of the present without

compromising the ability of future

24

00:02:34,010 --> 00:02:42,909

generations to meet their own needs. Now

this is one of my friends and I

25

00:02:42,909 --> 00:02:49,250

favorite play places here this this rock  
formation right here is called the

26

00:02:49,250 --> 00:02:55,120

keyhole and Longs Peak is a very popular  
destination of hikers in the summer

27

00:02:55,120 --> 00:02:59,390

there'll be hundreds of people trying to  
get up to the summit Longs Peak on a on

28

00:02:59,390 --> 00:03:06,750

a week a weekend afternoon. Ok the  
Foundation's, there is a little

29

00:03:06,750 --> 00:03:11,059

redundancy here, especially with respect  
to Kapp with what Sebastian already

30

00:03:11,059 --> 00:03:21,559

covered, but the common element of all

these people is an ecological approach,

31

00:03:21,559 --> 00:03:31,450

and that is one of the most important  
things lacking in and almost everyone's

32

00:03:31,450 --> 00:03:35,809

understanding and appreciation of  
environmental sustainability issues. And the

33

00:03:35,809 --> 00:03:40,099

two

34

00:03:40,099 --> 00:03:43,739

key things have been called two of the  
laws of ecology everything connect

35

00:03:43,739 --> 00:03:50,849

everything else and everything goes  
somewhere and also their biophysical

36

00:03:50,849 --> 00:03:55,590

systems are not just these reservoirs

that you can take stuff out of them dumb

37

00:03:55,590 --> 00:04:03,309

stuff into there even the ones who that  
aren't biological biophysical systems

38

00:04:03,309 --> 00:04:10,599

there are feedbacks and interactions and  
in biology if you study systems in

39

00:04:10,599 --> 00:04:17,859

biology they'll talk about tipping  
points, you'll have a system that if that

40

00:04:17,859 --> 00:04:22,180

is stable is kind of like in a little  
valley. If it gets disturbed enough it

41

00:04:22,180 --> 00:04:26,510

gets pushed out of the valley to a  
tipping point and then you can have

42

00:04:26,510 --> 00:04:33,169

cascading changes often or reversible.

43

00:04:33,169 --> 00:04:37,539

Oceans are a big issue right now the  
increased acidification of the oceans

44

00:04:37,539 --> 00:04:40,930

because of more carbon dioxide in the  
atmosphere the oceans are becoming more

45

00:04:40,930 --> 00:04:46,220

acidic it's hard on coral reefs which  
are one of the basic elements of ocean

46

00:04:46,220 --> 00:04:51,310

food chains. I just read in my  
environmental of one of my online

47

00:04:51,310 --> 00:04:56,600

environmental news sources today that  
scientists have just figured out how to

48

00:04:56,600 --> 00:05:01,930

measure accurately changes in salinity  
of the ocean in different parts of the

49

00:05:01,930 --> 00:05:05,789

ocean over the world and they've gone  
back and they've kind of, they've kind of

50

00:05:05,789 --> 00:05:11,000

gotten this data historically from  
sources that were designed for other

51

00:05:11,000 --> 00:05:15,939

things but they they, they have been able  
to actually measure where there's

52

00:05:15,939 --> 00:05:22,909

decreased salinity of the ocean implying  
more freshwater runoff, implying melting

53

00:05:22,909 --> 00:05:30,400

glaciers or more precipitation and areas  
where there's increases in ocean

54

00:05:30,400 --> 00:05:39,900

salinity where there's more drought and  
there's less runoff in that part of the

55

00:05:39,900 --> 00:05:47,520

ocean. Moving to Leopold, I have several  
quotes here I'm not going to read them

56

00:05:47,520 --> 00:06:00,580

all in the interest of time, but this one  
I think is worth, is worth looking at a little

57

00:06:00,580 --> 00:06:01,580

bit.

58

00:06:01,580 --> 00:06:04,219

Leopold goes through, if you haven't read  
this is a very nice concise

59

00:06:04,219 --> 00:06:07,130

statement of Leopold's land ethic. It's

60

00:06:07,130 --> 00:06:12,930

usually cited in 1949 was actually published originally in 1933 so here's a guy it

61

00:06:12,930 --> 00:06:18,439

was just a little bit ahead of his time.

And he says, we really need to extend

62

00:06:18,439 --> 00:06:24,370

ethics to the land if the evidence is if

I read that as correctly it's an

63

00:06:24,370 --> 00:06:30,069

evolutionary possibility and an

ecological necessity. Okay, and then he's

64

00:06:30,069 --> 00:06:36,410

talking more and more about what this

means. A land ethic changes the role of

65

00:06:36,410 --> 00:06:40,360

Homo sapiens from conquer of the land

community to plain member and citizen of

66

00:06:40,360 --> 00:06:44,979

it. It implies respect for his fellow  
members and also respect for the

67

00:06:44,979 --> 00:06:54,669

community as such. These these modern  
slides I'm throwing in it was so dry

68

00:06:54,669 --> 00:06:59,090

this this year that just about a month  
ago a friend and I hiked Longs Peak

69

00:06:59,090 --> 00:07:05,419

normally a technical climb except from  
mid-July to mid-September and it was

70

00:07:05,419 --> 00:07:12,130

really just a hike as close as it comes  
to just being a hike just about a month

71

00:07:12,130 --> 00:07:18,490

ago. It's no sense but so I wouldn't  
recommend trying it right now. Ok moving

72

00:07:18,490 --> 00:07:23,860

into Polanyi, um, Polanyi talks about,um...

The

73

00:07:23,860 --> 00:07:25,940

Polanyi's classic book is titled The

74

00:07:25,940 --> 00:07:34,400

Great Transformation and Polanyi

really it's two transformations ok when

75

00:07:34,400 --> 00:07:38,370

the free market was implemented this

system of self regulating markets

76

00:07:38,370 --> 00:07:45,039

required everything to be allocated in

competitive markets and what Polanyi said

77

00:07:45,039 --> 00:07:46,039

was

78

00:07:46,039 --> 00:07:49,930

well you know they tried that and it was  
just as utopian as Marx notion of

79

00:07:49,930 --> 00:07:55,030

communism was utopian it didn't work  
because there were social reactions to

80

00:07:55,030 --> 00:08:03,849

the costs that are imposed on nature and  
on society and I don't get into here the

81

00:08:03,849 --> 00:08:09,259

even he talked about three commodity  
fictions labor, land, and money. Even money

82

00:08:09,259 --> 00:08:12,629

he said you can't leave that to any kind  
of an automatic

83

00:08:12,629 --> 00:08:17,999

mechanism of a free market because with  
the business cycle even the capitalist

84

00:08:17,999 --> 00:08:27,490

can't stand to have money be a free,  
free market commodity. So Polanyi's main

85

00:08:27,490 --> 00:08:34,360

point is, is when you establish we treat  
land and Labor's mere commodities you

86

00:08:34,360 --> 00:08:38,340

degrade them and there's some quotes  
here about that and so these were the

87

00:08:38,340 --> 00:08:45,640

commodity fictions and he says just you  
know it's just too destructive so

88

00:08:45,640 --> 00:08:56,220

society react to protect both labor and  
and nature from the worst ravages of the

89

00:08:56,220 --> 00:09:06,950

market. Okay, let me just move on here. So  
you have what he called protecting

90

00:09:06,950 --> 00:09:15,560

counter moves by society and so in Polanyi's  
writing of history my socialist early

91

00:09:15,560 --> 00:09:19,040

movement the extension of the market

92

00:09:19,040 --> 00:09:23,540

organization in respect to genuine  
commodities was accompanied by his

93

00:09:23,540 --> 00:09:27,900

restriction in respect to fictitious  
ones. So again the fictitious commodities

94

00:09:27,900 --> 00:09:38,320

labor, land, and money. We did, my buddy and  
I, did make it up the Longs, and, um, about

95

00:09:38,320 --> 00:09:42,352

a month ago. And that's us on the summit bolder.

96

00:09:42,352 --> 00:09:45,700

The summit of Longs is actually about the size of two or three football fields it's

97

00:09:45,700 --> 00:09:46,700

a

98

00:09:46,700 --> 00:09:50,060

huge summit, but there's one boulder that sticks up so if you get the picture

99

00:09:50,060 --> 00:09:55,780

right it makes it look like you're you know up on some some extreme process or

100

00:09:55,780 --> 00:09:58,940

something.

Derald DeYoung there's gonna be seventy

101

00:09:58,940 --> 00:10:07,760

this coming Monday and I'm only 63. Okay moving on to Kapp, now you've already seen

102

00:10:07,760 --> 00:10:15,222

this quote

in Sebastian's talk

103

00:10:15,222 --> 00:10:25,460

and he discussed this quite a bit and

this is some quotations from Kapp he says

104

00:10:25,460 --> 00:10:30,440

that you know the theory claims that the

economies are closed and autonomous

105

00:10:30,440 --> 00:10:34,870

economic sphere with only minor effects

on man's natural social environment. And

106

00:10:34,870 --> 00:10:38,661

Kapp went on to say this autonomous

sphere is a fiction and the effects on

107

00:10:38,661 --> 00:10:48,100

the environment, society, or anything

negligible. Okay.

108

00:10:48,100 --> 00:10:53,150

And then Sebastian also talked about cost shifting which is a key concept in

109

00:10:53,150 --> 00:11:00,690

Kapp and a key concept in any, just in really in the framework of love looking

110

00:11:00,690 --> 00:11:05,550

at the economy from a social cost perspective the cost shifting is a key a,

111

00:11:05,550 --> 00:11:14,450

key concept here. And one, one extra point I want to make regarding cost shifting

112

00:11:14,450 --> 00:11:18,890

is if you've taken microeconomic theory either principals or intermediate

113

00:11:18,890 --> 00:11:24,010

graduate-level, there's almost never a

discussion and the textbooks don't have

114

00:11:24,010 --> 00:11:32,600

any discussion of the implicit logic

which really, I mean, when it comes to

115

00:11:32,600 --> 00:11:38,180

improving the production process is

explicit, what, competition gives an

116

00:11:38,180 --> 00:11:44,050

incentive to improve technology to

reduce costs, better managers will make,

117

00:11:44,050 --> 00:11:49,440

the product, make the operation more

efficient but the same incentive is

118

00:11:49,440 --> 00:11:56,970

there to shift costs and that never gets

discussed. I used to every time I went to

119

00:11:56,970 --> 00:12:02,360

a meeting around the microeconomist I  
tried hammer on this person never did

120

00:12:02,360 --> 00:12:10,050

any good. Okay, so in kind of summarizing  
Kapp these social costs are really not

121

00:12:10,050 --> 00:12:20,740

accidental side effects, they come  
from incentives within

122

00:12:20,740 --> 00:12:21,740

the system.

123

00:12:21,740 --> 00:12:29,400

And our next, the next guy, I want to talk  
about is Ken Boulding who wrote a great

124

00:12:29,400 --> 00:12:34,430

little essay, very accessible, I don't  
know how many times I've read it and but

125

00:12:34,430 --> 00:12:38,600

every time when I go back again it's  
just really a fun read. It's just it's

126

00:12:38,600 --> 00:12:44,190

just a great little essay the economics  
of the coming spaceship earth. And in

127

00:12:44,190 --> 00:12:49,750

this he talks about, he lays out, what he  
calls the cowboy economy and this third

128

00:12:49,750 --> 00:12:54,160

bullet here is is these are quotes right  
from Boulding for the sake of

129

00:12:54,160 --> 00:12:59,360

picturesqueness I'm tempted to call that  
an economy the cowboy economy the cowboy

130

00:12:59,360 --> 00:13:03,230

being symbolic of in the illimitable  
Plains and also associated with reckless

131

00:13:03,230 --> 00:13:07,820

exploiting the romantic and violent  
behavior which is characteristic of open

132

00:13:07,820 --> 00:13:16,250

societies whereas a spaceman economy he  
calls the closed earth of the future

133

00:13:16,250 --> 00:13:19,810

earth has become a single spaceship  
without unlit reservoirs of anything

134

00:13:19,810 --> 00:13:24,270

here for extraction or pollution which  
therefore man must find a place, must find

135

00:13:24,270 --> 00:13:32,170

his place cyclical ecological system. One  
thing interesting about this he's still somewhat

136

00:13:32,170 --> 00:13:33,270

in an atomistic

137

00:13:33,270 --> 00:13:37,760

framework which is really not fully  
ecological because he's saying they're

138

00:13:37,760 --> 00:13:42,730

reservoirs we can draw resources out of  
some reservoirs and we can place them in

139

00:13:42,730 --> 00:13:47,310

other reservoirs as if they're going to  
stay there. A few years ago some

140

00:13:47,310 --> 00:13:53,690

scientists got some money just to get a  
longitudinal database of air quality

141

00:13:53,690 --> 00:13:58,370

coming in on the Olympic Peninsula  
extreme Western out on the ocean in the

142

00:13:58,370 --> 00:14:02,790

state of Washington and they said boy  
with China's economy developing the way

143

00:14:02,790 --> 00:14:08,350

it is we want to get a baseline now and  
measure air quality coming across the

144

00:14:08,350 --> 00:14:15,820

ocean because in a few years we're going  
to start seeing this stuff from China

145

00:14:15,820 --> 00:14:21,800

and so they set their instruments and  
guess what there was already, they didn't

146

00:14:21,800 --> 00:14:25,790

get their baseline, they needed to have  
this instrument set up decades earlier,

147

00:14:25,790 --> 00:14:30,890

there's already lots of pollution  
arriving in the state of Washington from

148

00:14:30,890 --> 00:14:36,680

this from China. If you look at a map of  
mercury deposition a neurotoxin, really

149

00:14:36,680 --> 00:14:41,610

nasty stuff, most of it in this country  
comes from burning coal. If you look at

150

00:14:41,610 --> 00:14:46,630

the deposition, that is where as mercury  
come back down out of the sky to pollute

151

00:14:46,630 --> 00:14:51,870

things and get in the in the river and  
ocean food chains that's a reason that

152

00:14:51,870 --> 00:14:57,970

in in most states including Ohio there  
mercury advisories, pregnant women are

153

00:14:57,970 --> 00:15:04,190

not to eat fish, and other people are not  
to eat very many fish caught in the

154

00:15:04,190 --> 00:15:11,620

waters because mercury has come down

after being put up smokestacks is as

155

00:15:11,620 --> 00:15:15,010

precipitated has come down and it turns  
into methyl mercury which is its

156

00:15:15,010 --> 00:15:19,501

neurotoxin. If you look at a map of the whole  
US. All

157

00:15:19,501 --> 00:15:24,870

of the western states in the US, the  
majority of their mercury deposition is

158

00:15:24,870 --> 00:15:32,940

from other continents. Okay the earth is  
getting not only more crowded it's in a

159

00:15:32,940 --> 00:15:38,730

real sense getting very small. Okay, so,  
here's the comparison cowboy economy and

160

00:15:38,730 --> 00:15:43,290

spaceman economy and Boulding makes the point  
that what we really need to be

161

00:15:43,290 --> 00:15:47,680

thinking about is improving on make... what  
he calls the extent quality and

162

00:15:47,680 --> 00:15:52,980

complexity of the total capital stock  
including information rather than

163

00:15:52,980 --> 00:15:57,450

maximizing throughput which is what  
you're really doing when you when you

164

00:15:57,450 --> 00:16:01,570

when you put such emphasis on gross  
domestic product. How much stuff can we

165

00:16:01,570 --> 00:16:06,540

produce is really not the right  
orientation and recently Joseph Stiglitz

166

00:16:06,540 --> 00:16:11,350

Nobel prize-winning economist  
made the comment that what we measure

167

00:16:11,350 --> 00:16:19,390

affects how we behave. Another great  
quote by as I said by Boulding to me it's

168

00:16:19,390 --> 00:16:20,390

just

169

00:16:20,390 --> 00:16:24,650

such a delight to read. The shadow of the  
future spaceship is already falling over

170

00:16:24,650 --> 00:16:28,350

our spend thrift merriment.  
Oddly enough, it seems to be in pollution

171

00:16:28,350 --> 00:16:31,550

rather than in exhaustion that the problem  
is first becoming salient. He talks about

172

00:16:31,550 --> 00:16:33,340

in another generation,

173

00:16:33,340 --> 00:16:39,420

this is in 66 okay, so we've got two  
generations now the major problem

174

00:16:39,420 --> 00:16:44,900

is going to be the atmosphere so he  
recognized one of the one of the major

175

00:16:44,900 --> 00:16:52,130

problems that were now facing. Okay here  
I am in the keyhole back in January that

176

00:16:52,130 --> 00:16:57,530

little yellow thing I'm holding up was  
my retirement present from my colleagues

177

00:16:57,530 --> 00:17:02,110

here in the Economics Department Wright  
State and I want to take this

178

00:17:02,110 --> 00:17:06,280

opportunity to thank them I get a lot of  
use out of that one of the guys who

179

00:17:06,280 --> 00:17:12,920

leads a lot of hikes that I go on is 75  
years old and you get a nice stiff

180

00:17:12,920 --> 00:17:20,340

breeze like we had here 47 miles an hour  
and and he says oh, must be 80 it must

181

00:17:20,340 --> 00:17:25,140

be 80 miles an hour, so some of my other  
trail, trail trekkers the group, some of

182

00:17:25,140 --> 00:17:29,290

my other hiking buddies say now that's  
kind of, that little instrument of your has

183

00:17:29,290 --> 00:17:34,530

kind of quieted Kent down. Only 47.

184

00:17:34,530 --> 00:17:39,950

I'm leaning against the rocks they're on  
you 47 is enough, you know, is enough to

185

00:17:39,950 --> 00:17:45,540

knock you down if it's gusty but it was  
very steady so it really wasn't that bad.

186

00:17:45,540 --> 00:17:46,540

A little, little side trip

187

00:17:46,540 --> 00:17:50,780

here this you've all seen a version of  
another if you've ever taken the

188

00:17:50,780 --> 00:17:57,260

economics of circle flow becoming  
product okay. Where is this located? Is

189

00:17:57,260 --> 00:18:00,990

this some autonomous sphere on a magic  
carpet somewhere? Is it out there in the

190

00:18:00,990 --> 00:18:08,540

ether? Where is it? Well Coddington, Allen  
Coddington, British economist, use Kapp as

191

00:18:08,540 --> 00:18:14,230

a foundation to talk about this. He said look  
there are flows between firms and households,

192

00:18:14,230 --> 00:18:15,230

but they're

193

00:18:15,230 --> 00:18:19,561

also follows households, and  
environment firms and the environment. We

194

00:18:19,561 --> 00:18:24,130

breathe if there's no oxygen in the air, we  
don't last long, or if there's a bunch of

195

00:18:24,130 --> 00:18:30,490

poisons with the oxygen, we get sick, okay.  
Well a little more accurate

196

00:18:30,490 --> 00:18:35,420

representation of this is of course the  
whole economy exists within the

197

00:18:35,420 --> 00:18:43,410

environment so this shows the flows and  
that was... This was a real nice outing we

198

00:18:43,410 --> 00:18:46,800

had back in February.

199

00:18:46,800 --> 00:18:53,140

what you can see, I brought this pointer.  
I don't even know what I did with it at this

200

00:18:53,140 --> 00:18:57,630

point. It's under your papers. Oh, it's under  
my papers. Thanks. This Andrews...

201

00:18:57,630 --> 00:19:01,960

What's called Andrews Glacier is actually  
up above here this Andrews Tarn sits

202

00:19:01,960 --> 00:19:06,910

right up in here and then and this is so steep you can't actually see it, up to the

203

00:19:06,910 --> 00:19:11,390

Glacier. But we had a real nice outing that day.

204

00:19:11,390 --> 00:19:17,670

Just a little side on the boomter doomster debate, many of you have

205

00:19:17,670 --> 00:19:24,480

probably heard about this.  
The Stanford biologist Ehr..., Paul Ehrlich

206

00:19:24,480 --> 00:19:28,940

got into a heated debates on numerous occasions with a business economist

207

00:19:28,940 --> 00:19:34,880

Julian Simon. Simon challenged Ehrlich to a bet he said you picked the raw

208

00:19:34,880 --> 00:19:39,250

materials, you picked the time frame, and  
I'll bet you that the resource crisis

209

00:19:39,250 --> 00:19:44,340

will be lower in the future than they  
are now. Well, 1980 when they made the bet,

210

00:19:44,340 --> 00:19:47,630

was one of those periods kind of like  
we're in now where, where it have been

211

00:19:47,630 --> 00:19:53,720

a real run-up of commodity prices and so  
the the timing was really, boom there went

212

00:19:53,720 --> 00:19:55,440

my pointer. The timing was really

213

00:19:55,440 --> 00:20:03,810

bad for Ehrlich, but it was really kind  
of a sucker's bet, anyway. Because this

214

00:20:03,810 --> 00:20:08,490

isn't really as Boulding recognized this

isn't really where the problem is

215

00:20:08,490 --> 00:20:13,650

running out is the wrong topic of

discussion.

216

00:20:13,650 --> 00:20:19,010

It's the effluvia, it's where is all this

stuff that we dumped into the atmosphere

217

00:20:19,010 --> 00:20:25,090

and the oceans, where's all that stuff

going? Well, it away, went away

218

00:20:25,090 --> 00:20:32,410

there is no unlimited reservoir for junk.

So after Simon lost, excuse me after

219

00:20:32,410 --> 00:20:37,680

Simon won bet after Ehrlich lost the bet.

Simon continue to make these arguments

220

00:20:37,680 --> 00:20:41,730

and he made another bet of some...  
somebody else about timber prices that

221

00:20:41,730 --> 00:20:46,809

he lost and somebody else said well you  
know Ehrlich just chose the wrong time

222

00:20:46,809 --> 00:20:51,120

frame of course commodity prices now are  
much higher than they were

223

00:20:51,120 --> 00:20:56,559

in 1980. They go up and down like, like  
agriculture prices, raw material prices

224

00:20:56,559 --> 00:21:02,970

go up and down. But Ehrlich proposed a  
second bet Simon, Simon didn't, didn't

225

00:21:02,970 --> 00:21:08,670

like that bet, but Ehrlich made this statement

resource that worries me most

226

00:21:08,670 --> 00:21:14,470

is the declining capacity of our planet to  
buffer itself against human impacts. And,

227

00:21:14,470 --> 00:21:18,130

I think that's an accurate statement, but  
I've never understood why Ehrlich ever

228

00:21:18,130 --> 00:21:23,710

entered the bet on resource prices. Two  
entirely different problems and resource

229

00:21:23,710 --> 00:21:31,920

prices of course are much more subject  
to technology and to innovations in in

230

00:21:31,920 --> 00:21:36,410

the economy to garner new resources as  
we see with this whole increase in

231

00:21:36,410 --> 00:21:42,910

supply of natural gas in the U.S. many  
many natural gas producers have actually

232

00:21:42,910 --> 00:21:46,410

shut down production now because the  
price of natural gas is so low there

233

00:21:46,410 --> 00:21:53,360

they can't make any money because  
there's such a glut of natural gas right now.

234

00:21:53,360 --> 00:22:00,421

A couple of quotes a boomer, is a boomer  
and a doomster, the sa...boomster. A boomer

235

00:22:00,421 --> 00:22:01,580

and boomster

236

00:22:01,580 --> 00:22:06,520

are they the same thing?

Well I think they're close. A couple of

237

00:22:06,520 --> 00:22:10,580

well-known environmental writers Wallace  
Stegner says approach with boomers to

238

00:22:10,580 --> 00:22:17,530

pillage and run and Wendell Berry in a  
very recent talk just this past week

239

00:22:17,530 --> 00:22:22,720

made this statement We all are indicated.  
By the economic process thoughtlessly given,

240

00:22:22,720 --> 00:22:27,890

by thoughtless consumption of goods  
ignorantly purchased, we are all now

241

00:22:27,890 --> 00:22:38,700

boomers. So on that day we got up to Andrews  
Tarn and this is actually the, well I

242

00:22:38,700 --> 00:22:44,710

guess my dropping this made it go,  
made it go away. Here's my trail trekking

243

00:22:44,710 --> 00:22:49,220

friends this this, all this was all of this  
right here is the Tarn and it was just like

244

00:22:49,220 --> 00:22:50,220

an

245

00:22:50,220 --> 00:22:52,830

ocean swell the lake is just for a  
little lake in them just the ice was

246

00:22:52,830 --> 00:22:57,070

just like this across the lake and there  
are my friends and that's Andrews

247

00:22:57,070 --> 00:23:04,840

Glacier above there. Okay a little bit on  
Herman Daly one of the leading ecological

248

00:23:04,840 --> 00:23:12,260

economists today. He talks about empty  
earth, full earth. And one of his examples

249

00:23:12,260 --> 00:23:16,640

is fishing technology. It used to be that  
which you got better fishing technology

250

00:23:16,640 --> 00:23:27,720

caught more fish. Not anymore because, okay  
thank you, not anymore because we are capable

251

00:23:27,720 --> 00:23:28,720

of

252

00:23:28,720 --> 00:23:32,250

fishing then, all the fish out of the  
seas, basically. So to protect the fishery

253

00:23:32,250 --> 00:23:37,100

you have to have restrictions how many  
days can you go out, how big can your boat

254

00:23:37,100 --> 00:23:41,720

be, how big can your nets be, or you get  
in some kind of a lottery. This is true

255

00:23:41,720 --> 00:23:45,210

every place where fisher's haven't  
been totally wiped out. There are

256

00:23:45,210 --> 00:23:50,910

restrictions on fishing, fishing effort.

And this goes back to these basic

257

00:23:50,910 --> 00:23:55,440

ecological principles everything  
connected everything else everything

258

00:23:55,440 --> 00:24:01,340

goes somewhere and or in the designer  
William, McDonough if you ever get a chance

259

00:24:01,340 --> 00:24:10,571

to see him speaker, he's a really good speaker.  
His summary of this is away, went away. We

260

00:24:10,571 --> 00:24:11,571

did make it up to the

261

00:24:11,571 --> 00:24:19,190

Continental Divide a the top of Andrews Glacier.

Yeah, um, I shouldn't have dropped this thing.

262

00:24:19,190 --> 00:24:23,530

Andrews Tarn is down there in the shadows

and then that other streak of ice on down

263

00:24:23,530 --> 00:24:27,940

there is a lower lake just called the lock

in Rocky Mountain

264

00:24:27,940 --> 00:24:32,160

National Park. It's a little... you see a

little more people in the summer than

265

00:24:32,160 --> 00:24:39,040

you do in the winter when you go up there.

Okay now planetary boundaries this is

266

00:24:39,040 --> 00:24:44,570

from the British scientific journal

Nature along with the journal Science

267

00:24:44,570 --> 00:24:48,460

the American publication Science the two  
new two leading science journals in the

268

00:24:48,460 --> 00:24:50,830

world

this was article was published in

269

00:24:50,830 --> 00:24:56,960

September 2009 and this kind of  
summarizes this Rockstrom guy, a Swedish

270

00:24:56,960 --> 00:25:01,720

guy, he got he got people together from  
three major scientific disciplines and

271

00:25:01,720 --> 00:25:07,180

they sort of sat down so where are the  
real threats environmentally and they

272

00:25:07,180 --> 00:25:13,429

came up with nine and three that are  
they say are already pushing toward tipping

273

00:25:13,429 --> 00:25:21,490

thresholds are climate, biodiversity loss,  
and excess nitrogen. The excess nitrogen

274

00:25:21,490 --> 00:25:28,840

comes from burning fossil fuels,  
automobiles, coal power plants, and also

275

00:25:28,840 --> 00:25:33,640

from fertilizer. We use way... nitrogen  
fertilizer we certainly can't get rid of

276

00:25:33,640 --> 00:25:40,510

it but we use it pretty irresponsible. Other  
of the nine ocean acidification, fresh

277

00:25:40,510 --> 00:25:44,970

water use, land use and desertification, and  
the ozone layer.

278

00:25:44,970 --> 00:25:47,760

Then there's two more that are so poorly

279

00:25:47,760 --> 00:25:51,730

measured that they don't really have  
much to say about it. A lot more science needs

280

00:25:51,730 --> 00:25:54,050

to be done there. This is a chart out

281

00:25:54,050 --> 00:25:59,700

of that article and that article I mean  
this looks kind of complicated but it

282

00:25:59,700 --> 00:26:04,300

really isn't that hard to read this  
article it's only about four pages I

283

00:26:04,300 --> 00:26:07,990

highly recommend it for anyone who's  
really interested in learning about the

284

00:26:07,990 --> 00:26:12,530

science of these of these most  
threatening environmental problems.

285

00:26:12,530 --> 00:26:17,380

This is a little diagram out of this article  
the green area is considered the

286

00:26:17,380 --> 00:26:20,000

safe area and then the nine different

287

00:26:20,000 --> 00:26:26,130

threats are around the outside and the  
red ones are the three that are already

288

00:26:26,130 --> 00:26:31,230

outside the boundaries of what they, of  
what scientists consider be safe. You've

289

00:26:31,230 --> 00:26:37,560

got your biodiversity loss over this way,  
your nitrogen excess over that way, and

290

00:26:37,560 --> 00:26:43,640

climate change up at the top. Now a little  
mountaineering slide for a transition

291

00:26:43,640 --> 00:26:53,620

here then, oh and by the way this, um, let me go back here just briefly. This article

292

00:26:53,620 --> 00:27:00,250

by Rockstrom, he has given a TED lecture TED lecture, T E D. It's 18 minutes that's

293

00:27:00,250 --> 00:27:01,250

available on

294

00:27:01,250 --> 00:27:06,700

the web you could just put in Rockstrom and planetary boundaries and I'm sure you'd

295

00:27:06,700 --> 00:27:15,310

find it. It's really a good 18 minute video on the web. Okay and then this Kate

296

00:27:15,310 --> 00:27:25,060

Raworth of Oxfam, Oxfam the, the environmental..., they try to help people

297

00:27:25,060 --> 00:27:26,060

in

298

00:27:26,060 --> 00:27:29,540

the developing world with various  
problems Oxfam International

299

00:27:29,540 --> 00:27:34,990

and she is located where... in at the  
headquarters of Oxfam in England. And she,

300

00:27:34,990 --> 00:27:41,210

what she does, she puts those  
boundaries that Rockstrom talks about into,

301

00:27:41,210 --> 00:27:48,630

into the diagram and then she adds what  
she considers social justice, key social

302

00:27:48,630 --> 00:27:57,030

justice issues on the inside. Income,  
water, food, health, etc. jobs. etc. and then

303

00:27:57,030 --> 00:28:01,299

she goes through and talks about how the  
the the blue is where we're falling

304

00:28:01,299 --> 00:28:04,940

short and the ones that don't have  
anything we don't have a good measures

305

00:28:04,940 --> 00:28:10,740

of and she talks about how little it  
would actually take to get the world to

306

00:28:10,740 --> 00:28:18,820

meet these basic social foundations. I  
usually play in Rocky Mountain Park but

307

00:28:18,820 --> 00:28:24,050

my wife and I went up to Yellowstone  
briefly this winter and this is the

308

00:28:24,050 --> 00:28:28,050

geyser, it's about a mile from Old

Faithful Geyser. It's really pretty

309

00:28:28,050 --> 00:28:30,809

spectacular

the only erupts about every four hours

310

00:28:30,809 --> 00:28:37,120

but it goes for twenty minutes.

So it's something to see. Okay problems with

311

00:28:37,120 --> 00:28:42,390

the doughnut these are all actually quotes

from Greg Hayden who's one of our fellow

312

00:28:42,390 --> 00:28:45,760

institutionalist longtime professor at

University of Nebraska. I asked him his

313

00:28:45,760 --> 00:28:52,240

thoughts on this and he put it as well

as I could so I just quoted him. okay.

314

00:28:52,240 --> 00:28:56,530

problems with rigorous argument is if  
we're going to have a democracy we need,

315

00:28:56,530 --> 00:29:01,090

we need to be discussing all this stuff  
and that gets down this last one if you

316

00:29:01,090 --> 00:29:05,210

got a 24/7 high-tech job you're not  
to be talking about this stuff

317

00:29:05,210 --> 00:29:10,730

with your neighbors and with your fellow  
citizens, but also how all this stuff is

318

00:29:10,730 --> 00:29:18,440

interconnected. What's in the inside of  
this the hole of the doughnut, these

319

00:29:18,440 --> 00:29:21,980

many these things are obviously  
interconnected amongst themselves but

320

00:29:21,980 --> 00:29:29,030

they're also connected to the planetary boundaries, okay. All right now I have, oh,

321

00:29:29,030 --> 00:29:30,030

I got

322

00:29:30,030 --> 00:29:33,970

a let you look at that slide for a minute.

323

00:29:33,970 --> 00:29:40,430

They, they, they... you know if you watching these nature's programs it was show bison

324

00:29:40,430 --> 00:29:46,090

swimming across the Yellowstone River well whether Yellowstone was frozen right

325

00:29:46,090 --> 00:29:50,059

along here or not under that bridge, I don't know, but these bison had a better

326

00:29:50,059 --> 00:29:59,480

idea, okay. Here are my takeaway points  
from this talk okay again as fully

327

00:29:59,480 --> 00:30:05,290

recognized 45 years ago it's, it's the  
effluvia, it's the pollution, it's the

328

00:30:05,290 --> 00:30:11,210

stuff we're dumping out, that is really  
the problem more than any shortage of

329

00:30:11,210 --> 00:30:16,761

any particular resource or even just  
resource shortages in general. There

330

00:30:16,761 --> 00:30:21,690

reasons for this and, but they're hard to  
fix these problems are hard to fix and

331

00:30:21,690 --> 00:30:25,540

you study economics you know about open  
access and public goods problems but

332

00:30:25,540 --> 00:30:30,550

also we have the entropy wall from  
thermodynamics entropy per say running

333

00:30:30,550 --> 00:30:34,690

out of good sources of energy we're  
gonna figure, we're gonna get solar

334

00:30:34,690 --> 00:30:37,750

prices, we're gonna we're, going to  
get we're gonna figure the energy thing

335

00:30:37,750 --> 00:30:43,260

out, but again the byproducts of all of  
our econ... economic activity put so

336

00:30:43,260 --> 00:30:48,680

much stuff in the environment that it's  
really the symptoms of entropy that get

337

00:30:48,680 --> 00:30:59,270

us in trouble. When we talked about Kapp  
and Kapp's talking about is this incentive

338

00:30:59,270 --> 00:31:04,230

for businesspeople, for entrepreneurs, to  
shift costs well if everybody had a

339

00:31:04,230 --> 00:31:09,230

strong mind ethic like Wendell Berry that  
when quoted Wendell Berry obviously has a

340

00:31:09,230 --> 00:31:10,470

strong mind ethic we

341

00:31:10,470 --> 00:31:20,310

wouldn't have near as much of an issue  
with cost shift.

342

00:31:20,310 --> 00:31:23,297

Well I think we'll just leave it at that  
I think my time is about up anyway thank

343

00:31:23,297 --> 00:31:23,797

you