

1
00:00:00,000 --> 00:00:05,129
hello I just like to mention that the

2
00:00:03,359 --> 00:00:10,138
resolution on this particular video

3
00:00:05,129 --> 00:00:13,410
isn't the best but that was due to a

4
00:00:10,138 --> 00:00:15,359
firmware update and to the unfamiliarity

5
00:00:13,410 --> 00:00:19,079
with the equipment that was being used

6
00:00:15,359 --> 00:00:22,759
so apologies and advanced enjoy the show

7
00:00:19,079 --> 00:00:22,759
because it was a it was a great event

8
00:00:33,530 --> 00:00:35,590
you

9
00:00:38,119 --> 00:00:41,769
right ladies and gentlemen thank you

10
00:00:39,979 --> 00:00:45,140
very much for attending this the 10th

11
00:00:41,770 --> 00:00:47,000
monthly meeting of Swansea UFO network

12
00:00:45,140 --> 00:00:51,649
and the first of the new year hope you

13
00:00:47,000 --> 00:00:53,750
enjoyed your your Christmas break now

14
00:00:51,649 --> 00:00:57,079
before we start I'd very quickly like to

15
00:00:53,750 --> 00:00:58,488
touch on a few non UFO related items by

16
00:00:57,079 --> 00:01:03,170
acknowledging a few of our members

17
00:00:58,488 --> 00:01:05,390
achievement firstly I'd like to thank

18
00:01:03,170 --> 00:01:07,609
our very own name lynn williams sitting

19
00:01:05,390 --> 00:01:10,189
amongst you there for the courage and

20
00:01:07,609 --> 00:01:13,340
passion he's shown in coming out as a

21
00:01:10,189 --> 00:01:14,840
crossdresser now for those who don't

22
00:01:13,340 --> 00:01:17,390
know what I mean em then delighted

23
00:01:14,840 --> 00:01:20,390
audiences in God New Year by playing the

24
00:01:17,390 --> 00:01:21,920
daemon Sleeping Beauty apparently was

25
00:01:20,390 --> 00:01:25,640
very well received than a complete

26
00:01:21,920 --> 00:01:27,409
success how he has it well someone said

27
00:01:25,640 --> 00:01:29,719
mentioning no names that he looked just

28
00:01:27,409 --> 00:01:32,569
a little too comfortable in his dress

29

00:01:29,719 --> 00:01:34,250
and makeup and have you been abducted by

30
00:01:32,569 --> 00:01:37,039
aliens on his way home we would have not

31
00:01:34,250 --> 00:01:42,109
know much type of probe to user name so

32
00:01:37,039 --> 00:01:43,939
well done Emily certainly not here

33
00:01:42,109 --> 00:01:45,799
tonight but congratulations to gain a

34
00:01:43,939 --> 00:01:48,019
vine on the publication of a new book

35
00:01:45,799 --> 00:01:49,909
the books entitled down in the valley

36
00:01:48,019 --> 00:01:51,950
and it's available on amazon for anyone

37
00:01:49,909 --> 00:01:54,920
who's interested makes you go from

38
00:01:51,950 --> 00:01:56,929
strength to strength in that and lastly

39
00:01:54,920 --> 00:01:58,399
by no means least i don't want to

40
00:01:56,929 --> 00:01:59,509
embarrass him which are not likely to do

41
00:01:58,399 --> 00:02:01,969
hopefully unless he's watching this

42
00:01:59,509 --> 00:02:03,649
video i'd like to say congratulations to

43
00:02:01,969 --> 00:02:06,700

Stephen Griffiths I'm receiving his

44

00:02:03,649 --> 00:02:09,618

unsung heroes award from however

45

00:02:06,700 --> 00:02:11,750

University Health Board recognizing his

46

00:02:09,618 --> 00:02:14,360

passionate nulla faltering commitment to

47

00:02:11,750 --> 00:02:17,750

care as in Carmarthen so well done to

48

00:02:14,360 --> 00:02:19,700

him and we back to tonight I have the

49

00:02:17,750 --> 00:02:21,199

pleasure to introduce to our guest speak

50

00:02:19,699 --> 00:02:24,378

of the evening which is mr. Ben Hanlin

51

00:02:21,199 --> 00:02:26,479

Jones a brent was born in Aberystwyth

52

00:02:24,378 --> 00:02:28,848

and brought up in the lamp in Terraria

53

00:02:26,479 --> 00:02:31,518

before moving to Oxford where up until

54

00:02:28,848 --> 00:02:33,500

three years ago he spent 22 well

55

00:02:31,519 --> 00:02:35,870

respected years employed as a hospital

56

00:02:33,500 --> 00:02:39,530

porter a John Radcliffe Hospital in

57

00:02:35,870 --> 00:02:41,780

Oxford when became interested in UFOs

58
00:02:39,530 --> 00:02:45,259
and various other conspiracy theories in

59
00:02:41,780 --> 00:02:46,800
the late 1990s he started his website

60
00:02:45,259 --> 00:02:50,009
mark hospital porter

61
00:02:46,800 --> 00:02:52,500
against the New World Order in 2006 i

62
00:02:50,009 --> 00:02:55,679
believe and it has thousands of visitors

63
00:02:52,500 --> 00:02:57,030
every year every day he regularly

64
00:02:55,680 --> 00:02:59,129
attends and delivers talks and

65
00:02:57,030 --> 00:03:02,189
discussions all over Britain on a wide

66
00:02:59,129 --> 00:03:07,229
range of subjects is talk this evening

67
00:03:02,189 --> 00:03:08,759
is entitled energy politics and UFOs now

68
00:03:07,229 --> 00:03:10,199
he's traveled a good distance today to

69
00:03:08,759 --> 00:03:12,030
be with us this evening so without

70
00:03:10,199 --> 00:03:23,189
further ado please give a warm sulfone

71
00:03:12,030 --> 00:03:24,509
welcome to mr. Ben Hanlin jokes thank

72
00:03:23,189 --> 00:03:26,609
you very much thank you so much in d can

73
00:03:24,509 --> 00:03:30,870
you all hear me thanks for thanks oh

74
00:03:26,610 --> 00:03:32,430
thanks for that just start this up i'm

75
00:03:30,870 --> 00:03:35,129
making them all of your record it's so

76
00:03:32,430 --> 00:03:40,050
great a thing it's not visiting videoed

77
00:03:35,129 --> 00:03:42,000
got a separate video be made alright

78
00:03:40,050 --> 00:03:45,650
some other any Hospital porters here

79
00:03:42,000 --> 00:03:50,039
this evening no I'm at the wrong meeting

80
00:03:45,650 --> 00:03:52,860
there yeah the eye shadow come dive on

81
00:03:50,039 --> 00:03:54,689
demand I own now another leak okay now i

82
00:03:52,860 --> 00:03:58,530
can't speak welsh very well and the

83
00:03:54,689 --> 00:04:02,400
Rusties hell now I used to I got family

84
00:03:58,530 --> 00:04:06,330
for speaking oh I never see um but my

85
00:04:02,400 --> 00:04:08,219
name is Ben emily jones and i am an ex

86

00:04:06,330 --> 00:04:11,910
hospital porter as you just heard and

87
00:04:08,219 --> 00:04:14,489
then I do hail from Wales originally and

88
00:04:11,909 --> 00:04:16,199
but my accent is east of the border as

89
00:04:14,489 --> 00:04:19,319
you can tell I've lost my accent in the

90
00:04:16,199 --> 00:04:21,238
intervening years but I still feel like

91
00:04:19,319 --> 00:04:24,120
a Welsh boy in fact I've got something

92
00:04:21,238 --> 00:04:26,279
more appropriate to wear than this yeah

93
00:04:24,120 --> 00:04:28,459
I mind not gonna do the full monty don't

94
00:04:26,279 --> 00:04:28,459
worry

95
00:04:29,620 --> 00:04:40,569
dude yeah that's better that's more like

96
00:04:33,370 --> 00:04:45,879
it let's have another Grand Slam this

97
00:04:40,569 --> 00:04:50,918
year shall we yay yes oh that's right

98
00:04:45,879 --> 00:04:53,829
please sir Mike thanks very much this is

99
00:04:50,918 --> 00:04:56,859
me the porter in Buda I was a hospital

100
00:04:53,829 --> 00:04:58,839

porter for 23 years and lost my job in

101

00:04:56,860 --> 00:05:03,669

rather mysterious circumstances I can't

102

00:04:58,839 --> 00:05:05,049

really detail this evening but it was

103

00:05:03,668 --> 00:05:06,549

suspicious and I think it was related to

104

00:05:05,050 --> 00:05:09,310

what I'm doing now I'm one of several

105

00:05:06,550 --> 00:05:10,720

people who has had these experiences in

106

00:05:09,310 --> 00:05:16,389

their employment and through their

107

00:05:10,720 --> 00:05:18,729

career which really does kind of make a

108

00:05:16,389 --> 00:05:20,470

little bit suspicious makes it a little

109

00:05:18,728 --> 00:05:23,050

bit I think people should be asking

110

00:05:20,470 --> 00:05:25,720

serious questions when I'm more than one

111

00:05:23,050 --> 00:05:31,240

person suffers through their employment

112

00:05:25,720 --> 00:05:35,530

in this way and that's as not have it or

113

00:05:31,240 --> 00:05:38,259

Providence I am them I am definitely i'm

114

00:05:35,529 --> 00:05:39,788

still in mine I put a roof over my got

115
00:05:38,259 --> 00:05:42,519
food on base at least I can't complain

116
00:05:39,788 --> 00:05:45,279
I've got another job and things are

117
00:05:42,519 --> 00:05:47,109
going well so I and because the hospital

118
00:05:45,279 --> 00:05:48,819
and the NHS generally so stressful now i

119
00:05:47,110 --> 00:05:52,210
miss it less unless every minute i

120
00:05:48,819 --> 00:05:54,219
really do so maybe it's for the best but

121
00:05:52,209 --> 00:05:58,149
sims you sure there's no hospital

122
00:05:54,220 --> 00:05:59,770
Porter's I'm other wrong meeting no not

123
00:05:58,149 --> 00:06:03,969
to worry not to worry oh I'll hang

124
00:05:59,769 --> 00:06:06,668
around for a bit but basically what I'm

125
00:06:03,970 --> 00:06:08,949
here thought you about today is both

126
00:06:06,668 --> 00:06:11,409
energy politics and UFOs and you might

127
00:06:08,949 --> 00:06:14,580
think there's no cake are possibly be a

128
00:06:11,410 --> 00:06:17,020
connection between those disparates

129
00:06:14,579 --> 00:06:18,879
items they're too tiny different

130
00:06:17,019 --> 00:06:21,339
subjects how do they possibly care less

131
00:06:18,879 --> 00:06:23,348
what they do it and I will explain but

132
00:06:21,339 --> 00:06:25,538
it's a long way round and it will take a

133
00:06:23,348 --> 00:06:27,038
while to get through all the details but

134
00:06:25,538 --> 00:06:28,839
it's important to understand the details

135
00:06:27,038 --> 00:06:32,829
before you can understand what's going

136
00:06:28,839 --> 00:06:35,099
on in the world now um can I the next

137
00:06:32,829 --> 00:06:37,589
slide please

138
00:06:35,100 --> 00:06:39,990
so what is a UFO well UFO stands for

139
00:06:37,589 --> 00:06:41,069
unidentified flying objects as you well

140
00:06:39,990 --> 00:06:43,019
know in this group because you've

141
00:06:41,069 --> 00:06:45,689
studied them carefully basically

142
00:06:43,019 --> 00:06:48,089
anything you see in the sky which you do

143

00:06:45,689 --> 00:06:50,310
not recognize is by definition a UFO

144
00:06:48,089 --> 00:06:52,409
unidentified flying object this could be

145
00:06:50,310 --> 00:06:54,300
an unusual bird of a species you're not

146
00:06:52,410 --> 00:06:56,700
familiar where there could be a kite it

147
00:06:54,300 --> 00:07:02,160
could be a foreign aircraft or a design

148
00:06:56,699 --> 00:07:04,379
you're not familiar with etc etc now the

149
00:07:02,160 --> 00:07:06,480
official line is that basically all

150
00:07:04,379 --> 00:07:08,219
these things are explicable and they

151
00:07:06,480 --> 00:07:09,629
would be if you couldn't if everyone

152
00:07:08,220 --> 00:07:11,700
could just get a bit closer and see what

153
00:07:09,629 --> 00:07:13,350
they were now obviously in many cases

154
00:07:11,699 --> 00:07:15,449
maybe the majority of cases of course

155
00:07:13,350 --> 00:07:17,340
people are mistaken they mystique a

156
00:07:15,449 --> 00:07:19,139
mistake mundane everyday objects for

157
00:07:17,339 --> 00:07:21,209

things like they just think what's that

158

00:07:19,139 --> 00:07:23,099

and they don't know what it is but if

159

00:07:21,209 --> 00:07:24,810

maybe in different circumstances they

160

00:07:23,100 --> 00:07:26,310

wouldn't know what it is but I believe

161

00:07:24,810 --> 00:07:28,470

it is false I'll say that from the start

162

00:07:26,310 --> 00:07:30,990

I believe it is false to suggest that

163

00:07:28,470 --> 00:07:35,040

all unidentified flying object

164

00:07:30,990 --> 00:07:37,079

experiences can be explained us and I'm

165

00:07:35,040 --> 00:07:38,129

sure that had an interest in the subject

166

00:07:37,079 --> 00:07:42,269

you will have come to a similar

167

00:07:38,129 --> 00:07:43,620

conclusion but there's all kinds of

168

00:07:42,269 --> 00:07:45,509

different UFOs some people see them very

169

00:07:43,620 --> 00:07:48,149

close this is one of the most common

170

00:07:45,509 --> 00:07:50,159

varieties you need a saucer is the

171

00:07:48,149 --> 00:07:53,339

original flying saucer a disc-shaped

172
00:07:50,160 --> 00:07:56,400
object needs seen quite commonly next

173
00:07:53,339 --> 00:07:58,259
slide please this is another common

174
00:07:56,399 --> 00:08:00,810
variety is a triangular-shaped object

175
00:07:58,259 --> 00:08:03,180
with lights on the corn very often these

176
00:08:00,810 --> 00:08:05,670
do have lights on the corners very often

177
00:08:03,180 --> 00:08:07,079
they're black in color that sometimes

178
00:08:05,670 --> 00:08:10,830
seen in local areas for instance to the

179
00:08:07,079 --> 00:08:13,529
north of England and in Belgium there

180
00:08:10,829 --> 00:08:15,899
was a wide range of sightings of these

181
00:08:13,529 --> 00:08:18,000
across Belgium in in the late nineteen

182
00:08:15,899 --> 00:08:20,669
eighty nine to nineteen ninety this is a

183
00:08:18,000 --> 00:08:23,970
photograph taken one in Belgium in 1919

184
00:08:20,670 --> 00:08:25,850
next slide please this is another

185
00:08:23,970 --> 00:08:28,680
familiar type of object it is a

186
00:08:25,850 --> 00:08:31,080
spherical object I've actually seen one

187
00:08:28,680 --> 00:08:32,820
of these myself not up close like this

188
00:08:31,079 --> 00:08:34,978
this is actually an artist's impression

189
00:08:32,820 --> 00:08:37,740
of it a real-life encounter took place

190
00:08:34,979 --> 00:08:40,919
in Scotland in 1970 knowing the man

191
00:08:37,740 --> 00:08:42,779
called Roberts named Robert Taylor was

192
00:08:40,918 --> 00:08:44,789
walking through the woods one day and he

193
00:08:42,779 --> 00:08:46,799
came across this and it you didn't only

194
00:08:44,789 --> 00:08:48,149
see it it actually ripped his trousers

195
00:08:46,799 --> 00:08:48,569
actually kept went for him and ripped

196
00:08:48,149 --> 00:08:50,429
his trail

197
00:08:48,570 --> 00:08:52,250
roses and I've seen those trousers I put

198
00:08:50,429 --> 00:08:56,189
my fingers through the holes made by

199
00:08:52,250 --> 00:08:59,000
this strange object and so that's

200

00:08:56,190 --> 00:09:01,860
another common form a next slide please

201
00:08:59,000 --> 00:09:03,929
this is a triangular shaped or pyramidal

202
00:09:01,860 --> 00:09:06,120
object different from the black triangle

203
00:09:03,929 --> 00:09:09,419
this is like a solid tetrahedron or

204
00:09:06,120 --> 00:09:11,310
pyramid a tetra meet a tetrahedron is

205
00:09:09,419 --> 00:09:15,389
like a pyramid with a triangular base so

206
00:09:11,309 --> 00:09:17,269
it's triangles on four sides and this is

207
00:09:15,389 --> 00:09:19,769
an artist's impression of one scene

208
00:09:17,269 --> 00:09:22,949
Rendlesham forest in 1982 fay very

209
00:09:19,769 --> 00:09:24,539
famous incident in which a group of

210
00:09:22,950 --> 00:09:26,129
american airmen many many witnesses

211
00:09:24,539 --> 00:09:28,319
encounter strange things in the woods

212
00:09:26,129 --> 00:09:32,189
it's one of the most famous sightings of

213
00:09:28,320 --> 00:09:36,270
all times next slide please this is a

214
00:09:32,190 --> 00:09:38,640

chevron shaped object which is racine

215

00:09:36,269 --> 00:09:41,909

it's basically similar to the one seen

216

00:09:38,639 --> 00:09:43,199

over Phoenix Arizona in 1997 contrary to

217

00:09:41,909 --> 00:09:45,480

what you might hurt and they weren't

218

00:09:43,200 --> 00:09:47,970

just flares they watched warning flowers

219

00:09:45,480 --> 00:09:49,769

there was a solid object very large flew

220

00:09:47,970 --> 00:09:52,200

over the City of Phoenix are sitting on

221

00:09:49,769 --> 00:09:55,199

million people in Arizona USA next slide

222

00:09:52,200 --> 00:09:56,910

please and it seems that weather

223

00:09:55,200 --> 00:10:01,890

balloons are fitted with ruh bars these

224

00:09:56,909 --> 00:10:06,000

days it's a infamous or famous headline

225

00:10:01,889 --> 00:10:09,449

from the Sun and well basically this

226

00:10:06,000 --> 00:10:11,129

happened in Lincolnshire where a wind

227

00:10:09,450 --> 00:10:13,290

turbine suffered an accident was struck

228

00:10:11,129 --> 00:10:14,549

by some objects and no one knows exactly

229
00:10:13,289 --> 00:10:16,709
what it was but was big enough to knock

230
00:10:14,549 --> 00:10:19,289
the hell out of it and break one of the

231
00:10:16,710 --> 00:10:21,300
blaze and Bend another one so it was

232
00:10:19,289 --> 00:10:23,069
really quite unremarkable the incident

233
00:10:21,299 --> 00:10:24,719
that that's still remains unsolved

234
00:10:23,070 --> 00:10:26,570
there's been many other strange

235
00:10:24,720 --> 00:10:30,480
goings-on in Lincolnshire including

236
00:10:26,570 --> 00:10:32,730
sheath being stolen and similar things

237
00:10:30,480 --> 00:10:37,009
strange odd like to be seen in the sky

238
00:10:32,730 --> 00:10:41,159
etc next slide please of course them

239
00:10:37,009 --> 00:10:43,610
when I destroy them and UFOs like we

240
00:10:41,159 --> 00:10:45,839
often hear me use the word artifact I

241
00:10:43,610 --> 00:10:48,000
don't often use words like spaceship

242
00:10:45,840 --> 00:10:50,160
spacecraft etc even though that might be

243
00:10:48,000 --> 00:10:53,639
accurate in many cases artifact is a bit

244
00:10:50,159 --> 00:10:54,990
more wide-ranging because we it may be a

245
00:10:53,639 --> 00:10:58,480
bit of an assumption to say things like

246
00:10:54,990 --> 00:11:01,250
spaceship or spacecraft artifact is more

247
00:10:58,480 --> 00:11:03,110
implies an up an artificially created

248
00:11:01,250 --> 00:11:06,919
object should not terrestrial it's not

249
00:11:03,110 --> 00:11:11,840
made by humans and but it's quite clear

250
00:11:06,919 --> 00:11:13,519
that these objects do appear to function

251
00:11:11,840 --> 00:11:16,639
as some kind of transportation device

252
00:11:13,519 --> 00:11:18,169
for biological beings of some kind or

253
00:11:16,639 --> 00:11:20,899
another and this is one of the most

254
00:11:18,169 --> 00:11:24,039
commonly iconic gray with a big black

255
00:11:20,899 --> 00:11:26,240
eyes short creature hairless gray body

256
00:11:24,039 --> 00:11:29,179
this is one of the most commonly seen

257

00:11:26,240 --> 00:11:34,039
and regularly encountered by witnesses

258
00:11:29,179 --> 00:11:35,419
next slide and these are these are a bit

259
00:11:34,039 --> 00:11:37,730
different there more human looking these

260
00:11:35,419 --> 00:11:40,549
actually czar the Nordics they're the

261
00:11:37,730 --> 00:11:42,139
kind of aliens you could almost pass in

262
00:11:40,549 --> 00:11:44,029
the street and not really look at them

263
00:11:42,139 --> 00:11:45,529
if they were wearing normal clothes you

264
00:11:44,029 --> 00:11:47,149
might just think I'll a bit strange but

265
00:11:45,529 --> 00:11:48,409
you wouldn't immediately you wouldn't

266
00:11:47,149 --> 00:11:50,569
react the same way as you did if you saw

267
00:11:48,409 --> 00:11:52,309
under grace they tend to have very

268
00:11:50,570 --> 00:11:54,320
bright blond hair and deep blue eyes

269
00:11:52,309 --> 00:11:56,479
they often have exaggerated features

270
00:11:54,320 --> 00:11:58,640
like speeches like extra large eyes and

271
00:11:56,480 --> 00:12:03,710

extra long chin things like that next

272

00:11:58,639 --> 00:12:06,169
slide please now this is a artist

273

00:12:03,710 --> 00:12:07,670
impression of a creature seen by a guy

274

00:12:06,169 --> 00:12:10,069
like a Whitley Strieber in the United

275

00:12:07,669 --> 00:12:11,839
States but this Reba was authorized to

276

00:12:10,070 --> 00:12:14,120
write books on various kinds of things

277

00:12:11,840 --> 00:12:15,889
and then he had an amazing encounter

278

00:12:14,120 --> 00:12:17,870
with preachers with several in for the

279

00:12:15,889 --> 00:12:20,149
creature like this and after that he

280

00:12:17,870 --> 00:12:23,000
decided to write about his experiences

281

00:12:20,149 --> 00:12:24,439
and he's a book called chameleon which

282

00:12:23,000 --> 00:12:26,720
was made into an excellent film starring

283

00:12:24,440 --> 00:12:29,060
Christopher Walken Eric Clapton did

284

00:12:26,720 --> 00:12:32,660
score it's very well worth seeing next

285

00:12:29,059 --> 00:12:34,489
slide please this is a reptilian

286
00:12:32,659 --> 00:12:38,509
humanoid now this is another creature

287
00:12:34,490 --> 00:12:40,700
very often seen by witnesses these

288
00:12:38,509 --> 00:12:43,840
creatures tend to be often more likely

289
00:12:40,700 --> 00:12:46,640
associated with unpleasant encounters

290
00:12:43,840 --> 00:12:49,190
the brilliant Australian researcher Mary

291
00:12:46,639 --> 00:12:51,439
Rodwell has looked into all kinds of

292
00:12:49,190 --> 00:12:54,080
alien contact experiences throughout her

293
00:12:51,440 --> 00:12:56,990
career and that's what she has noted

294
00:12:54,080 --> 00:12:58,610
these are like a human they tend to be a

295
00:12:56,990 --> 00:13:01,370
bit short bit taller than average man

296
00:12:58,610 --> 00:13:04,370
and reptilian features in other words

297
00:13:01,370 --> 00:13:06,259
they have scaly skin lizard-like eyes

298
00:13:04,370 --> 00:13:09,499
etc and think

299
00:13:06,259 --> 00:13:10,609
that there you'll hear a lot about some

300
00:13:09,499 --> 00:13:12,249
of these if you look into the works of

301
00:13:10,609 --> 00:13:15,168
people are David Icke because these

302
00:13:12,249 --> 00:13:16,369
apparently he talks about reptilian

303
00:13:15,168 --> 00:13:18,739
humanoids that could disguise themselves

304
00:13:16,369 --> 00:13:21,399
as humans and I'll go into a bit more

305
00:13:18,739 --> 00:13:23,778
detail about that later in the talk but

306
00:13:21,399 --> 00:13:25,038
it's not necessarily the same phenomenon

307
00:13:23,778 --> 00:13:28,208
we're dealing with here there may be

308
00:13:25,038 --> 00:13:31,458
something different next slide please

309
00:13:28,208 --> 00:13:33,678
now this is what's known as a romantic

310
00:13:31,458 --> 00:13:35,298
and these are a lot of talk creatures

311
00:13:33,678 --> 00:13:37,519
that look fearsome but they very often

312
00:13:35,298 --> 00:13:41,538
quite benevolent I should point out that

313
00:13:37,519 --> 00:13:44,749
some aliens whatever you want to call

314

00:13:41,538 --> 00:13:46,548
them some people have encounters with

315
00:13:44,749 --> 00:13:48,350
them which are very loving and

316
00:13:46,548 --> 00:13:50,239
benevolent these creatures are some was

317
00:13:48,350 --> 00:13:51,918
quite spiritual and they're almost like

318
00:13:50,239 --> 00:13:56,720
spiritual gurus who want to help us

319
00:13:51,918 --> 00:13:58,428
evolve on a ferret level others seem to

320
00:13:56,720 --> 00:14:02,449
be disinterested the majority seem to

321
00:13:58,428 --> 00:14:05,119
point disinterested and neutral towards

322
00:14:02,448 --> 00:14:08,149
us and they appear to be almost studying

323
00:14:05,119 --> 00:14:10,519
us as a scientist my study a an animal

324
00:14:08,149 --> 00:14:12,708
in the laboratory those seem to be the

325
00:14:10,519 --> 00:14:15,139
majority there are there are some and

326
00:14:12,708 --> 00:14:18,078
luckily is a minority which appear to

327
00:14:15,139 --> 00:14:19,730
have a dark gender they appear to be

328
00:14:18,078 --> 00:14:22,008

very very hateful and very malevolent

329

00:14:19,730 --> 00:14:24,199

and they wish to inflict pain on us and

330

00:14:22,009 --> 00:14:26,149

they do injuries on people there's

331

00:14:24,198 --> 00:14:28,448

several people died and their deaths

332

00:14:26,149 --> 00:14:31,159

have been associated with contact with

333

00:14:28,448 --> 00:14:32,928

extraterrestrial sets the

334

00:14:31,159 --> 00:14:34,909

extraterrestrials have a play exhibit a

335

00:14:32,928 --> 00:14:36,499

very very wide array of behaviors and

336

00:14:34,909 --> 00:14:40,009

they seem to have a lot of different

337

00:14:36,499 --> 00:14:43,069

motives and agendas so I never I never

338

00:14:40,009 --> 00:14:44,418

go along with people who claim that the

339

00:14:43,068 --> 00:14:45,889

same agenda can be applied to all

340

00:14:44,418 --> 00:14:48,889

extraterrestrials because I don't really

341

00:14:45,889 --> 00:14:51,709

that's the case but I mean very often

342

00:14:48,889 --> 00:14:53,178

people have encounters with these and

343
00:14:51,708 --> 00:14:55,278
there's a famous witness who's been on

344
00:14:53,178 --> 00:14:56,389
TV lately talking about how he's

345
00:14:55,278 --> 00:14:58,458
actually married to one of these

346
00:14:56,389 --> 00:15:00,168
creatures in the in the in the spaceship

347
00:14:58,458 --> 00:15:01,518
he has like a second wife so awkward

348
00:15:00,168 --> 00:15:03,978
because he has a wife in this world and

349
00:15:01,519 --> 00:15:05,688
a family but some he doesn't meet up

350
00:15:03,979 --> 00:15:08,889
with his wife on the spacecraft his

351
00:15:05,688 --> 00:15:11,328
other wife and they I can't imagine to

352
00:15:08,889 --> 00:15:12,889
begin to imagine what his home life is

353
00:15:11,328 --> 00:15:15,378
long but his family life is like but

354
00:15:12,889 --> 00:15:17,209
some all kinds of weird wonderful

355
00:15:15,379 --> 00:15:19,278
creatures every variety you can imagine

356
00:15:17,208 --> 00:15:20,659
next slide please you can't imagine the

357
00:15:19,278 --> 00:15:22,428
kind of strange creatures you sometimes

358
00:15:20,659 --> 00:15:24,289
come across in the various it captures

359
00:15:22,428 --> 00:15:29,360
and I don't what the hell is that doing

360
00:15:24,289 --> 00:15:31,698
that during me Nick Pope blessing do you

361
00:15:29,360 --> 00:15:34,999
know about Nick podium Nick Pope got

362
00:15:31,698 --> 00:15:37,609
married to what human woman apparently I

363
00:15:34,999 --> 00:15:40,100
think she's human anyone but some didn't

364
00:15:37,610 --> 00:15:41,389
go very well at first because he was

365
00:15:40,100 --> 00:15:43,308
standing in front of the altar beside

366
00:15:41,389 --> 00:15:45,169
her and the vicar says Nicholas do you

367
00:15:43,308 --> 00:15:46,308
take this woman is about to be your

368
00:15:45,169 --> 00:15:48,289
lawful wedded wife to love and cherish

369
00:15:46,308 --> 00:15:50,419
all this day forward till death do you

370
00:15:48,289 --> 00:15:55,188
part Nick replied I can neither confirm

371

00:15:50,419 --> 00:15:58,519
nor deny that that's enough Nick

372
00:15:55,188 --> 00:16:02,088
potpourri my mother Nick papist our next

373
00:15:58,519 --> 00:16:04,909
slide please now this is a picture of my

374
00:16:02,089 --> 00:16:06,259
own encounter and I was going to say

375
00:16:04,909 --> 00:16:08,838
artist impression but it's not really

376
00:16:06,259 --> 00:16:11,240
accurate is it I was walking through

377
00:16:08,839 --> 00:16:14,749
Oxford and I saw a white spherical

378
00:16:11,240 --> 00:16:16,909
object at a distance it was its parent

379
00:16:14,749 --> 00:16:19,399
sizes about the size of the quarter of

380
00:16:16,909 --> 00:16:22,039
the size of the moon and it was hideous

381
00:16:19,399 --> 00:16:23,328
I never worked out exactly how big it

382
00:16:22,039 --> 00:16:25,669
was but it must've been some size

383
00:16:23,328 --> 00:16:28,308
because a cloud passed in front of it an

384
00:16:25,669 --> 00:16:31,759
elevation of about like bats or

385
00:16:28,308 --> 00:16:34,428

elevation so um it must have been some

386

00:16:31,759 --> 00:16:35,990

considerable size and I did I did look

387

00:16:34,428 --> 00:16:37,669

into iron try to eliminate the obvious

388

00:16:35,990 --> 00:16:39,558

things like I checked to see if there

389

00:16:37,669 --> 00:16:41,748

are any balloons flying that day any

390

00:16:39,558 --> 00:16:43,850

balloon sargas well this was just before

391

00:16:41,749 --> 00:16:46,399

new year so it was unlikely and very

392

00:16:43,850 --> 00:16:48,048

windy day this thing was just standing

393

00:16:46,399 --> 00:16:51,798

still in the sky even though there's a

394

00:16:48,048 --> 00:16:54,379

very strong wind blowing but some that I

395

00:16:51,798 --> 00:16:57,980

thought it's very strange um I did

396

00:16:54,379 --> 00:16:59,269

report it to nick pope some UFO desk so

397

00:16:57,980 --> 00:17:01,159

i'm looking forward to reading about my

398

00:16:59,269 --> 00:17:04,640

report and they and the recently

399

00:17:01,159 --> 00:17:07,759

declassified files hey my next slide

400
00:17:04,640 --> 00:17:10,959
please now we're going to go to energy

401
00:17:07,759 --> 00:17:13,308
now i hope you've got lots of it tonight

402
00:17:10,959 --> 00:17:17,230
but what is energy we also don't know

403
00:17:13,308 --> 00:17:19,639
what it means but how do you define it

404
00:17:17,230 --> 00:17:23,000
well it's it's very difficult to

405
00:17:19,640 --> 00:17:24,770
actually define even for expert sandy

406
00:17:23,000 --> 00:17:26,720
they'll sort of a man are but it's

407
00:17:24,769 --> 00:17:29,019
basically it's an in it's an observed

408
00:17:26,720 --> 00:17:30,620
quantity of the universe it is

409
00:17:29,019 --> 00:17:34,609
essentially it is

410
00:17:30,619 --> 00:17:37,519
causes change and adaptation oiling any

411
00:17:34,609 --> 00:17:41,599
kind of change or alteration of the

412
00:17:37,519 --> 00:17:43,910
universe is requires energy but it can't

413
00:17:41,599 --> 00:17:45,949
be defined even piano people I Professor

414
00:17:43,910 --> 00:17:48,550
Brian Cox in are these these experts

415
00:17:45,950 --> 00:17:50,960
they've got a TV yes I don't really know

416
00:17:48,549 --> 00:17:53,509
I'm very handsome and very clever but I

417
00:17:50,960 --> 00:17:55,700
don't know what energy is you know

418
00:17:53,509 --> 00:17:58,329
they'll they have to admit these experts

419
00:17:55,700 --> 00:18:01,819
that they're not experts in that respect

420
00:17:58,329 --> 00:18:03,558
it's different kinds of energy and of

421
00:18:01,819 --> 00:18:05,450
course our body to produce energy our

422
00:18:03,558 --> 00:18:09,889
bodies produce energy from the food we

423
00:18:05,450 --> 00:18:12,410
eat which we can bust in US inside us is

424
00:18:09,890 --> 00:18:15,259
combustion it's the same chemical

425
00:18:12,410 --> 00:18:18,019
reaction you get from fire only because

426
00:18:15,259 --> 00:18:20,119
the various carbon hydrocarbons and

427
00:18:18,019 --> 00:18:21,710
things in our food are mixed with that

428

00:18:20,119 --> 00:18:23,419
we breathe oxygen this releases energy

429
00:18:21,710 --> 00:18:25,069
and it's for our muscles and if I'm

430
00:18:23,420 --> 00:18:27,800
happy arm like that I've got my arm up

431
00:18:25,069 --> 00:18:30,529
like that it is requires energy for me

432
00:18:27,799 --> 00:18:32,928
the whole my arm in a position the the

433
00:18:30,529 --> 00:18:35,740
muscles are burning literally the food I

434
00:18:32,929 --> 00:18:38,600
eat the energy from the food I eat into

435
00:18:35,740 --> 00:18:41,000
energy which allows me to overcome the

436
00:18:38,599 --> 00:18:43,669
force of gravity to hold my arm and I

437
00:18:41,000 --> 00:18:47,869
shouldn't do that mission so wrong

438
00:18:43,670 --> 00:18:50,390
meeting again but some that's muscle

439
00:18:47,869 --> 00:18:56,000
powers basically as it is a part of how

440
00:18:50,390 --> 00:18:57,860
that works and next slide please now

441
00:18:56,000 --> 00:19:00,170
energy there's other forms of energy of

442
00:18:57,859 --> 00:19:03,109

course that is artificial energy energy

443

00:19:00,170 --> 00:19:05,000

that we get from sources outside our

444

00:19:03,109 --> 00:19:07,669

bodies which we actually burn outside

445

00:19:05,000 --> 00:19:09,589

our bodies in machines and this could be

446

00:19:07,670 --> 00:19:10,880

something as simple as a campfire and

447

00:19:09,589 --> 00:19:12,529

something that's complicated as a space

448

00:19:10,880 --> 00:19:14,480

rocket but it's essentially the same

449

00:19:12,529 --> 00:19:16,879

thing we're taking energy from the

450

00:19:14,480 --> 00:19:19,779

environment and processing it through

451

00:19:16,880 --> 00:19:21,620

combustion to release the energy and

452

00:19:19,779 --> 00:19:23,058

there's other reactions course like

453

00:19:21,619 --> 00:19:25,308

nuclear reactions which I'll come to as

454

00:19:23,058 --> 00:19:28,190

well which also release energy but this

455

00:19:25,308 --> 00:19:32,000

is basically how this is basically the

456

00:19:28,190 --> 00:19:33,710

majority of the energy we have in our

457
00:19:32,000 --> 00:19:35,569
society this is the energy which we burn

458
00:19:33,710 --> 00:19:37,759
our side of body comes from oil in the

459
00:19:35,569 --> 00:19:40,309
modern world and for the last century or

460
00:19:37,759 --> 00:19:42,099
more it comes from oil and oil is

461
00:19:40,309 --> 00:19:45,490
obtained from underground

462
00:19:42,099 --> 00:19:46,659
it is drilled foot like for this oil rig

463
00:19:45,490 --> 00:19:48,940
it for this is normally from the North

464
00:19:46,660 --> 00:19:51,788
Sea and is drilling the vast oil

465
00:19:48,940 --> 00:19:54,160
reserves from deep below that's the

466
00:19:51,788 --> 00:19:56,640
seabed which will lay down billions of

467
00:19:54,160 --> 00:19:58,779
years ago or millions of years ago by

468
00:19:56,640 --> 00:20:00,220
animal life unless well that's a

469
00:19:58,779 --> 00:20:02,019
contentious issue are going to come onto

470
00:20:00,220 --> 00:20:03,519
all right so I may sometimes say things

471
00:20:02,019 --> 00:20:06,579
this evening which I won't necessarily

472
00:20:03,519 --> 00:20:08,619
agree with and I'll make you aware that

473
00:20:06,579 --> 00:20:10,569
there is another side of the story but I

474
00:20:08,619 --> 00:20:12,428
might just mention it for convenience is

475
00:20:10,569 --> 00:20:16,359
safe which is to tell a certain part of

476
00:20:12,429 --> 00:20:20,288
the story but the energies everything

477
00:20:16,359 --> 00:20:24,699
energy is the if they call it black gold

478
00:20:20,288 --> 00:20:27,009
and it is oil oil is the oil industry

479
00:20:24,700 --> 00:20:28,960
covers almost everything in terms of our

480
00:20:27,009 --> 00:20:33,099
civilization or everything all is

481
00:20:28,960 --> 00:20:34,600
everything it is run off oil it's been

482
00:20:33,099 --> 00:20:37,538
described as the world's biggest denius

483
00:20:34,599 --> 00:20:41,349
industry I would say it's actually it's

484
00:20:37,538 --> 00:20:43,990
not it is it is industry oil is industry

485

00:20:41,349 --> 00:20:45,699
it is the lifeblood of civilization but

486
00:20:43,990 --> 00:20:47,650
it's the fuel and it's the lubricant it

487
00:20:45,700 --> 00:20:50,259
is everything when it comes to

488
00:20:47,650 --> 00:20:51,850
civilization because nearly all our fuel

489
00:20:50,259 --> 00:20:53,379
comes from it we also of course have

490
00:20:51,849 --> 00:20:56,579
other forms which I'm going to talk

491
00:20:53,380 --> 00:21:00,220
about coal is another one we burn coal

492
00:20:56,579 --> 00:21:01,928
in olden times we burned we didn't have

493
00:21:00,220 --> 00:21:03,519
oil really and we had vehicles or

494
00:21:01,929 --> 00:21:06,460
powered by coal in terms of steam

495
00:21:03,519 --> 00:21:09,250
engines steam engine steam railways comes

496
00:21:06,460 --> 00:21:10,690
things like that now those kinds of

497
00:21:09,250 --> 00:21:13,058
vehicles that kind of work is done by

498
00:21:10,690 --> 00:21:19,529
oil powered vehicles oil-powered

499
00:21:13,058 --> 00:21:22,779

machines and now then next slide please

500

00:21:19,529 --> 00:21:24,700

this is a normal part that is on land

501

00:21:22,779 --> 00:21:26,918

this is what's known as a nodding donkey

502

00:21:24,700 --> 00:21:29,319

and it is actually doing a similar job

503

00:21:26,919 --> 00:21:34,030

to the oil rig you just saw except it's

504

00:21:29,319 --> 00:21:36,250

on land and the thing about oil is we

505

00:21:34,029 --> 00:21:37,750

often think of the fact there's oil down

506

00:21:36,250 --> 00:21:40,779

there and all we have to do to get it up

507

00:21:37,750 --> 00:21:42,400

it's not quite that simple the oil has

508

00:21:40,779 --> 00:21:45,609

to come up which means it has to be

509

00:21:42,400 --> 00:21:48,580

under pressure incense the ground itself

510

00:21:45,609 --> 00:21:50,289

is squeezing the oil up because if we in

511

00:21:48,579 --> 00:21:52,359

order to suck the oil up we would have

512

00:21:50,289 --> 00:21:54,609

to have a pump and pump it up the thing

513

00:21:52,359 --> 00:21:55,289

is you'd need more energy to in some

514
00:21:54,609 --> 00:21:56,609
cases to

515
00:21:55,289 --> 00:21:59,279
on the pump and you'd actually get from

516
00:21:56,609 --> 00:22:01,289
the oil you extract at that point when

517
00:21:59,279 --> 00:22:03,180
that point is reached that oil well

518
00:22:01,289 --> 00:22:07,559
becomes useless it becomes spent and its

519
00:22:03,180 --> 00:22:09,360
in its abandoned so again that's there's

520
00:22:07,559 --> 00:22:10,559
been some issues where oil wells have

521
00:22:09,359 --> 00:22:12,569
been left alone for 20 years and people

522
00:22:10,559 --> 00:22:15,779
come back to them and there there's

523
00:22:12,569 --> 00:22:17,250
pressure again that's goes into the

524
00:22:15,779 --> 00:22:19,009
realm of abiotic oil which I'll talk

525
00:22:17,250 --> 00:22:21,000
more about in a minute in a minute but

526
00:22:19,009 --> 00:22:23,400
assuming at the moment this is a fossil

527
00:22:21,000 --> 00:22:25,680
fuel it's a finite resource it was laid

528
00:22:23,400 --> 00:22:28,259
down millions and billions of years ago

529
00:22:25,680 --> 00:22:31,890
went by fossils by microbial life which

530
00:22:28,259 --> 00:22:33,390
died then in which case it's gonna run

531
00:22:31,890 --> 00:22:35,580
it's not going to last forever it's not

532
00:22:33,390 --> 00:22:37,410
going to run out all together I mean

533
00:22:35,579 --> 00:22:38,819
when when humans are no longer able to

534
00:22:37,410 --> 00:22:41,009
use oil there's still be plenty of it

535
00:22:38,819 --> 00:22:43,529
left in the ground you'll just be in a

536
00:22:41,009 --> 00:22:45,420
state may be too deep or without enough

537
00:22:43,529 --> 00:22:47,970
pressure in areas that we can't access

538
00:22:45,420 --> 00:22:50,210
it well it costs too much money it took

539
00:22:47,970 --> 00:22:52,710
because there's too much money to ronic

540
00:22:50,210 --> 00:22:54,690
too much energy to actually extract the

541
00:22:52,710 --> 00:22:59,279
oil for us to actually get a net gain

542

00:22:54,690 --> 00:23:03,000
from the oil itself we extract now the

543
00:22:59,279 --> 00:23:07,740
next slide please this is a factory this

544
00:23:03,000 --> 00:23:10,710
is the it's the cipher of the Industrial

545
00:23:07,740 --> 00:23:12,870
Revolution that the big mass urban

546
00:23:10,710 --> 00:23:14,610
factory which is run off coal oil and

547
00:23:12,869 --> 00:23:17,099
any kind of energy if you imagine to

548
00:23:14,609 --> 00:23:21,000
produce things which our civilization

549
00:23:17,099 --> 00:23:22,740
needs and as you can see it's got a big

550
00:23:21,000 --> 00:23:25,829
cloud of black smoke coming out of it

551
00:23:22,740 --> 00:23:27,000
and that's a that's the downside of the

552
00:23:25,829 --> 00:23:29,129
use of fossil fuels which I'll talk more

553
00:23:27,000 --> 00:23:33,930
about in a little while next slide

554
00:23:29,130 --> 00:23:36,150
please there are alternatives there are

555
00:23:33,930 --> 00:23:38,480
other forms of energy which people use

556
00:23:36,150 --> 00:23:40,500

and this is one of them wind turbines

557

00:23:38,480 --> 00:23:42,029

this is one that was common it's very

558

00:23:40,500 --> 00:23:45,329

common often using this country since

559

00:23:42,029 --> 00:23:46,980

it's so windy like tonight but wind

560

00:23:45,329 --> 00:23:48,689

turbines have a disadvantage and like a

561

00:23:46,980 --> 00:23:50,640

lot of these alternative energy sources

562

00:23:48,690 --> 00:23:52,380

even though the energy the power to

563

00:23:50,640 --> 00:23:54,660

generate electricity is very simple it's

564

00:23:52,380 --> 00:23:56,430

a basically a big dynamo run by a big

565

00:23:54,660 --> 00:23:57,870

windmill and that generates electricity

566

00:23:56,430 --> 00:23:59,880

but there's these things are complicated

567

00:23:57,869 --> 00:24:01,739

to build they have a lot of overheads

568

00:23:59,880 --> 00:24:03,780

they need a lot of maintenance and they

569

00:24:01,740 --> 00:24:05,400

they don't last they often need

570

00:24:03,779 --> 00:24:07,440

repairing when they when the wind gets

571
00:24:05,400 --> 00:24:08,788
too high they often burn

572
00:24:07,440 --> 00:24:11,399
they catch fire and sometimes they

573
00:24:08,788 --> 00:24:15,750
struck by UFOs as well as we've seen so

574
00:24:11,398 --> 00:24:19,768
it's not not easy to run a grid of of

575
00:24:15,750 --> 00:24:21,028
wind turbines some very often some

576
00:24:19,769 --> 00:24:22,470
people say that these are not suitable

577
00:24:21,028 --> 00:24:27,778
for every part of the world next slide

578
00:24:22,470 --> 00:24:31,860
please this is a very important man in

579
00:24:27,778 --> 00:24:33,720
this story and he's what he the things

580
00:24:31,859 --> 00:24:35,038
he has said a very an important part of

581
00:24:33,720 --> 00:24:36,269
analyzing what we were going to talk

582
00:24:35,038 --> 00:24:37,980
about this evening this is Richard

583
00:24:36,269 --> 00:24:40,308
Heinberg Richard Heinberg is a

584
00:24:37,980 --> 00:24:43,889
journalist a teacher an ecologist and

585
00:24:40,308 --> 00:24:47,128
futurologists and he is he's written a

586
00:24:43,888 --> 00:24:50,808
book called the party's over great title

587
00:24:47,128 --> 00:24:53,339
azimuth great title yet he says some

588
00:24:50,808 --> 00:24:56,339
basically that the age of oil is coming

589
00:24:53,339 --> 00:24:57,898
to an end because it's no longer be

590
00:24:56,339 --> 00:24:59,849
possible to extract oil there's not

591
00:24:57,898 --> 00:25:01,168
enough oil efforts to extract and to use

592
00:24:59,849 --> 00:25:02,428
but that is gonna there's going to be a

593
00:25:01,169 --> 00:25:04,620
point where we won't be able to anymore

594
00:25:02,429 --> 00:25:07,230
and what he's referring to is what's

595
00:25:04,619 --> 00:25:09,599
known as peak oil what happens is that

596
00:25:07,230 --> 00:25:12,720
the oil production has been rising as

597
00:25:09,599 --> 00:25:14,699
new wells are discovered and they're

598
00:25:12,720 --> 00:25:18,750
being extracted more and more oil is

599

00:25:14,700 --> 00:25:20,399
being extracted um there's gonna what

600
00:25:18,750 --> 00:25:23,700
he's saying is that that of course is

601
00:25:20,398 --> 00:25:24,989
finite and he says that sooner or later

602
00:25:23,700 --> 00:25:26,159
we're going to run them we're gonna

603
00:25:24,990 --> 00:25:28,528
reach a point where we can't actually

604
00:25:26,159 --> 00:25:30,600
there's no more new oil wells defined

605
00:25:28,528 --> 00:25:33,509
are usable which are viable pressure

606
00:25:30,599 --> 00:25:36,750
which we can actually we can actually

607
00:25:33,509 --> 00:25:38,509
tap what's going to happen before that

608
00:25:36,750 --> 00:25:41,940
is there'll be a peak in production

609
00:25:38,509 --> 00:25:43,710
it'll be there'll be a peak when the

610
00:25:41,940 --> 00:25:45,538
rise in the production one's going to

611
00:25:43,710 --> 00:25:47,370
stop and it's going to turn downwards

612
00:25:45,538 --> 00:25:50,009
and from then onwards is going to be

613
00:25:47,369 --> 00:25:51,628

declining oil production and he doesn't

614

00:25:50,009 --> 00:25:53,399

know exactly when that Pete will occur

615

00:25:51,628 --> 00:25:55,678

he claims it's occurring around about

616

00:25:53,398 --> 00:25:57,148

now some people say happened a few years

617

00:25:55,679 --> 00:26:00,710

ago some paper so it's not going to

618

00:25:57,148 --> 00:26:02,609

happen till 2025 etc etc so not sure

619

00:26:00,710 --> 00:26:08,879

it's not the girl I met in the pub

620

00:26:02,609 --> 00:26:11,278

earlier Tara I'll call her back um so um

621

00:26:08,878 --> 00:26:12,449

when that happens is in its kind of a

622

00:26:11,278 --> 00:26:15,179

perfect storm from his perspective

623

00:26:12,450 --> 00:26:16,860

because at the same time oil demand and

624

00:26:15,179 --> 00:26:17,269

the need for oil is rising because the

625

00:26:16,859 --> 00:26:19,189

world is

626

00:26:17,269 --> 00:26:21,079

lapping countries in a third world are

627

00:26:19,190 --> 00:26:23,059

becoming more developed they're bringing

628
00:26:21,079 --> 00:26:24,799
in more they need more energy because

629
00:26:23,059 --> 00:26:26,179
they have a bit of a bigger

630
00:26:24,799 --> 00:26:29,180
infrastructure more developed and

631
00:26:26,180 --> 00:26:30,890
sophisticated technological and social

632
00:26:29,180 --> 00:26:32,420
infrastructure and you'll hear words

633
00:26:30,890 --> 00:26:34,100
that would infrastructure is a bit of a

634
00:26:32,420 --> 00:26:36,110
buzz word and you'll hear me say it

635
00:26:34,099 --> 00:26:41,659
several times than me because it is a

636
00:26:36,109 --> 00:26:43,399
part of this tale now Heinberg is his

637
00:26:41,660 --> 00:26:47,420
book is very interesting because at one

638
00:26:43,400 --> 00:26:50,210
point he compares our civilization to

639
00:26:47,420 --> 00:26:53,240
yeast because as you know if you do any

640
00:26:50,210 --> 00:26:54,829
brewing at home expect something you do

641
00:26:53,240 --> 00:26:57,829
something you do now with the price of

642
00:26:54,829 --> 00:26:59,539
beer in the pub going up you actually

643
00:26:57,829 --> 00:27:01,429
have a solution of sugar and various

644
00:26:59,539 --> 00:27:04,190
other substances which you then add h2

645
00:27:01,430 --> 00:27:07,190
and the yeast consumes the sugar to the

646
00:27:04,190 --> 00:27:09,860
point where you actually have a nice

647
00:27:07,190 --> 00:27:11,120
pint or glass of wine or whenever is

648
00:27:09,859 --> 00:27:13,039
called of alcohol which have been

649
00:27:11,119 --> 00:27:14,539
produced by the feast and then the yeast

650
00:27:13,039 --> 00:27:16,839
dies and it sinks to the bottom when you

651
00:27:14,539 --> 00:27:19,609
get this slime on the bottom and and

652
00:27:16,839 --> 00:27:22,039
Heinberg puts it very pithily actually

653
00:27:19,609 --> 00:27:24,109
he had a big statement on the page it

654
00:27:22,039 --> 00:27:27,019
says our human beings more intelligent

655
00:27:24,109 --> 00:27:28,609
than yeast you won't be very good dinner

656

00:27:27,019 --> 00:27:31,819
guests this guy he really wouldn't put

657
00:27:28,609 --> 00:27:32,990
you off your food but some he says

658
00:27:31,819 --> 00:27:34,909
basically that's what we're doing we're

659
00:27:32,990 --> 00:27:36,650
consuming we like the yeast consuming

660
00:27:34,910 --> 00:27:39,110
the sugar of a racist rate we're not

661
00:27:36,650 --> 00:27:40,759
rationing ourselves ete through it soon

662
00:27:39,109 --> 00:27:44,709
later I'll be gone and then we'll be

663
00:27:40,759 --> 00:27:48,259
like the yeast will just die now um I

664
00:27:44,710 --> 00:27:50,150
don't agree with Richard Heinberg that's

665
00:27:48,259 --> 00:27:52,879
important and I'll explain why this

666
00:27:50,150 --> 00:27:55,580
evening I think he's wrong on most

667
00:27:52,880 --> 00:27:59,230
things in several different ways and

668
00:27:55,579 --> 00:28:01,909
I'll explain why he is but in order to

669
00:27:59,230 --> 00:28:04,880
grasp this subject it's important to see

670
00:28:01,910 --> 00:28:07,070

the issue through his eyes you had to

671

00:28:04,880 --> 00:28:10,160
understand the point in order to

672

00:28:07,069 --> 00:28:12,099
actually understand his points in order

673

00:28:10,160 --> 00:28:16,630
to see exactly the mistakes he's made

674

00:28:12,099 --> 00:28:16,629
just running this is

675

00:28:17,809 --> 00:28:26,879
right so next slide please now Richard

676

00:28:24,269 --> 00:28:28,519
Heinberg has a vision of the width of

677

00:28:26,880 --> 00:28:30,600
the past and he explains how

678

00:28:28,519 --> 00:28:34,109
civilization developed from the earliest

679

00:28:30,599 --> 00:28:36,769
times and as I've explained to begin

680

00:28:34,109 --> 00:28:38,849
with humans basically for most of our

681

00:28:36,769 --> 00:28:40,769
most of our history now humans have been

682

00:28:38,849 --> 00:28:43,349
around for a long time at least a

683

00:28:40,769 --> 00:28:45,000
hundred thousand years we got a common

684

00:28:43,349 --> 00:28:46,349
ancestor for which everyone in the world

685
00:28:45,000 --> 00:28:48,000
shares which lived a hundred thousand

686
00:28:46,349 --> 00:28:50,849
years ago that was a modern human like

687
00:28:48,000 --> 00:28:53,160
ourselves some people say we've been

688
00:28:50,849 --> 00:28:55,169
around much lot older we've been around

689
00:28:53,160 --> 00:28:59,310
much longer then we shared the world

690
00:28:55,170 --> 00:29:01,880
with Dinosaurs etc but watch out Fred

691
00:28:59,309 --> 00:29:04,740
Flintstone so it must be true but some

692
00:29:01,880 --> 00:29:06,540
basically that's another contentious

693
00:29:04,740 --> 00:29:09,900
issue and I'm not going to go there

694
00:29:06,539 --> 00:29:11,250
tonight I also cause how you define

695
00:29:09,900 --> 00:29:12,900
human because of course the full body

696
00:29:11,250 --> 00:29:15,210
was there when the ender thermal and

697
00:29:12,900 --> 00:29:18,330
then there was the Homo erectus etc but

698
00:29:15,210 --> 00:29:19,890
some I'll go along with what Heinberg

699
00:29:18,329 --> 00:29:23,939
vision is cuz Heinberg strives this

700
00:29:19,890 --> 00:29:26,400
process as well for nearly all of our

701
00:29:23,940 --> 00:29:28,830
history we are only energy source was

702
00:29:26,400 --> 00:29:30,750
muscle power our own muscles bodily

703
00:29:28,829 --> 00:29:33,929
strength as I told you as I explained in

704
00:29:30,750 --> 00:29:37,170
the beginning we move things we pushed

705
00:29:33,930 --> 00:29:39,240
Paul carried dragged then that's it the

706
00:29:37,170 --> 00:29:41,340
only there were a few exceptions for

707
00:29:39,240 --> 00:29:42,690
instance we live wood fires to cook

708
00:29:41,339 --> 00:29:44,639
meals and things like that but apart

709
00:29:42,690 --> 00:29:46,470
from that all our energy came from our

710
00:29:44,640 --> 00:29:48,720
own bodies from the food we ate and how

711
00:29:46,470 --> 00:29:49,710
we transfer that into motion which is

712
00:29:48,720 --> 00:29:53,970
the opposite of course what a wind

713

00:29:49,710 --> 00:29:57,150
turbine does next slide please oh

714
00:29:53,970 --> 00:29:58,710
i'll go back go back sorry later now

715
00:29:57,150 --> 00:30:00,960
this piece i should point about this

716
00:29:58,710 --> 00:30:04,950
picture and this is a picture of the

717
00:30:00,960 --> 00:30:07,049
Egyptian pyramids being built now as you

718
00:30:04,950 --> 00:30:10,590
according to official history the

719
00:30:07,049 --> 00:30:11,849
pyramids were built by um people using

720
00:30:10,589 --> 00:30:13,740
primitive technology they didn't have

721
00:30:11,849 --> 00:30:15,119
the lever but pulley the Wii or anything

722
00:30:13,740 --> 00:30:17,130
like that they basically they have

723
00:30:15,119 --> 00:30:18,839
bronze tools and stone tools and they

724
00:30:17,130 --> 00:30:20,820
dragged these blocks around now this is

725
00:30:18,839 --> 00:30:22,919
what you see illustrated here now I know

726
00:30:20,819 --> 00:30:24,059
a lot of people who study the Egypt and

727
00:30:22,920 --> 00:30:24,570

study the pyramid and these other

728

00:30:24,059 --> 00:30:27,538
monument

729

00:30:24,569 --> 00:30:30,000
don't agree with that and I understand

730

00:30:27,538 --> 00:30:31,679
their points I do understand that there

731

00:30:30,000 --> 00:30:34,079
are big questions we've got to ask in

732

00:30:31,679 --> 00:30:36,809
that respect so but for now we're just

733

00:30:34,079 --> 00:30:43,439
going to assume that that's the case by

734

00:30:36,808 --> 00:30:46,099
next slide now a big a big revolution

735

00:30:43,440 --> 00:30:50,490
occurred sometime in the Neolithic Age

736

00:30:46,099 --> 00:30:54,388
when we learn to domesticate animals we

737

00:30:50,490 --> 00:30:56,308
actually we basically got animals we

738

00:30:54,388 --> 00:30:58,019
persuaded animals to live with us and

739

00:30:56,308 --> 00:30:59,308
work with us and we could use their much

740

00:30:58,019 --> 00:31:00,538
we can use them for many many different

741

00:30:59,308 --> 00:31:03,720
things including their much greater

742
00:31:00,538 --> 00:31:07,710
strength now this here is say things a

743
00:31:03,720 --> 00:31:09,329
donkey or mule here in Egypt and the

744
00:31:07,710 --> 00:31:10,889
donkey of course is one of the oldest

745
00:31:09,329 --> 00:31:12,689
beasts of burden which has been around

746
00:31:10,888 --> 00:31:14,459
for a long time and this donkey of

747
00:31:12,690 --> 00:31:16,350
courses and making itself very useful

748
00:31:14,460 --> 00:31:19,919
pulling this big car full of vegetable

749
00:31:16,349 --> 00:31:21,928
matter and because the donkey is very

750
00:31:19,919 --> 00:31:25,559
strong that donkeys probably as strong

751
00:31:21,929 --> 00:31:28,350
as that for Big Ben so it'll do the same

752
00:31:25,558 --> 00:31:30,690
workers for big guy so basically someone

753
00:31:28,349 --> 00:31:32,579
just one person the farm I can sit on

754
00:31:30,690 --> 00:31:33,870
that then the Duncan can pull the card

755
00:31:32,579 --> 00:31:35,308
otherwise he'd have to pull it himself

756
00:31:33,869 --> 00:31:37,048
but she wouldn't be able to do we'd have

757
00:31:35,308 --> 00:31:38,819
to get three of his friends to help him

758
00:31:37,048 --> 00:31:42,388
so that's gives you an illustration of

759
00:31:38,819 --> 00:31:45,778
how useful it is to domesticate beasts

760
00:31:42,388 --> 00:31:47,939
of burden next slide please because

761
00:31:45,778 --> 00:31:49,500
donkeys are not the only animals that

762
00:31:47,940 --> 00:31:52,740
we've domesticated we use for

763
00:31:49,500 --> 00:31:54,000
transportation and for labor the camel

764
00:31:52,740 --> 00:31:57,720
for example this is another photograph

765
00:31:54,000 --> 00:31:59,069
also taken in Egypt of camels camels are

766
00:31:57,720 --> 00:32:01,500
even bigger and stronger than donkeys

767
00:31:59,069 --> 00:32:04,408
and they have the advantages they can go

768
00:32:01,500 --> 00:32:06,869
places donkeys can't because they are

769
00:32:04,409 --> 00:32:08,700
adapted for the dry hot climate of

770

00:32:06,869 --> 00:32:10,558
desert and they're known as the ship of

771
00:32:08,700 --> 00:32:12,269
the desert and even in this day and age

772
00:32:10,558 --> 00:32:14,418
if you want to get across a desert the

773
00:32:12,269 --> 00:32:17,788
back of the camel is the best way and

774
00:32:14,419 --> 00:32:19,740
this this camel will take you very long

775
00:32:17,788 --> 00:32:21,538
distance it doesn't need to stop for a

776
00:32:19,740 --> 00:32:23,250
drink it can we can go six months

777
00:32:21,538 --> 00:32:25,470
without a drink it will take you across

778
00:32:23,250 --> 00:32:26,490
the desert whereas if you try to do the

779
00:32:25,470 --> 00:32:29,009
same journey with a donkey the donkey

780
00:32:26,490 --> 00:32:30,269
will be dead within 10 miles so that's

781
00:32:29,009 --> 00:32:33,919
another example of a domesticated

782
00:32:30,269 --> 00:32:33,919
animals next slide please

783
00:32:34,259 --> 00:32:38,650
this is a picture taken in South America

784
00:32:36,609 --> 00:32:42,159

and you can see here as a mule pulling

785

00:32:38,650 --> 00:32:44,290

the plow and again you have an idea of

786

00:32:42,160 --> 00:32:46,840

how Adam domesticating out domesticating

787

00:32:44,289 --> 00:32:48,759

animals helped in agriculture today we

788

00:32:46,839 --> 00:32:51,490

use machines very often to do this like

789

00:32:48,759 --> 00:32:53,470

tractors which are oil-powered that's

790

00:32:51,490 --> 00:32:55,029

very important I'll come to that this

791

00:32:53,470 --> 00:32:56,380

mule of course is not oil powered and

792

00:32:55,029 --> 00:32:58,808

these people are sticking to their

793

00:32:56,380 --> 00:33:00,370

traditional farming methods and as you

794

00:32:58,808 --> 00:33:02,259

can see this mule has the power to pull

795

00:33:00,369 --> 00:33:06,009

the plow through the soil and the man

796

00:33:02,259 --> 00:33:08,400

standing on it guiding it you need 20

797

00:33:06,009 --> 00:33:12,250

people probably to do that sort of job

798

00:33:08,400 --> 00:33:14,290

to pull it along some slave states in

799
00:33:12,250 --> 00:33:16,299
the in the ancient world did use people

800
00:33:14,289 --> 00:33:18,490
to do things like this but but you don't

801
00:33:16,299 --> 00:33:20,049
think you need an awful lot of food you

802
00:33:18,490 --> 00:33:23,589
need north lot of drink and water to

803
00:33:20,049 --> 00:33:25,869
keep them going so it gives you an

804
00:33:23,589 --> 00:33:27,699
example of how more efficient is to use

805
00:33:25,869 --> 00:33:35,129
animals for things like next slide

806
00:33:27,700 --> 00:33:38,350
please then everything changed yes um

807
00:33:35,130 --> 00:33:41,830
about two hundred years ago the world

808
00:33:38,349 --> 00:33:46,178
changed completely we hit the Industrial

809
00:33:41,829 --> 00:33:48,159
Revolution and it's great k McCrory came

810
00:33:46,179 --> 00:33:49,690
around in different countries of

811
00:33:48,160 --> 00:33:51,970
different times Britain was where it

812
00:33:49,690 --> 00:33:53,920
actually started right here in here in

813
00:33:51,970 --> 00:33:56,440
South Wales you played a vital role

814
00:33:53,920 --> 00:33:57,789
because all through the 19th century the

815
00:33:56,440 --> 00:34:00,279
early the first phase the Industrial

816
00:33:57,789 --> 00:34:03,069
Revolution the Industrial the industrial

817
00:34:00,279 --> 00:34:04,420
area south wales was the equivalent of

818
00:34:03,069 --> 00:34:07,210
the persian gulf in the 20th century

819
00:34:04,420 --> 00:34:08,860
because that's where all I think more

820
00:34:07,210 --> 00:34:12,730
than half the world's coal came from

821
00:34:08,860 --> 00:34:14,289
South Wales so we started off with coal

822
00:34:12,730 --> 00:34:16,389
a lot of it from this area from other

823
00:34:14,289 --> 00:34:18,789
parts of the world as well and that was

824
00:34:16,389 --> 00:34:20,320
the fuel of the first phase of

825
00:34:18,789 --> 00:34:22,480
industrial society the Industrial

826
00:34:20,320 --> 00:34:24,039
Revolution took chicken just took a few

827

00:34:22,480 --> 00:34:27,280
decades which in historical terms it

828
00:34:24,039 --> 00:34:30,340
turns the whole world is a blink of an

829
00:34:27,280 --> 00:34:32,379
eye it happened very very quickly we

830
00:34:30,340 --> 00:34:34,329
have factory Springs actually springing

831
00:34:32,378 --> 00:34:35,980
up everywhere creating goods creating

832
00:34:34,329 --> 00:34:37,840
all kinds of things that we never could

833
00:34:35,980 --> 00:34:40,570
have before all run off fossil fuels all

834
00:34:37,840 --> 00:34:43,150
run off this new coals new fossil fuel

835
00:34:40,570 --> 00:34:46,610
now on

836
00:34:43,150 --> 00:34:49,700
we went almost instantaneously from a

837
00:34:46,610 --> 00:34:51,980
world of mere human and animal muscle

838
00:34:49,699 --> 00:34:53,629
power to an energy source that was a

839
00:34:51,980 --> 00:34:56,960
hundred or a thousand times more

840
00:34:53,630 --> 00:34:59,360
effective more with more more compact

841
00:34:56,960 --> 00:35:00,710

and more full of energy more than you're

842

00:34:59,360 --> 00:35:03,380

more able to use the amount of energy

843

00:35:00,710 --> 00:35:05,539

you're able to use and Heinberg

844

00:35:03,380 --> 00:35:07,119

illustrated very well he says if you

845

00:35:05,539 --> 00:35:09,710

want to know the difference that it made

846

00:35:07,119 --> 00:35:11,119

when we started using fossil fuels

847

00:35:09,710 --> 00:35:13,730

compared to what we had before with

848

00:35:11,119 --> 00:35:16,400

muscle power get in your car drive 10

849

00:35:13,730 --> 00:35:19,119

miles from home and stop the engine and

850

00:35:16,400 --> 00:35:21,500

push the car back push the car home

851

00:35:19,119 --> 00:35:24,019

it'll take you days to push that car

852

00:35:21,500 --> 00:35:25,969

home if you can't even do it at all yet

853

00:35:24,019 --> 00:35:29,239

you can travel 10 miles in pending on

854

00:35:25,969 --> 00:35:32,869

traffic in half an hour with just by

855

00:35:29,239 --> 00:35:34,099

turning a wheel and pressing a pedal all

856
00:35:32,869 --> 00:35:36,650
that energy that massive amount of

857
00:35:34,099 --> 00:35:38,900
energy your body or even a horse without

858
00:35:36,650 --> 00:35:41,920
trouble with is there at your disposal

859
00:35:38,900 --> 00:35:44,360
the flick of a switch and turn the key

860
00:35:41,920 --> 00:35:46,659
it's actually believe it or not your

861
00:35:44,360 --> 00:35:50,090
color family car has about the same

862
00:35:46,659 --> 00:35:52,129
horsepower as a Roman galley but the

863
00:35:50,090 --> 00:35:53,539
Roman galleys were their own slaves it's

864
00:35:52,130 --> 00:35:55,160
amazing to think of that isn't it that's

865
00:35:53,539 --> 00:35:57,860
how compact this energy sources a tank

866
00:35:55,159 --> 00:36:01,489
of petrol that big you fill it up and

867
00:35:57,860 --> 00:36:04,130
you have the equivalent of 200

868
00:36:01,489 --> 00:36:09,019
galley-slave 200 been hers or sitting

869
00:36:04,130 --> 00:36:11,510
there going that's in your car in your

870
00:36:09,019 --> 00:36:13,309
car petrol tank as miraculous for people

871
00:36:11,510 --> 00:36:18,670
who live before the age of fossil fuels

872
00:36:13,309 --> 00:36:22,250
that's a miraculous energy source and

873
00:36:18,670 --> 00:36:25,900
our entire world is is constructed on

874
00:36:22,250 --> 00:36:25,900
this foundation of this energy supply

875
00:36:26,139 --> 00:36:32,269
and of course is not only it with fossil

876
00:36:29,989 --> 00:36:33,829
fuels people say I've had people

877
00:36:32,269 --> 00:36:35,150
actually say to me well we don't just

878
00:36:33,829 --> 00:36:38,420
use possibles we have electricity

879
00:36:35,150 --> 00:36:40,010
where's the electricity come from in

880
00:36:38,420 --> 00:36:42,110
this country very often comes from coal

881
00:36:40,010 --> 00:36:44,060
and gas-fired power stations more gas

882
00:36:42,110 --> 00:36:45,920
now I'll come to that in a minute the

883
00:36:44,059 --> 00:36:50,420
changeover from cold gas is very

884

00:36:45,920 --> 00:36:52,340
important but some it comes from fossil

885
00:36:50,420 --> 00:36:54,500
fuels and electricity is not an energy

886
00:36:52,340 --> 00:36:55,440
source electricity is a way of moving

887
00:36:54,500 --> 00:36:57,449
energy from one

888
00:36:55,440 --> 00:36:59,338
to another the energy is created at the

889
00:36:57,449 --> 00:37:01,199
power station it charges the national

890
00:36:59,338 --> 00:37:04,799
grid and it comes into these lights at

891
00:37:01,199 --> 00:37:08,309
the next slide please now this is the

892
00:37:04,800 --> 00:37:15,269
downside though too this is the downside

893
00:37:08,309 --> 00:37:18,029
too it's a fossil fuel use is the

894
00:37:15,269 --> 00:37:19,650
downside to our energy source and is

895
00:37:18,030 --> 00:37:21,000
environmental destruction you remember

896
00:37:19,650 --> 00:37:22,858
the picture of the factory I showed you

897
00:37:21,000 --> 00:37:25,619
with massive amounts of smoke coming out

898
00:37:22,858 --> 00:37:28,739

of its chimney that's what we see we see

899

00:37:25,619 --> 00:37:30,960

that smoke goes into the environment it

900

00:37:28,739 --> 00:37:33,118

goes into the ground it goes into the

901

00:37:30,960 --> 00:37:34,858

soil it goes into the water goes into

902

00:37:33,119 --> 00:37:36,568

our bodies these very often toxic

903

00:37:34,858 --> 00:37:39,119

chemicals released from the burning of

904

00:37:36,568 --> 00:37:42,568

coal and other substances and oil two

905

00:37:39,119 --> 00:37:46,170

releases this suit that is a very very

906

00:37:42,568 --> 00:37:47,940

young it's very very toxic now you'll

907

00:37:46,170 --> 00:37:50,608

hear an awful lot about carbon dioxide

908

00:37:47,940 --> 00:37:51,869

now you may you may question question

909

00:37:50,608 --> 00:37:54,380

now we see it Carmen darks is very

910

00:37:51,869 --> 00:37:56,970

dangerous if it's causing climate change

911

00:37:54,380 --> 00:37:59,160

that's not that's kind of a zip side

912

00:37:56,969 --> 00:38:00,899

issues it's one I don't to personally go

913
00:37:59,159 --> 00:38:03,299
along with myself I know a lot of people

914
00:38:00,900 --> 00:38:04,440
who don't some people do it's it's

915
00:38:03,300 --> 00:38:06,329
irrelevant right now the fact of the

916
00:38:04,440 --> 00:38:08,700
matter is that even if you don't believe

917
00:38:06,329 --> 00:38:10,800
that carbon dioxide is a dangerous gas

918
00:38:08,699 --> 00:38:12,960
to be to admit the other things that

919
00:38:10,800 --> 00:38:15,030
burning fossil fuels are dangerous and

920
00:38:12,960 --> 00:38:16,530
that is why we should stop this is why

921
00:38:15,030 --> 00:38:19,140
burning fossil fuels is so destructive

922
00:38:16,530 --> 00:38:21,829
and here we have here are devastated

923
00:38:19,139 --> 00:38:25,019
forest the forest was devastated because

924
00:38:21,829 --> 00:38:28,260
this particular forest was cleared in

925
00:38:25,019 --> 00:38:29,909
order to create farmland and could be

926
00:38:28,260 --> 00:38:32,900
off the farm the farming method is

927
00:38:29,909 --> 00:38:34,799
basically the kind of farming that is

928
00:38:32,900 --> 00:38:38,099
intimately tied to the use of fossil

929
00:38:34,800 --> 00:38:39,720
fuels as I'll explain because our farms

930
00:38:38,099 --> 00:38:45,088
believe it or not are dependent on

931
00:38:39,719 --> 00:38:46,588
fossil fuels we have certain them and I

932
00:38:45,088 --> 00:38:48,480
mentioned tractors early rocks we have

933
00:38:46,588 --> 00:38:50,840
tractors rather than horses now to pull

934
00:38:48,480 --> 00:38:53,608
plows and things like that

935
00:38:50,840 --> 00:38:55,410
not only that oil actually is used for

936
00:38:53,608 --> 00:39:01,019
industrial chemicals and things like

937
00:38:55,409 --> 00:39:02,670
that agricultural chemicals as well and

938
00:39:01,019 --> 00:39:04,409
this is some you'll hear well this tube

939
00:39:02,670 --> 00:39:07,050
here this is another buzz word you'll

940
00:39:04,409 --> 00:39:08,819
hear a lot a lot unsustainable that's

941

00:39:07,050 --> 00:39:10,550
another you'll hear that very often

942
00:39:08,820 --> 00:39:16,100
under sustained this is unsustainable

943
00:39:10,550 --> 00:39:18,570
situation and it depletes resources this

944
00:39:16,099 --> 00:39:21,900
it depletes other kinds of resources the

945
00:39:18,570 --> 00:39:23,640
use of fossil fuels now the idea that

946
00:39:21,900 --> 00:39:24,960
oil might not be a fossil fuel I should

947
00:39:23,639 --> 00:39:27,480
touch on there's a guy called Ian our

948
00:39:24,960 --> 00:39:30,750
crane is very very interesting he talks

949
00:39:27,480 --> 00:39:32,639
about this the possibility the oil might

950
00:39:30,750 --> 00:39:34,409
actually be not be a fossil fuel and it

951
00:39:32,639 --> 00:39:37,170
actually replenishes itself it regrows

952
00:39:34,409 --> 00:39:39,589
is it it's something that actually it

953
00:39:37,170 --> 00:39:42,090
grows almost Mike's like a plant and

954
00:39:39,590 --> 00:39:43,950
basically in Russia it's kind of open

955
00:39:42,090 --> 00:39:45,930

secret because it's in Russia that they

956

00:39:43,949 --> 00:39:49,230

leave the oil bottle over 20 years and

957

00:39:45,929 --> 00:39:50,730

they come back or partly they come back

958

00:39:49,230 --> 00:39:53,269

later and then your new oil is replenish

959

00:39:50,730 --> 00:39:56,519

their precious back because if that ever

960

00:39:53,269 --> 00:39:58,349

became known the price i mean the price

961

00:39:56,519 --> 00:40:01,739

of the price would go through the floor

962

00:39:58,349 --> 00:40:03,659

the price of oil would plummet from the

963

00:40:01,739 --> 00:40:05,039

interestingly the current oil price is

964

00:40:03,659 --> 00:40:07,379

very low with minus the lowest it's been

965

00:40:05,039 --> 00:40:08,909

four years and i think it's to do with

966

00:40:07,380 --> 00:40:11,039

it attempt to sabotage the Russian

967

00:40:08,909 --> 00:40:12,629

economy of all countries let's aren't in

968

00:40:11,039 --> 00:40:15,690

Russia for some reason that's a big

969

00:40:12,630 --> 00:40:18,119

subject I can't cover that in detail but

970
00:40:15,690 --> 00:40:21,119
that's basically when they do it and the

971
00:40:18,119 --> 00:40:22,890
control as i said the there is a

972
00:40:21,119 --> 00:40:25,559
suppression of information like this and

973
00:40:22,889 --> 00:40:27,989
it leads it comes from the fact that the

974
00:40:25,559 --> 00:40:31,320
flow of energy and the distribution of

975
00:40:27,989 --> 00:40:33,389
energy is a vital tool for political

976
00:40:31,320 --> 00:40:38,700
reasons which I'll describe the next

977
00:40:33,389 --> 00:40:40,500
slide please this here is a oil rig

978
00:40:38,699 --> 00:40:43,500
burning in the Gulf of Mexico this is

979
00:40:40,500 --> 00:40:47,039
the deepwater horizon oil rig was caught

980
00:40:43,500 --> 00:40:48,630
fire in 2010 and that's created one of

981
00:40:47,039 --> 00:40:50,849
the worst environmental disasters in

982
00:40:48,630 --> 00:40:52,170
history in the Gulf of Mexico it

983
00:40:50,849 --> 00:40:54,659
destroyed a five-hundred-year-old

984
00:40:52,170 --> 00:40:56,579
sustainable fishing industry and has

985
00:40:54,659 --> 00:40:58,379
poisoned is destroyed the tourist

986
00:40:56,579 --> 00:40:59,929
industry it's and it's caused

987
00:40:58,380 --> 00:41:02,240
devastation to the local while

988
00:40:59,929 --> 00:41:07,549
I never eat fish that comes from the

989
00:41:02,239 --> 00:41:08,959
Gulf of Mexico now it's ian are cranes

990
00:41:07,550 --> 00:41:10,460
talked a lot about this particular issue

991
00:41:08,960 --> 00:41:11,599
as well this subjects what he believes

992
00:41:10,460 --> 00:41:16,460
this was done deliberately that's

993
00:41:11,599 --> 00:41:18,710
perfectly possible but some why was this

994
00:41:16,460 --> 00:41:20,889
by accident or design this deepwater

995
00:41:18,710 --> 00:41:23,570
horizon oil rig caught fire and exploded

996
00:41:20,889 --> 00:41:25,219
this is a very different this was all

997
00:41:23,570 --> 00:41:26,570
rhythm this is an oil rig of a very

998

00:41:25,219 --> 00:41:27,739
different type to the one I showed you

999
00:41:26,570 --> 00:41:30,289
earlier which is the one in the North

1000
00:41:27,739 --> 00:41:33,859
Sea because this one is much deeper

1001
00:41:30,289 --> 00:41:35,750
water drills down into the water there's

1002
00:41:33,860 --> 00:41:37,070
many several thousand feet deep rather

1003
00:41:35,750 --> 00:41:39,829
than the one in the North Sea which is

1004
00:41:37,070 --> 00:41:42,769
several hundred feet deep so what's

1005
00:41:39,829 --> 00:41:45,559
happening is the depletion of various

1006
00:41:42,769 --> 00:41:47,840
easy to get oil in shallow waters on

1007
00:41:45,559 --> 00:41:49,759
land it it's causing the oil industry to

1008
00:41:47,840 --> 00:41:51,680
need to move further out as Heinberg

1009
00:41:49,760 --> 00:41:54,440
explains this is a homo doesn't mention

1010
00:41:51,679 --> 00:41:55,549
this particular this actually his book

1011
00:41:54,440 --> 00:41:58,480
was written before this happened but

1012
00:41:55,550 --> 00:42:01,870

this is the kind of thing he talks about

1013

00:41:58,480 --> 00:42:05,179
something that next slide please

1014

00:42:01,869 --> 00:42:07,339
fracking now this is very very topical

1015

00:42:05,179 --> 00:42:09,109
indeed and this is a speciality V in our

1016

00:42:07,340 --> 00:42:12,350
crane as well he said anti-fracking

1017

00:42:09,110 --> 00:42:14,150
campaigner didcot power station in

1018

00:42:12,349 --> 00:42:17,089
oxfordshire which is close to where I

1019

00:42:14,150 --> 00:42:20,329
live is one of the biggest power

1020

00:42:17,090 --> 00:42:21,890
stations on the national grid the

1021

00:42:20,329 --> 00:42:24,259
National Grid of course is basically

1022

00:42:21,889 --> 00:42:27,109
it's a it's a network of electric wires

1023

00:42:24,260 --> 00:42:29,090
and cables and pylons that includes all

1024

00:42:27,110 --> 00:42:31,070
the wires leading up to sprinters the

1025

00:42:29,090 --> 00:42:33,079
light they're all these folk sockets and

1026

00:42:31,070 --> 00:42:35,180
it covers the entire country and the

1027
00:42:33,079 --> 00:42:37,130
power stations are at all points along

1028
00:42:35,179 --> 00:42:40,039
the grid charge the National Grid at

1029
00:42:37,130 --> 00:42:41,840
various places now the national grid is

1030
00:42:40,039 --> 00:42:43,940
some is wasteful because a lot of the

1031
00:42:41,840 --> 00:42:46,150
because the energy is generated so far

1032
00:42:43,940 --> 00:42:48,409
from where it's worked where the work is

1033
00:42:46,150 --> 00:42:50,090
you lose a lot from resistance these

1034
00:42:48,409 --> 00:42:51,889
copies the wires are copper because

1035
00:42:50,090 --> 00:42:53,269
that's a low resistance metal but a lot

1036
00:42:51,889 --> 00:42:56,869
of the power is lost to resistance

1037
00:42:53,269 --> 00:42:58,579
because the size of the circuit if one

1038
00:42:56,869 --> 00:43:00,199
power station fails it means that the

1039
00:42:58,579 --> 00:43:02,360
rest of the National Grid can compensate

1040
00:43:00,199 --> 00:43:04,129
you can keep charging but obviously more

1041
00:43:02,360 --> 00:43:07,340
power stations fail then national grid

1042
00:43:04,130 --> 00:43:10,730
goes down but some coming back to

1043
00:43:07,340 --> 00:43:12,860
fracking my this local power station is

1044
00:43:10,730 --> 00:43:13,110
to this didcot a indeed copy and one of

1045
00:43:12,860 --> 00:43:16,440
them

1046
00:43:13,110 --> 00:43:19,440
DK I think has recently completely

1047
00:43:16,440 --> 00:43:21,720
switched from coal to gas it's right

1048
00:43:19,440 --> 00:43:23,369
it's a natural gas-fired power station

1049
00:43:21,719 --> 00:43:25,049
and the reason stunna has got a lot to

1050
00:43:23,369 --> 00:43:27,659
do with fracking this process of

1051
00:43:25,050 --> 00:43:31,200
extracting natural gas from places where

1052
00:43:27,659 --> 00:43:33,389
it was not able to before the it's done

1053
00:43:31,199 --> 00:43:35,159
by drilling a hole down an oil with it

1054
00:43:33,389 --> 00:43:37,769
down to the where there's a coal bed

1055

00:43:35,159 --> 00:43:39,690
methane or shale this there's an

1056
00:43:37,769 --> 00:43:41,940
explosion set off to crack the pipe and

1057
00:43:39,690 --> 00:43:43,860
then high pressure water mixed with sand

1058
00:43:41,940 --> 00:43:45,360
and various chemicals which they won't

1059
00:43:43,860 --> 00:43:47,820
tell us what's in the chemicals I'll

1060
00:43:45,360 --> 00:43:49,680
push down a very high pressure which

1061
00:43:47,820 --> 00:43:53,190
Brett splits the rocks at prom part and

1062
00:43:49,679 --> 00:43:55,319
lets the gas bubbles out now that's very

1063
00:43:53,190 --> 00:43:57,179
very hazardous because some of the gas

1064
00:43:55,320 --> 00:43:58,200
leaks out into the environment and the

1065
00:43:57,179 --> 00:44:01,319
industry will tell you it doesn't

1066
00:43:58,199 --> 00:44:03,329
because these they drill down 12,000

1067
00:44:01,320 --> 00:44:04,740
feet they say it's that deep it won't

1068
00:44:03,329 --> 00:44:07,199
make its way up to the surface but it

1069
00:44:04,739 --> 00:44:09,719

does it's been detected in drinking

1070

00:44:07,199 --> 00:44:11,879

water in the air everywhere and it leaks

1071

00:44:09,719 --> 00:44:13,349

out the well higher up as well and the

1072

00:44:11,880 --> 00:44:16,820

chemicals get up no one knows what's in

1073

00:44:13,349 --> 00:44:19,079

these chemicals that they rise as well

1074

00:44:16,820 --> 00:44:21,390

and it's all to do with extracting

1075

00:44:19,079 --> 00:44:22,319

natural gas down there and the governor

1076

00:44:21,389 --> 00:44:24,269

that they're doing they're so determined

1077

00:44:22,320 --> 00:44:25,769

to do this they've lied about them even

1078

00:44:24,269 --> 00:44:27,480

the amount of gas that's in their wells

1079

00:44:25,769 --> 00:44:31,139

because there's only a fraction of the

1080

00:44:27,480 --> 00:44:32,579

gas as they say is there anyway so why

1081

00:44:31,139 --> 00:44:34,559

they've done that with Ian talks about

1082

00:44:32,579 --> 00:44:41,130

that in detail in his leg check but

1083

00:44:34,559 --> 00:44:44,099

basically it's a big bubble and then the

1084
00:44:41,130 --> 00:44:46,380
next slide please this is another form

1085
00:44:44,099 --> 00:44:49,799
of energy and unconventional oil sauce

1086
00:44:46,380 --> 00:44:52,500
this is tar sands in this particular tar

1087
00:44:49,800 --> 00:44:53,460
sands pit is in Canada and it sounds

1088
00:44:52,500 --> 00:44:56,130
like what it says it is it's basically

1089
00:44:53,460 --> 00:44:58,349
sound mixed with tar which you can

1090
00:44:56,130 --> 00:45:01,140
extracted hydrocarbons to burn it and

1091
00:44:58,349 --> 00:45:02,969
it's an unconventional oil sauce you can

1092
00:45:01,139 --> 00:45:05,539
actually make musical oil out of this

1093
00:45:02,969 --> 00:45:08,730
the only problem is that this is a huge

1094
00:45:05,539 --> 00:45:10,289
dirty dangerous place but these little

1095
00:45:08,730 --> 00:45:12,780
strips here they're not part which

1096
00:45:10,289 --> 00:45:15,509
people walk along their big roads where

1097
00:45:12,780 --> 00:45:17,310
massive dumper trucks drive along this

1098
00:45:15,510 --> 00:45:19,620
is several miles across this tar sand

1099
00:45:17,309 --> 00:45:21,949
pit and when birds land on it they get

1100
00:45:19,619 --> 00:45:24,929
oil on their feathers and they die um

1101
00:45:21,949 --> 00:45:25,489
it's it's a nice so it must be no sore

1102
00:45:24,929 --> 00:45:28,339
as well

1103
00:45:25,489 --> 00:45:30,679
people tell me it smells really bad but

1104
00:45:28,340 --> 00:45:32,119
that's another example of how the oil

1105
00:45:30,679 --> 00:45:33,849
industry and the energy the need for

1106
00:45:32,119 --> 00:45:37,460
energy is pushing people into

1107
00:45:33,849 --> 00:45:38,929
destructive and really really unwise

1108
00:45:37,460 --> 00:45:42,019
which would otherwise be very very

1109
00:45:38,929 --> 00:45:45,829
unwise and means of obtaining oil and

1110
00:45:42,019 --> 00:45:49,190
I'm next slide please of course always

1111
00:45:45,829 --> 00:45:51,289
has to be paid for it is expensive it

1112

00:45:49,190 --> 00:45:54,460
costs money to drill for oil to mine

1113
00:45:51,289 --> 00:45:56,630
coal to transport them to refine them

1114
00:45:54,460 --> 00:46:02,030
it's a complex process that needs

1115
00:45:56,630 --> 00:46:03,590
millions of man-hours um and so that's

1116
00:46:02,030 --> 00:46:05,090
why you have energy bills and energy

1117
00:46:03,590 --> 00:46:06,590
bills are now so high that a lot of

1118
00:46:05,090 --> 00:46:09,019
people are having real trouble paying

1119
00:46:06,590 --> 00:46:11,900
people I know having trouble paying them

1120
00:46:09,019 --> 00:46:13,789
and I mean is there anyone this room

1121
00:46:11,900 --> 00:46:17,559
hasn't noticed their energy bill rising

1122
00:46:13,789 --> 00:46:20,420
over the last 20 years or so no no one

1123
00:46:17,559 --> 00:46:23,929
it's honestly they they've got a singly

1124
00:46:20,420 --> 00:46:26,650
going up all over the place and a lot of

1125
00:46:23,929 --> 00:46:28,759
people can't afford it up there's people

1126
00:46:26,650 --> 00:46:30,920

there's people in some countries where

1127

00:46:28,760 --> 00:46:33,260

very few people can afford this energy

1128

00:46:30,920 --> 00:46:34,849

and they fall into poverty we call those

1129

00:46:33,260 --> 00:46:37,250

countries of countries the third-world

1130

00:46:34,849 --> 00:46:43,460

or developing nations as the euphemism

1131

00:46:37,250 --> 00:46:45,710

goes next slide place is a picture than

1132

00:46:43,460 --> 00:46:48,260

this is part of the National Grid these

1133

00:46:45,710 --> 00:46:50,179

big metal giants which string across

1134

00:46:48,260 --> 00:46:52,640

which lie across the countryside

1135

00:46:50,179 --> 00:46:58,399

dragging these wires behind them ruining

1136

00:46:52,639 --> 00:47:00,349

the view they are they've lived this

1137

00:46:58,400 --> 00:47:02,990

thousands and thousands of miles of

1138

00:47:00,349 --> 00:47:04,759

these across the country taking this

1139

00:47:02,989 --> 00:47:09,759

energy from on the national grid to

1140

00:47:04,760 --> 00:47:09,760

various places wasteful as I said

1141
00:47:09,909 --> 00:47:19,819
and with all the other disadvantage that

1142
00:47:13,190 --> 00:47:21,769
I talked about um so yeah this is all

1143
00:47:19,820 --> 00:47:23,180
there's other health they're said to be

1144
00:47:21,769 --> 00:47:24,769
health conditions associated with you

1145
00:47:23,179 --> 00:47:26,210
there's been several accidents involved

1146
00:47:24,769 --> 00:47:28,070
with these things when kids some kids

1147
00:47:26,210 --> 00:47:31,550
try to climb them I try to do as well as

1148
00:47:28,070 --> 00:47:33,880
little kids silly of me some some people

1149
00:47:31,550 --> 00:47:38,210
climb and they get electrocuted

1150
00:47:33,880 --> 00:47:39,680
sometimes there's also several reports

1151
00:47:38,210 --> 00:47:40,909
that state that people who live close to

1152
00:47:39,679 --> 00:47:43,519
these are more likely to get certain

1153
00:47:40,909 --> 00:47:44,779
kinds of cancer if you if you're I think

1154
00:47:43,519 --> 00:47:47,239
one thing is going over your house for

1155
00:47:44,780 --> 00:47:54,460
example it's something to be concerned

1156
00:47:47,239 --> 00:47:57,529
about so next slide please now this is

1157
00:47:54,460 --> 00:47:58,909
this graph illustrates well this next to

1158
00:47:57,530 --> 00:48:01,370
this series goes illustrates the kind of

1159
00:47:58,909 --> 00:48:03,349
thing Heineberg talks about this is the

1160
00:48:01,369 --> 00:48:05,509
one I drew myself it's very very simple

1161
00:48:03,349 --> 00:48:08,329
on the up on the vertical axis there's

1162
00:48:05,510 --> 00:48:11,720
quantity of the horizontal axis is time

1163
00:48:08,329 --> 00:48:14,090
there is no there's no figures on these

1164
00:48:11,719 --> 00:48:15,349
it's all qualitative it's all just

1165
00:48:14,090 --> 00:48:17,720
general is not there's no particular

1166
00:48:15,349 --> 00:48:21,219
figures except as you can see on the

1167
00:48:17,719 --> 00:48:23,149
time axis I put past present and future

1168
00:48:21,219 --> 00:48:24,709
and that's that's all you need to know

1169

00:48:23,150 --> 00:48:26,690
this is not about exact measurement this

1170
00:48:24,710 --> 00:48:29,990
is simply illustration so it's all

1171
00:48:26,690 --> 00:48:32,539
qualitative and in exact but basically

1172
00:48:29,989 --> 00:48:35,209
from as i said earlier for most of our

1173
00:48:32,539 --> 00:48:36,739
history there were very few people in

1174
00:48:35,210 --> 00:48:40,400
the world compared to what we have now

1175
00:48:36,739 --> 00:48:42,199
there were lesson it's interesting they

1176
00:48:40,400 --> 00:48:43,579
were less than a billion people for most

1177
00:48:42,199 --> 00:48:44,629
of the time we around at one point

1178
00:48:43,579 --> 00:48:46,549
someone said they would like about a

1179
00:48:44,630 --> 00:48:51,860
million people in the world we went for

1180
00:48:46,550 --> 00:48:53,450
a real bottleneck at some point um we

1181
00:48:51,860 --> 00:48:56,750
only reached a billion people actually

1182
00:48:53,449 --> 00:48:59,629
in the Year 1800 at the start of the

1183
00:48:56,750 --> 00:49:02,090

Industrial Revolution but so for many

1184

00:48:59,630 --> 00:49:03,680

many from most violent we were just this

1185

00:49:02,090 --> 00:49:07,430

little line at the bottom this small

1186

00:49:03,679 --> 00:49:10,279

group of animals with small species have

1187

00:49:07,429 --> 00:49:11,719

come cluster and of course our energy

1188

00:49:10,280 --> 00:49:13,280

production was very low as well because

1189

00:49:11,719 --> 00:49:15,169

we had like I say this red line

1190

00:49:13,280 --> 00:49:17,390

illustrate the amount of energy energy

1191

00:49:15,170 --> 00:49:19,970

capability energy availability energy

1192

00:49:17,389 --> 00:49:22,139

and resources available for energy

1193

00:49:19,969 --> 00:49:24,029

and that of course was also very low

1194

00:49:22,139 --> 00:49:26,849

because as I've explained we had muscle

1195

00:49:24,030 --> 00:49:30,000

power only we had beasts of burden we

1196

00:49:26,849 --> 00:49:31,860

had various domesticated animals and we

1197

00:49:30,000 --> 00:49:33,929

could light fires wood fires and things

1198
00:49:31,860 --> 00:49:38,970
like that so there was no industry this

1199
00:49:33,929 --> 00:49:42,389
is before industry next slide please and

1200
00:49:38,969 --> 00:49:45,119
then suddenly the amount of energy

1201
00:49:42,389 --> 00:49:46,769
available to us shot up and as you see

1202
00:49:45,119 --> 00:49:48,329
just before the present day I put on

1203
00:49:46,769 --> 00:49:51,329
here illustrating the start of the

1204
00:49:48,329 --> 00:49:53,699
Industrial Revolution our energy supply

1205
00:49:51,329 --> 00:49:56,519
increased a thousandfold with the

1206
00:49:53,699 --> 00:50:00,869
industrialized mass infrastructure

1207
00:49:56,519 --> 00:50:04,110
fossil fuel use next slide please and as

1208
00:50:00,869 --> 00:50:06,089
a result our population shot up the as I

1209
00:50:04,110 --> 00:50:08,070
said by 1800 there about a billion

1210
00:50:06,090 --> 00:50:10,019
people in the world that's less than a

1211
00:50:08,070 --> 00:50:13,050
population of India today and we now

1212
00:50:10,019 --> 00:50:15,300
have seven a half billion so we we it's

1213
00:50:13,050 --> 00:50:16,440
increased enormously the start of the

1214
00:50:15,300 --> 00:50:18,450
Industrial Revolution led to a

1215
00:50:16,440 --> 00:50:21,900
population explosion with increased

1216
00:50:18,449 --> 00:50:23,250
energy basically took all of human

1217
00:50:21,900 --> 00:50:26,430
history for us to reach a billion people

1218
00:50:23,250 --> 00:50:28,980
by 1800 but by 1900 we hit two billion

1219
00:50:26,429 --> 00:50:30,719
so and we added we doubled in size

1220
00:50:28,980 --> 00:50:33,380
within a century because of the

1221
00:50:30,719 --> 00:50:35,819
Industrial Revolution next slide please

1222
00:50:33,380 --> 00:50:38,039
we're back in prehistory ball button in

1223
00:50:35,820 --> 00:50:39,660
the pre-industrial age now as you can

1224
00:50:38,039 --> 00:50:42,150
see the green line there represents

1225
00:50:39,659 --> 00:50:44,879
resources resources are what sometimes

1226

00:50:42,150 --> 00:50:46,769
known as the natural capital or the de

1227
00:50:44,880 --> 00:50:50,070
Bayeux economic capital planet Earth

1228
00:50:46,769 --> 00:50:54,420
this includes includes oil and fossil

1229
00:50:50,070 --> 00:50:58,440
fuels but also soil nutrients food water

1230
00:50:54,420 --> 00:51:01,590
air everything everything that we need

1231
00:50:58,440 --> 00:51:04,110
is reor everything the planet the

1232
00:51:01,590 --> 00:51:06,090
planets life life on earth needs which

1233
00:51:04,110 --> 00:51:09,180
is the same thing in terms of those

1234
00:51:06,090 --> 00:51:10,800
resources next slide please with the

1235
00:51:09,179 --> 00:51:12,809
Industrial Revolution with increase in

1236
00:51:10,800 --> 00:51:14,340
production increasing energy

1237
00:51:12,809 --> 00:51:16,380
availability and use decrease in

1238
00:51:14,340 --> 00:51:18,019
population the resources started to go

1239
00:51:16,380 --> 00:51:21,720
down started to eat into the natural

1240
00:51:18,019 --> 00:51:23,369

capital of the world as Heinberg puts it

1241

00:51:21,719 --> 00:51:26,149

he says we treat the natural capital as

1242

00:51:23,369 --> 00:51:28,710

an income and we just spend spend spend

1243

00:51:26,150 --> 00:51:29,490

and well and like the yeast eventually

1244

00:51:28,710 --> 00:51:33,659

going to run out

1245

00:51:29,489 --> 00:51:35,189

next slide please now we're back in

1246

00:51:33,659 --> 00:51:38,190

prehistory again you can see here there

1247

00:51:35,190 --> 00:51:39,539

was a gray line at the bottom I'm not

1248

00:51:38,190 --> 00:51:42,929

keeping tally I've been talking for

1249

00:51:39,539 --> 00:51:48,269

anyone keeping time I won't be good for

1250

00:51:42,929 --> 00:51:50,099

50 50 miles let me just do this bit and

1251

00:51:48,269 --> 00:51:51,719

we'll have a little break and the bottom

1252

00:51:50,099 --> 00:51:54,230

they see that gray line represents

1253

00:51:51,719 --> 00:51:57,179

environmental destruction that means

1254

00:51:54,230 --> 00:51:59,519

habitat loss the poisoning of the air

1255
00:51:57,179 --> 00:52:02,940
the poisoning of the oceans rubbish tips

1256
00:51:59,519 --> 00:52:05,670
replacing green forests things like that

1257
00:52:02,940 --> 00:52:07,679
even all kinds of all kinds of things

1258
00:52:05,670 --> 00:52:08,700
every time like a motorways built it

1259
00:52:07,679 --> 00:52:10,440
goes to a forest that adds to

1260
00:52:08,699 --> 00:52:13,259
environmental destruction as you can see

1261
00:52:10,440 --> 00:52:16,829
it's very very low here until maybe

1262
00:52:13,260 --> 00:52:18,780
someone might lighter a open fire

1263
00:52:16,829 --> 00:52:20,730
underneath the tree and the tree might

1264
00:52:18,780 --> 00:52:22,260
get to leave singed something like that

1265
00:52:20,730 --> 00:52:24,000
there's a limit of environmental

1266
00:52:22,260 --> 00:52:29,640
destruction in those days next slide

1267
00:52:24,000 --> 00:52:32,880
please and of course as you probably

1268
00:52:29,639 --> 00:52:35,368
know i can predict by now with the rise

1269
00:52:32,880 --> 00:52:37,970
in population the rising energy the

1270
00:52:35,369 --> 00:52:40,019
right or the depletion of resources

1271
00:52:37,969 --> 00:52:41,429
environment instruction started to rise

1272
00:52:40,019 --> 00:52:45,769
and you know all about actually hear

1273
00:52:41,429 --> 00:52:47,969
about it all the time next slide please

1274
00:52:45,769 --> 00:52:50,309
so now in the present day we've reached

1275
00:52:47,969 --> 00:52:55,009
a point really where what which heinberg

1276
00:52:50,309 --> 00:52:57,480
considers to be the perfect storm

1277
00:52:55,010 --> 00:52:58,770
increasing population increasing in an

1278
00:52:57,480 --> 00:53:00,719
energy increasing demand for energy

1279
00:52:58,769 --> 00:53:04,230
increasing environmental instruction and

1280
00:53:00,719 --> 00:53:06,179
the sapling of resources the point where

1281
00:53:04,230 --> 00:53:08,849
they're almost gone with continuing to

1282
00:53:06,179 --> 00:53:11,608
increase we it's like he needed he said

1283

00:53:08,849 --> 00:53:13,589
oh I despair because we're acting as if

1284
00:53:11,608 --> 00:53:18,000
the resources are infinite when they're

1285
00:53:13,590 --> 00:53:22,530
not next slide please and here course we

1286
00:53:18,000 --> 00:53:25,019
have here the power stations the cold

1287
00:53:22,530 --> 00:53:27,150
the energy that's being generated and

1288
00:53:25,019 --> 00:53:30,358
everything that goes with it which is

1289
00:53:27,150 --> 00:53:31,769
all part of this is this is almost the

1290
00:53:30,358 --> 00:53:35,639
center of this entire look at the core

1291
00:53:31,769 --> 00:53:38,289
of this entire system next slide please

1292
00:53:35,639 --> 00:53:41,049
now one of the alternatives that's the

1293
00:53:38,289 --> 00:53:43,509
question maybe I'll tell you what I'll

1294
00:53:41,050 --> 00:53:44,890
take a little break and then we'll talk

1295
00:53:43,510 --> 00:53:47,170
about alternatives to what we've seen

1296
00:53:44,889 --> 00:53:48,779
just now all right now you can if you're

1297
00:53:47,170 --> 00:53:51,309

feeling a bit down don't worry because

1298

00:53:48,780 --> 00:53:52,990

I'm going this does have a happy ending

1299

00:53:51,309 --> 00:53:54,519

all right I'm not that I'm gonna chit

1300

00:53:52,989 --> 00:53:57,699

there's some cheerful news coming up

1301

00:53:54,519 --> 00:54:02,369

okay but to go get yourself a beer or

1302

00:53:57,699 --> 00:54:02,368

drink anthem I'll see you in how long

1303

00:54:02,610 --> 00:54:07,599

year 15 very much I've got some books

1304

00:54:05,260 --> 00:54:09,130

for sale here and these are just five

1305

00:54:07,599 --> 00:54:12,099

pounds each these books despite their

1306

00:54:09,130 --> 00:54:16,510

size this is a book i published it by me

1307

00:54:12,099 --> 00:54:18,699

and i wrote it and post it in 2002 it's

1308

00:54:16,510 --> 00:54:19,840

called Evan's land and it's not about

1309

00:54:18,699 --> 00:54:21,069

the subjects i'm talking about now but

1310

00:54:19,840 --> 00:54:22,480

it's about whales I thought you might

1311

00:54:21,070 --> 00:54:24,220

like it because it's kind of a it's kind

1312
00:54:22,480 --> 00:54:26,740
of a science fiction story set in Wales

1313
00:54:24,219 --> 00:54:28,299
so if you want one of those let me know

1314
00:54:26,739 --> 00:54:30,069
and take one of these and they're just

1315
00:54:28,300 --> 00:54:31,420
five pounds each they won't run

1316
00:54:30,070 --> 00:54:34,450
remainder prices now because that books

1317
00:54:31,420 --> 00:54:36,659
been around for a long time okay thanks

1318
00:54:34,449 --> 00:54:36,659
very much