



**REBECCA
GOLDSTEIN**

**GÖDEL'S
INCOMPLETENESS
EXPLAINED**

1
00:00:05,720 --> 00:00:01,340
I don't think we all want the same

2
00:00:10,280 --> 00:00:05,730
things I think there are many people who

3
00:00:13,789 --> 00:00:10,290
want their their group their tribe

4
00:00:17,720 --> 00:00:13,799
however they define it to win at all

5
00:00:22,310 --> 00:00:17,730
costs and they will sacrifice the truth

6
00:00:25,550 --> 00:00:22,320
entirely to to to get what they want and

7
00:00:30,320 --> 00:00:25,560
no I don't think we all want I think

8
00:00:33,319 --> 00:00:30,330
without the taming respect for the truth

9
00:00:37,250 --> 00:00:33,329
yeah that's what it descends to this

10
00:00:41,000 --> 00:00:37,260
next guest needs no introduction it is

11
00:00:43,600 --> 00:00:41,010
the always charming lovely edifying

12
00:00:45,799 --> 00:00:43,610
rebecca goldstein and in this

13
00:00:47,869 --> 00:00:45,809

conversation we talked about girdle's

14

00:00:51,110 --> 00:00:47,879

incompleteness theorem its relationship

15

00:00:53,630 --> 00:00:51,120

to truth as well as the laws of physics

16

00:00:55,639 --> 00:00:53,640

potentially we also talked about her

17

00:00:59,119 --> 00:00:55,649

views on sam Harris's moral landscape

18

00:01:00,650 --> 00:00:59,129

how does she justify her morality given

19

00:01:02,119 --> 00:01:00,660

that she's an atheist and doesn't

20

00:01:06,560 --> 00:01:02,129

particularly like notions of

21

00:01:07,820 --> 00:01:06,570

transcendence or God and last we talked

22

00:01:11,050 --> 00:01:07,830

about something she's never revealed

23

00:01:13,460 --> 00:01:11,060

before which is her thoughts feelings

24

00:01:16,510 --> 00:01:13,470

conceptualizations of that debate that

25

00:01:19,280 --> 00:01:16,520

she had with jordan Peterson enjoy

26

00:01:22,219 --> 00:01:19,290

I'm here with Rebecca Goldstein and

27

00:01:24,530 --> 00:01:22,229

we're going to talk all about girdle's

28

00:01:26,070 --> 00:01:24,540

theorem incompleteness theorem as well

29

00:01:28,230 --> 00:01:26,080

as

30

00:01:32,370 --> 00:01:28,240

progress rationality and the

31

00:01:35,850 --> 00:01:32,380

enlightenment okay Rebecca thanks for

32

00:01:37,980 --> 00:01:35,860

coming on my pleasure so tell me what

33

00:01:39,210 --> 00:01:37,990

does your day-to-day schedule look like

34

00:01:47,850 --> 00:01:39,220

how are you productive

35

00:01:54,060 --> 00:01:47,860

I feel very unproductive actually you

36

00:01:57,690 --> 00:01:54,070

mean as of late or as may be 2016 when

37

00:02:03,090 --> 00:01:57,700

so politics have become too interesting

38

00:02:06,210 --> 00:02:03,100

and I faced it all so a lot of time you

39

00:02:12,170 --> 00:02:06,220

know politics and I'm reading up on

40

00:02:17,900 --> 00:02:12,180

politics and doing whatever I can so I

41

00:02:20,370 --> 00:02:17,910

sometimes wonder whether when historians

42

00:02:23,910 --> 00:02:20,380

intellectual historians look back on

43

00:02:29,910 --> 00:02:23,920

this period whether they're going to see

44

00:02:33,509 --> 00:02:29,920

a different activity just because of you

45

00:02:36,270 --> 00:02:33,519

know how well consuming politics can get

46

00:02:39,360 --> 00:02:36,280

so anyway when I am productive

47

00:02:45,390 --> 00:02:39,370

I am productive because I become

48

00:02:50,820 --> 00:02:45,400

obsessed and so I you know when I'm

49

00:02:53,100 --> 00:02:50,830

working on a problem time just flies you

50

00:02:56,820 --> 00:02:53,110

know and I you know I get right to work

51
00:02:59,729 --> 00:02:56,830
and I can work for 18 hours straight

52
00:03:01,830 --> 00:02:59,739
in fact I've when I was writing the book

53
00:03:05,729 --> 00:03:01,840
on goodall's incompleteness theorems in

54
00:03:07,949 --> 00:03:05,739
particular I you know I kind of ruined

55
00:03:12,210 --> 00:03:07,959
my back because the day would just fly

56
00:03:14,370 --> 00:03:12,220
by and I had it moved from my desk feet

57
00:03:15,509 --> 00:03:14,380
for most of it is do you write with a

58
00:03:20,400 --> 00:03:15,519
pen and paper do you write with your

59
00:03:22,320 --> 00:03:20,410
laptop I'm getting into the details yeah

60
00:03:24,960 --> 00:03:22,330
I write with the laptop you know that

61
00:03:26,100 --> 00:03:24,970
was in slow process I it was very late

62
00:03:29,850 --> 00:03:26,110
to doing that

63
00:03:31,740 --> 00:03:29,860

I've thought I needed to do I do

64

00:03:34,170 --> 00:03:31,750

diagrams and all of this sort of thing

65

00:03:36,390 --> 00:03:34,180

when I'm mapping out ideas the structure

66

00:03:38,640 --> 00:03:36,400

of an argument is always extremely

67

00:03:41,330 --> 00:03:38,650

important to me you write the diagrams

68

00:03:44,580 --> 00:03:41,340

on the laptop or with a pen and paper

69

00:03:48,180 --> 00:03:44,590

paper but then the actual sentences are

70

00:03:50,430 --> 00:03:48,190

always composed on a laptop and you know

71

00:03:53,790 --> 00:03:50,440

it's it's terrific for someone like me

72

00:03:55,410 --> 00:03:53,800

because I'm realizing I revise and

73

00:03:57,360 --> 00:03:55,420

revise I realize each sentence

74

00:03:59,790 --> 00:03:57,370

I don't like write a whole book and then

75

00:04:02,730 --> 00:03:59,800

go back to rising up which I do anyway

76

00:04:04,740 --> 00:04:02,740

but I go sentence by sentence and you

77

00:04:09,270 --> 00:04:04,750

know sentences can be written seven

78

00:04:10,170 --> 00:04:09,280

eight times yeah so a laptop right oh

79

00:04:12,420 --> 00:04:10,180

okay

80

00:04:15,510 --> 00:04:12,430

do you find that most of your work is

81

00:04:16,860 --> 00:04:15,520

reading or actual writing where I

82

00:04:19,140 --> 00:04:16,870

remember I was talking to Pinker and he

83

00:04:21,479 --> 00:04:19,150

said something like 80% of his time it's

84

00:04:28,170 --> 00:04:21,489

been reading yeah he reads a lot

85

00:04:32,250 --> 00:04:28,180

I read much less I you know for my work

86

00:04:34,890 --> 00:04:32,260

because he is he's a great cattle you

87

00:04:36,690 --> 00:04:34,900

know he he takes from this person from

88

00:04:38,010 --> 00:04:36,700

that person and he and then he puts it

89

00:04:40,320 --> 00:04:38,020

together and something that's greater

90

00:04:46,980 --> 00:04:40,330

than the sum of its parts I think that's

91

00:04:49,589 --> 00:04:46,990

one of his tremendous talents but I I'm

92

00:04:54,210 --> 00:04:49,599

different I I certain attacks problems

93

00:04:56,700 --> 00:04:54,220

usually on my own I mean there there

94

00:05:00,930 --> 00:04:56,710

there usually are more amenable problems

95

00:05:04,409 --> 00:05:00,940

and I so for me it's thinking more than

96

00:05:07,110 --> 00:05:04,419

writing very looked I'm thinking and

97

00:05:09,719 --> 00:05:07,120

looking around my walk around the house

98

00:05:15,089 --> 00:05:09,729

you know and I walk outside and I walk

99

00:05:17,279 --> 00:05:15,099

you know so our processes are very

100

00:05:18,719 --> 00:05:17,289

different I know this is gonna sound

101
00:05:21,000 --> 00:05:18,729
like I'm getting so much of the details

102
00:05:23,550 --> 00:05:21,010
but do you tell pinker or anyone who

103
00:05:25,350 --> 00:05:23,560
else is around to not talk to you when

104
00:05:29,940 --> 00:05:25,360
you're walking and thinking for example

105
00:05:31,980 --> 00:05:29,950
for me when I think I look like I'm

106
00:05:34,560 --> 00:05:31,990
angry so my wife always wants to ask if

107
00:05:36,240 --> 00:05:34,570
I'm okay and and I have to tell her to

108
00:05:38,370 --> 00:05:36,250
bark at her until they're like don't

109
00:05:40,770 --> 00:05:38,380
please if I if I look like I'm angry I'm

110
00:05:42,510 --> 00:05:40,780
likely just thinking so when this light

111
00:05:44,279 --> 00:05:42,520
is I have a light when this light is on

112
00:05:45,280 --> 00:05:44,289
just don't talk try your best to not

113
00:05:49,600 --> 00:05:45,290

talk don't even

114

00:05:51,580 --> 00:05:49,610

he looks at me I know a reticle but if

115

00:05:54,930 --> 00:05:51,590

she looks at me I feel bad so I have

116

00:06:00,070 --> 00:05:54,940

please ignore me so what are your rules

117

00:06:04,060 --> 00:06:00,080

I don't know that I've ever explicitly

118

00:06:08,220 --> 00:06:04,070

laid them out but people can tell and

119

00:06:13,410 --> 00:06:08,230

they were respectful so I have I'm also

120

00:06:15,910 --> 00:06:13,420

from a former marriage to children and

121

00:06:18,670 --> 00:06:15,920

they you know so they were little

122

00:06:22,300 --> 00:06:18,680

children when their mother was thinking

123

00:06:25,030 --> 00:06:22,310

and I remember once I was you know

124

00:06:26,830 --> 00:06:25,040

cooking dinner and one of my daughter's

125

00:06:29,560 --> 00:06:26,840

had a little friend over and little

126

00:06:32,440 --> 00:06:29,570

friend asked me something and my

127

00:06:36,130 --> 00:06:32,450

daughter said don't bother her she's

128

00:06:39,700 --> 00:06:36,140

thinking and the friend said she's

129

00:06:42,490 --> 00:06:39,710

cooking and my daughter said trust me

130

00:06:45,640 --> 00:06:42,500

she's thinking so that's when I knew

131

00:06:48,820 --> 00:06:45,650

that they could read my expression and

132

00:06:52,030 --> 00:06:48,830

they were extremely respectful of it so

133

00:06:53,770 --> 00:06:52,040

I've been lucky okay let's get into

134

00:06:56,500 --> 00:06:53,780

girls incompleteness theorems look I

135

00:06:58,540 --> 00:06:56,510

don't mind why don't you explain to the

136

00:07:01,180 --> 00:06:58,550

audience just a brief overview of what

137

00:07:04,300 --> 00:07:01,190

they are yeah so that yes as you say

138

00:07:11,500 --> 00:07:04,310

there are its in the plural there are

139

00:07:14,950 --> 00:07:11,510

two of them and and what they have to do

140

00:07:19,870 --> 00:07:14,960

with are the limitations of formal

141

00:07:21,880 --> 00:07:19,880

systems and formal systems which are

142

00:07:26,170 --> 00:07:21,890

very very important in logic and

143

00:07:29,250 --> 00:07:26,180

mathematics are rule governed systems

144

00:07:33,520 --> 00:07:29,260

for proving things are kind of proof

145

00:07:37,650 --> 00:07:33,530

mechanisms in which everything that you

146

00:07:42,970 --> 00:07:37,660

can do in the formal system is defined

147

00:07:45,340 --> 00:07:42,980

by a rule recursive rules are extremely

148

00:07:48,040 --> 00:07:45,350

important in formal systems and these

149

00:07:50,320 --> 00:07:48,050

are rules that you you can apply to

150

00:07:53,680 --> 00:07:50,330

something and then you can apply that

151
00:07:56,110 --> 00:07:53,690
rule to the results that you got and

152
00:07:58,149 --> 00:07:56,120
applying the rule ever and ever and ever

153
00:08:00,639 --> 00:07:58,159
so for example we can generate

154
00:08:03,969 --> 00:08:00,649
the integers that way just keep adding

155
00:08:06,879 --> 00:08:03,979
one to the results you got before and

156
00:08:09,070 --> 00:08:06,889
you'll have another integer so this is a

157
00:08:13,450 --> 00:08:09,080
lathe you can you know define the

158
00:08:20,740 --> 00:08:18,879
completely rule burned just one rose

159
00:08:23,890 --> 00:08:20,750
right after you said this is how you

160
00:08:28,480 --> 00:08:23,900
define integers algorithmically yes so

161
00:08:32,380 --> 00:08:28,490
this is how you know that that formal

162
00:08:34,719 --> 00:08:32,390
systems they have rules mechanical

163
00:08:42,130 --> 00:08:34,729

procedures algorithms these are all

164

00:08:46,180 --> 00:08:42,140

inter twined concepts and and they were

165

00:08:48,340 --> 00:08:46,190

very very important in mathematic you'll

166

00:08:51,550 --> 00:08:48,350

early mathematics because of the

167

00:08:55,710 --> 00:08:51,560

discovery of the paradoxes of set theory

168

00:08:58,960 --> 00:08:55,720

which showed us that our intuitions in

169

00:09:03,519 --> 00:08:58,970

mathematics were not trustworthy you can

170

00:09:06,490 --> 00:09:03,529

derive certain paradoxes and so the idea

171

00:09:09,010 --> 00:09:06,500

was okay we're just we're going to

172

00:09:11,519 --> 00:09:09,020

reduce mathematics to formal systems so

173

00:09:15,820 --> 00:09:11,529

just these mechanical rules that will

174

00:09:18,940 --> 00:09:15,830

eliminate our reliance on intuitions on

175

00:09:24,579 --> 00:09:18,950

what seems to us to be true and just

176
00:09:26,260 --> 00:09:24,589
have these mindless rules but you don't

177
00:09:29,470 --> 00:09:26,270
even have to think about meaning the

178
00:09:33,699 --> 00:09:29,480
kind of thing that can be programmed

179
00:09:37,120 --> 00:09:33,709
into a computer and so it and and

180
00:09:42,570 --> 00:09:37,130
actually from these notions of formal

181
00:09:58,240 --> 00:09:51,730
after goodell you we did get computers

182
00:10:00,220 --> 00:09:58,250
actually so that this is anyway so the

183
00:10:02,949 --> 00:10:00,230
incompleteness of the areum's are about

184
00:10:07,000 --> 00:10:02,959
the limitations of formal systems this

185
00:10:10,170 --> 00:10:07,010
is not a way to solve it turns out the

186
00:10:12,610 --> 00:10:10,180
paradoxes of set theory it's impossible

187
00:10:15,790 --> 00:10:12,620
what you want from a formal system is

188
00:10:19,720 --> 00:10:15,800

that everything you prove in it is true

189

00:10:25,250 --> 00:10:19,730

for sure you also want that everything

190

00:10:29,180 --> 00:10:26,840

and that's what the first thing

191

00:10:32,150 --> 00:10:29,190

completeness theorem tells you cannot be

192

00:10:34,040 --> 00:10:32,160

true for a retic everything that we can

193

00:10:37,910 --> 00:10:34,050

prove that a formal system of arithmetic

194

00:10:40,370 --> 00:10:37,920

is true but not everything that's true

195

00:10:43,040 --> 00:10:40,380

can be proved in a formal system and

196

00:10:46,400 --> 00:10:43,050

then you can try to add an axiom to that

197

00:10:48,410 --> 00:10:46,410

formal system so that you know you can

198

00:10:50,720 --> 00:10:48,420

capture the thing you couldn't prove in

199

00:10:54,620 --> 00:10:50,730

the previous one well you can perform

200

00:10:57,830 --> 00:10:54,630

you can derive other propositions that

201
00:11:01,910 --> 00:10:57,840
won't be provable in that system and on

202
00:11:04,400 --> 00:11:01,920
and on infinitum so that's the first

203
00:11:10,340 --> 00:11:04,410
thing completeness theorem there are

204
00:11:15,200 --> 00:11:10,350
true propositions about the integers it

205
00:11:17,990 --> 00:11:15,210
can't be proved in any formal system and

206
00:11:21,830 --> 00:11:18,000
so and then the second incompleteness

207
00:11:24,530 --> 00:11:21,840
theorem is also kind of devastating

208
00:11:26,840 --> 00:11:24,540
because the one thing you really really

209
00:11:29,270 --> 00:11:26,850
want from your portable system is that

210
00:11:32,540 --> 00:11:29,280
it be consistent that is that you can't

211
00:11:35,210 --> 00:11:32,550
prove a contradiction in it you can't

212
00:11:40,580 --> 00:11:35,220
prove for some proposition P that both P

213
00:11:43,040 --> 00:11:40,590

and not P it's true and of course that

214

00:11:44,810 --> 00:11:43,050

would be contradictions or false so that

215

00:11:46,850 --> 00:11:44,820

would negate you know the first thing

216

00:11:49,160 --> 00:11:46,860

which is that everything you prove in a

217

00:11:53,930 --> 00:11:49,170

formal system is true but it's much more

218

00:11:57,400 --> 00:11:53,940

serious than that because technically in

219

00:12:00,830 --> 00:11:57,410

formal logic from a contradiction

220

00:12:02,570 --> 00:12:00,840

anything follows so you can prove

221

00:12:05,270 --> 00:12:02,580

absolutely anything I can prove that one

222

00:12:09,920 --> 00:12:05,280

equals three I can prove you know I can

223

00:12:13,250 --> 00:12:09,930

prove anything in an inconsistent system

224

00:12:15,860 --> 00:12:13,260

so the fact that when you're using a

225

00:12:28,010 --> 00:12:15,870

formal system you cannot itself prove

226

00:12:30,710 --> 00:12:28,020

its consistency is is kind of yeah you

227

00:12:33,740 --> 00:12:30,720

can go outside of the system like for

228

00:12:37,610 --> 00:12:33,750

example giving a model for the system

229

00:12:38,730 --> 00:12:37,620

that will show that it is consistent so

230

00:12:40,950 --> 00:12:38,740

it's not that we're

231

00:12:42,930 --> 00:12:40,960

but within one of the things that you

232

00:12:45,150 --> 00:12:42,940

can't prove within a formal system is

233

00:12:47,870 --> 00:12:45,160

the consistency of that system itself

234

00:12:51,360 --> 00:12:47,880

that's the second incompleteness theorem

235

00:12:52,890 --> 00:12:51,370

I'm sorry yeah okay okay so I'll make a

236

00:12:55,260 --> 00:12:52,900

synopsis just for people who are

237

00:12:58,410 --> 00:12:55,270

listening in math you have a statement

238

00:13:00,300 --> 00:12:58,420

like let's say that even plus even

239

00:13:02,820 --> 00:13:00,310

equals another even number so you take

240

00:13:04,170 --> 00:13:02,830

two even numbers equals no how do you

241

00:13:05,550 --> 00:13:04,180

know that that's true for all even

242

00:13:06,990 --> 00:13:05,560

numbers you have a proof it's almost

243

00:13:08,250 --> 00:13:07,000

like the way that I like to explain it

244

00:13:09,570 --> 00:13:08,260

to people is like Sherlock Holmes you

245

00:13:11,010 --> 00:13:09,580

have the dead body and then you want to

246

00:13:12,570 --> 00:13:11,020

say who killed and then you go step by

247

00:13:13,680 --> 00:13:12,580

step there's well there's shoes here and

248

00:13:16,320 --> 00:13:13,690

the shoes can only belong to a man

249

00:13:18,210 --> 00:13:16,330

because it's so and so and and the dog

250

00:13:20,580 --> 00:13:18,220

didn't bark because they know that so on

251
00:13:22,560 --> 00:13:20,590
so on so these okay great so now we've

252
00:13:24,210 --> 00:13:22,570
gotten step by step deductively we've

253
00:13:27,390 --> 00:13:24,220
gotten to the conclusion therefore this

254
00:13:31,320 --> 00:13:27,400
conclusion is true okay now the question

255
00:13:33,870 --> 00:13:31,330
is does the reverse hold okay well if

256
00:13:36,660 --> 00:13:33,880
something is true can you always prove

257
00:13:38,280 --> 00:13:36,670
that it's true if for mathematicians for

258
00:13:40,580 --> 00:13:38,290
a while it was like what does it mean

259
00:13:44,460 --> 00:13:40,590
for something to be true and not proved

260
00:13:48,060 --> 00:13:44,470
okay but then girdle said there are some

261
00:13:49,710 --> 00:13:48,070
truths inside a formal system you fix a

262
00:13:51,510 --> 00:13:49,720
formal system there are some things that

263
00:13:54,030 --> 00:13:51,520

we can just see from the outside that it

264

00:13:55,200 --> 00:13:54,040

has to be true but we can also see from

265

00:13:57,330 --> 00:13:55,210

the way that it's constructed that you

266

00:13:58,530 --> 00:13:57,340

can't prove it within the system okay so

267

00:14:00,090 --> 00:13:58,540

that's the first one the second one is

268

00:14:02,220 --> 00:14:00,100

also that you can't prove in your own

269

00:14:03,300 --> 00:14:02,230

system your the consistency of your own

270

00:14:05,070 --> 00:14:03,310

system otherwise would come in

271

00:14:07,470 --> 00:14:05,080

consistent consistency just means like

272

00:14:12,500 --> 00:14:07,480

Rebecca you just said you can't prove a

273

00:14:15,030 --> 00:14:12,510

and not a at the same time yes okay yes

274

00:14:16,410 --> 00:14:15,040

so why does that matter what does that

275

00:14:18,240 --> 00:14:16,420

matter to people like that just sounds

276

00:14:20,250 --> 00:14:18,250

so esoteric to most people who are

277

00:14:24,030 --> 00:14:20,260

listening yes it does sound very

278

00:14:27,030 --> 00:14:24,040

esoteric well it was as he said you know

279

00:14:29,280 --> 00:14:27,040

um we had always depended on these sort

280

00:14:33,540 --> 00:14:29,290

of on these intuitions like if you could

281

00:14:35,550 --> 00:14:33,550

if you have a predicate you know forming

282

00:14:38,280 --> 00:14:35,560

a predicate you can form the set of all

283

00:14:41,220 --> 00:14:38,290

things that satisfy that predicate so

284

00:14:43,920 --> 00:14:41,230

the predicate of like being an American

285

00:14:47,520 --> 00:14:43,930

president you know there are how many

286

00:14:49,350 --> 00:14:47,530

people 45 right 45 people who for whom

287

00:14:52,530 --> 00:14:49,360

that is true I think I think Trump is

288

00:14:58,590 --> 00:14:52,540

the 45th president anyway according to

289

00:15:01,860 --> 00:14:58,600

some people so you know it's a dear SEC

290

00:15:04,650 --> 00:15:01,870

SEC that satisfies well there that just

291

00:15:06,810 --> 00:15:04,660

seems you know intuitive for every

292

00:15:10,170 --> 00:15:06,820

predicate you can form the set of things

293

00:15:12,990 --> 00:15:10,180

satisfying that predicate and set theory

294

00:15:16,050 --> 00:15:13,000

dependent on that well considering this

295

00:15:18,330 --> 00:15:16,060

consider the following set the set of

296

00:15:19,080 --> 00:15:18,340

all sets that aren't members of

297

00:15:26,160 --> 00:15:19,090

themselves

298

00:15:28,860 --> 00:15:26,170

so is there such a set turns out there

299

00:15:31,020 --> 00:15:28,870

there can't be such a set because a set

300

00:15:32,880 --> 00:15:31,030

of all sets that aren't members of

301

00:15:35,160 --> 00:15:32,890

themselves if it's a member of itself

302

00:15:37,650 --> 00:15:35,170

then it's not a member of itself and

303

00:15:39,690 --> 00:15:37,660

it's not a member of itself it is a

304

00:15:42,750 --> 00:15:39,700

member of itself that's a classic

305

00:15:44,880 --> 00:15:42,760

paradox it's a member of itself if and

306

00:15:47,910 --> 00:15:44,890

only if it's not a member of itself that

307

00:15:50,210 --> 00:15:47,920

was a paradox discovered by Bertrand

308

00:15:52,950 --> 00:15:50,220

Russell the philosopher Bertrand Russell

309

00:15:55,770 --> 00:15:52,960

there were other paradoxes but that's a

310

00:15:58,110 --> 00:15:55,780

classic paradox that still sounds like

311

00:15:59,850 --> 00:15:58,120

it doesn't matter so how does this

312

00:16:02,970 --> 00:15:59,860

matter to someone's day-to-day life or

313

00:16:04,980 --> 00:16:02,980

does it not matter well let's see if it

314

00:16:07,770 --> 00:16:04,990

matters it so it is something about

315

00:16:10,860 --> 00:16:07,780

mathematics it matters in terms of as

316

00:16:12,900 --> 00:16:10,870

you it sort of indicate it what makes

317

00:16:14,880 --> 00:16:12,910

mathematics true mathematics is a little

318

00:16:17,550 --> 00:16:14,890

mysterious because it's not empirical

319

00:16:19,860 --> 00:16:17,560

right you know we that's why

320

00:16:22,260 --> 00:16:19,870

mathematicians are so cheap for a

321

00:16:25,800 --> 00:16:22,270

universe can hate to hire right they

322

00:16:29,400 --> 00:16:25,810

only require blackboards and chalks and

323

00:16:31,440 --> 00:16:29,410

erasers basically and yeah and there's a

324

00:16:33,540 --> 00:16:31,450

joke connected to that that philosophers

325

00:16:36,060 --> 00:16:33,550

are even cheaper because they don't

326

00:16:37,230 --> 00:16:36,070

require the eraser especially never you

327

00:16:42,540 --> 00:16:37,240

can't ever discover you've made a

328

00:16:46,160 --> 00:16:42,550

mistake in philosophy but um you know

329

00:16:48,360 --> 00:16:46,170

whereas physicists and all the empirical

330

00:16:51,120 --> 00:16:48,370

scientists they require laboratories

331

00:16:54,210 --> 00:16:51,130

servitor is you know all this expensive

332

00:16:57,060 --> 00:16:54,220

stuff you know accelerators and God

333

00:16:59,790 --> 00:16:57,070

knows what so so what is it and that's

334

00:17:01,800 --> 00:16:59,800

because you know mathematics you know

335

00:17:03,580 --> 00:17:01,810

that the information is of carried

336

00:17:05,740 --> 00:17:03,590

inside your crane ship you know

337

00:17:08,590 --> 00:17:05,750

all here are the axe teams work out the

338

00:17:10,570 --> 00:17:08,600

consequences still this is a little bit

339

00:17:12,790 --> 00:17:10,580

mysterious and you're what makes

340

00:17:16,000 --> 00:17:12,800

mathematics true there are these two

341

00:17:18,550 --> 00:17:16,010

basic views you know one is that you

342

00:17:21,340 --> 00:17:18,560

know they're they're the kind of a super

343

00:17:24,190 --> 00:17:21,350

a sensible reality that we are somehow

344

00:17:26,230 --> 00:17:24,200

being able to access with our little

345

00:17:28,690 --> 00:17:26,240

finite minds and being able to prove all

346

00:17:32,020 --> 00:17:28,700

these things about and you know many

347

00:17:34,750 --> 00:17:32,030

magnitudes of infinity and you know Wow

348

00:17:37,450 --> 00:17:34,760

aren't we something or there's a few

349

00:17:40,750 --> 00:17:37,460

that look it's just it's like a higher

350

00:17:43,240 --> 00:17:40,760

form of chess it's just some rules it's

351
00:17:45,730 --> 00:17:43,250
a game we lay down the rules and then we

352
00:17:48,160 --> 00:17:45,740
see what falls right

353
00:17:51,370 --> 00:17:48,170
and so mathematics is really just the

354
00:17:53,140 --> 00:17:51,380
sign of mindless rule following we're

355
00:17:55,210 --> 00:17:53,150
surprised by the things just as we're

356
00:17:58,480 --> 00:17:55,220
surprised in chess then you know what

357
00:18:00,940 --> 00:17:58,490
can ensue just from these finite set of

358
00:18:02,320 --> 00:18:00,950
rules but you know but okay you know if

359
00:18:04,200 --> 00:18:02,330
we had implements we'd be able to see

360
00:18:07,990 --> 00:18:04,210
all the consequences of our rules

361
00:18:09,970 --> 00:18:08,000
gödel showed that first there's

362
00:18:13,780 --> 00:18:09,980
something wrong with that first answer

363
00:18:16,150 --> 00:18:13,790

right it can't just be a matter of rule

364

00:18:17,890 --> 00:18:16,160

following of mindless rule following

365

00:18:18,970 --> 00:18:17,900

that's and he was a plainness but and

366

00:18:21,790 --> 00:18:18,980

that's up to you that you know

367

00:18:23,020 --> 00:18:21,800

mathematics is kind of independently

368

00:18:25,630 --> 00:18:23,030

true

369

00:18:27,760 --> 00:18:25,640

you know the june the moons of jupiter

370

00:18:31,630 --> 00:18:27,770

was spinning around Jupiter before we

371

00:18:33,550 --> 00:18:31,640

put the telescope to our eyes and so two

372

00:18:35,500 --> 00:18:33,560

mathematical truths you know that

373

00:18:37,750 --> 00:18:35,510

there's just an infinity so I mean in

374

00:18:41,560 --> 00:18:37,760

that sense it's interesting here's the

375

00:18:46,330 --> 00:18:41,570

other thing people have claimed very

376

00:18:49,000 --> 00:18:46,340

large consequences from girdles and

377

00:18:57,460 --> 00:18:49,010

completeness theorems about both mind

378

00:19:00,280 --> 00:18:57,470

and matter so and girdle also considered

379

00:19:01,630 --> 00:19:00,290

about mind if there were consequences I

380

00:19:08,260 --> 00:19:01,640

have a little story about that maybe

381

00:19:10,900 --> 00:19:08,270

I'll get you but it was an argument that

382

00:19:14,320 --> 00:19:10,910

was first published by philosopher Lucas

383

00:19:18,370 --> 00:19:14,330

John Lucas in I think 1964

384

00:19:22,060 --> 00:19:18,380

arguing that girdles incompleteness

385

00:19:25,720 --> 00:19:22,070

theorems show that our minds can't be

386

00:19:28,450 --> 00:19:25,730

digital computers that even in our doing

387

00:19:30,990 --> 00:19:28,460

mathematics we're not doing it formally

388

00:19:33,220 --> 00:19:31,000

that's how we know that these

389

00:19:36,130 --> 00:19:33,230

propositions that we can't prove are

390

00:19:40,240 --> 00:19:36,140

true and that even our mathematical

391

00:19:44,250 --> 00:19:40,250

knowledge can't be programmed into a

392

00:19:47,200 --> 00:19:44,260

digital computer therefore we are not

393

00:19:50,550 --> 00:19:47,210

computers right right right right and so

394

00:19:55,560 --> 00:19:50,560

that is and Roger Penrose the great

395

00:19:58,420 --> 00:19:55,570

physicist polymath wrote two books

396

00:20:02,170 --> 00:19:58,430

arguing such things now the uppers in

397

00:20:07,320 --> 00:20:02,180

mind and shadows of the light enlarging

398

00:20:10,180 --> 00:20:07,330

on this argument of Lucas and so

399

00:20:13,810 --> 00:20:10,190

actually so here's my little story which

400

00:20:19,120 --> 00:20:13,820

is when I was a graduate student at

401
00:20:21,190 --> 00:20:19,130
Princeton my then-husband was at the

402
00:20:24,400 --> 00:20:21,200
Institute for Advanced Study and goodell

403
00:20:27,970 --> 00:20:24,410
was there oh wow

404
00:20:31,060 --> 00:20:27,980
yes yeah your ex-husband was a physicist

405
00:20:37,930 --> 00:20:31,070
am I correct yes Sheldon Goldstein in a

406
00:20:38,210 --> 00:20:37,940
most excellent physicist and so don't

407
00:20:43,190 --> 00:20:38,220
care

408
00:20:45,049 --> 00:20:43,200
was a famous recluse um he never he his

409
00:20:49,180 --> 00:20:45,059
best friend was Einstein I mean that

410
00:20:52,340 --> 00:20:49,190
predated like time I didn't die cited

411
00:20:57,919 --> 00:20:52,350
1954 anyway he would they would only

412
00:20:59,810 --> 00:20:57,929
talk to each other apparently and once

413
00:21:03,200 --> 00:20:59,820

Iceland died he really became very

414

00:21:07,070 --> 00:21:03,210

reclusive and then I went to this party

415

00:21:09,619 --> 00:21:07,080

for newcomers at the Institute for

416

00:21:12,139 --> 00:21:09,629

Advanced Study my husband was a newcomer

417

00:21:13,369 --> 00:21:12,149

when I walked in a bunch of logicians

418

00:21:16,070 --> 00:21:13,379

came running over to me

419

00:21:21,200 --> 00:21:16,080

it said he's here he's here devil is

420

00:21:24,230 --> 00:21:21,210

here and so sure enough it was I learned

421

00:21:27,019 --> 00:21:24,240

later there was this brief opening when

422

00:21:28,789 --> 00:21:27,029

he was a little bit more garius and that

423

00:21:30,919 --> 00:21:28,799

party just happened to coincide with it

424

00:21:36,159 --> 00:21:30,929

and he was there kind of holding court

425

00:21:41,029 --> 00:21:36,169

and I had of course read this argument

426

00:21:44,360 --> 00:21:41,039

and I was wanting to ask him what he

427

00:21:49,820 --> 00:21:44,370

thought of it um but I was too shy which

428

00:21:53,270 --> 00:21:49,830

argument the gianluca's argument that

429

00:21:54,620 --> 00:21:53,280

the mind can't be a digital computer

430

00:21:57,740 --> 00:21:54,630

and I just kept putting it off and

431

00:21:59,870 --> 00:21:57,750

putting it off and then he was gone and

432

00:22:02,360 --> 00:21:59,880

I always tell my students this if you

433

00:22:05,180 --> 00:22:02,370

have a question ask you can spend the

434

00:22:08,270 --> 00:22:05,190

rest of your life regretting I did it I

435

00:22:09,680 --> 00:22:08,280

have always regretted that I didn't ask

436

00:22:11,390 --> 00:22:09,690

him that question

437

00:22:14,410 --> 00:22:11,400

you know what do you think of this

438

00:22:17,780 --> 00:22:14,420

argument said he could have views on it

439

00:22:21,650 --> 00:22:17,790

okay so that would be that's a big

440

00:22:22,430 --> 00:22:21,660

important consequence if it is a

441

00:22:23,990 --> 00:22:22,440

consequence

442

00:22:25,430 --> 00:22:24,000

right right right because people like

443

00:22:27,620 --> 00:22:25,440

Daniel Dennett would say that the mind

444

00:22:30,680 --> 00:22:27,630

is mechanistic well I don't know if I'm

445

00:22:32,300 --> 00:22:30,690

if I'm straw Manning him but it's

446

00:22:35,390 --> 00:22:32,310

something akin to a completely some

447

00:22:39,260 --> 00:22:35,400

people say yeah it is it is a thing to

448

00:22:41,830 --> 00:22:39,270

say we'd like to say it and it's

449

00:22:45,320 --> 00:22:41,840

certainly true your thoughts on that

450

00:22:46,910 --> 00:22:45,330

yeah I am I'm not a I'm not a

451
00:22:51,740 --> 00:22:46,920
reductionist when it comes to the mind

452
00:22:54,760 --> 00:22:51,750
oh I didn't know that yeah is Pinker a

453
00:23:00,560 --> 00:22:54,770
reductionist when it comes to the mind

454
00:23:05,030 --> 00:23:00,570
we are perhaps he takes reductionism a

455
00:23:07,160 --> 00:23:05,040
little more seriously than I do yeah one

456
00:23:08,720 --> 00:23:07,170
of my questions that I had - no no I

457
00:23:09,920 --> 00:23:08,730
just really want to ask this one what

458
00:23:14,270 --> 00:23:09,930
are the ways in which you defer from

459
00:23:21,590 --> 00:23:14,280
Pinker ideologically hmm well maybe we

460
00:23:24,410 --> 00:23:21,600
can I would say hmm depends what's what

461
00:23:27,700 --> 00:23:24,420
what sphere I think you know if it's

462
00:23:34,070 --> 00:23:27,710
political I probably am a little mortal

463
00:23:43,130 --> 00:23:34,080

well I am mortal last but um we are

464

00:23:47,660 --> 00:23:43,140

exactly no I would I think that I think

465

00:23:52,280 --> 00:23:47,670

that we're both very very committed as

466

00:23:55,550 --> 00:23:52,290

you note your rationality and I would

467

00:24:01,970 --> 00:23:55,560

say in the important ways we're we're

468

00:24:02,840 --> 00:24:01,980

quite similar okay so does this mean

469

00:24:05,450 --> 00:24:02,850

when you say that you're not a

470

00:24:07,010 --> 00:24:05,460

reductionist which by the way that's one

471

00:24:08,240 --> 00:24:07,020

of the major ways that

472

00:24:10,360 --> 00:24:08,250

and completeness theorem has

473

00:24:12,830 --> 00:24:10,370

implications because if you think of

474

00:24:15,680 --> 00:24:12,840

society as being composed of brains then

475

00:24:17,630 --> 00:24:15,690

that's composed of biology which is

476

00:24:23,440 --> 00:24:17,640

chemistry which is physics which is

477

00:24:27,850 --> 00:24:23,450

predicated on mathematics and if sorry

478

00:24:31,130 --> 00:24:27,860

uses mathematics right right right right

479

00:24:32,930 --> 00:24:31,140

not itself well that that's like that's

480

00:24:36,020 --> 00:24:32,940

our that's right in the string and if

481

00:24:38,750 --> 00:24:36,030

and if mathematics is on on solid ground

482

00:24:40,700 --> 00:24:38,760

in some way shape or form then that has

483

00:24:42,170 --> 00:24:40,710

implications for all for definitely all

484

00:24:45,710 --> 00:24:42,180

the physics and then all of what's above

485

00:24:47,090 --> 00:24:45,720

well even that is contested

486

00:24:49,070 --> 00:24:47,100

so for example I was interviewing

487

00:24:50,510 --> 00:24:49,080

someone named Sabine Hassan Felder who

488

00:24:52,210 --> 00:24:50,520

thinks girde's incompleteness theorem

489

00:24:55,460 --> 00:24:52,220

has nothing to say about physics

490

00:24:57,500 --> 00:24:55,470

although she said who said that

491

00:25:00,770 --> 00:24:57,510

it's Sabine Hassan Felder well I

492

00:25:02,150 --> 00:25:00,780

actually agree with her okay okay

493

00:25:03,530 --> 00:25:02,160

well she said one of the reasons is that

494

00:25:05,870 --> 00:25:03,540

let's say that you came up with

495

00:25:07,670 --> 00:25:05,880

something that cannot be proven whether

496

00:25:09,440 --> 00:25:07,680

or not it's they cannot be proven to be

497

00:25:11,030 --> 00:25:09,450

true you can all in physics you can just

498

00:25:12,530 --> 00:25:11,040

test it and then if it is true because

499

00:25:15,760 --> 00:25:12,540

it's experimental then if it is true you

500

00:25:18,530 --> 00:25:15,770

just put that as an axiom well my

501
00:25:20,270 --> 00:25:18,540
response to that would be that would go

502
00:25:23,000 --> 00:25:20,280
against the parsimony of science because

503
00:25:25,040 --> 00:25:23,010
if you have many of them then you can

504
00:25:27,410 --> 00:25:25,050
just have a thousand axioms plus your

505
00:25:30,140 --> 00:25:27,420
physical theory or ten thousand axioms

506
00:25:32,990 --> 00:25:30,150
or 1 million it's um in principle

507
00:25:40,140 --> 00:25:33,000
argument but regardless regardless yeah

508
00:25:49,050 --> 00:25:43,800
open on this first question of whether

509
00:25:51,420 --> 00:25:49,060
mind conclusions about mine follow from

510
00:25:56,160 --> 00:25:51,430
gödel's incompleteness theorems when it

511
00:25:59,990 --> 00:25:56,170
comes to matter I actually don't think

512
00:26:03,330 --> 00:26:00,000
any of these meta mathematical

513
00:26:05,570 --> 00:26:03,340

conclusions and that's what god's

514

00:26:09,690 --> 00:26:05,580

incompleteness theorem has to do with

515

00:26:13,050 --> 00:26:09,700

has any implications for a final theory

516

00:26:20,030 --> 00:26:13,060

for a theory of everything right so does

517

00:26:32,180 --> 00:26:25,800

it does mind come from matter oh yeah

518

00:26:34,650 --> 00:26:32,190

this stuff is doing doing it all yes

519

00:26:36,180 --> 00:26:34,660

where's the discrepancy why is it that

520

00:26:37,680 --> 00:26:36,190

girdle's incompleteness theorem doesn't

521

00:26:40,170 --> 00:26:37,690

apply to matter but what matter

522

00:26:48,650 --> 00:26:40,180

engenders it applies to

523

00:26:52,290 --> 00:26:48,660

well what we want to know about mind is

524

00:26:55,260 --> 00:26:52,300

is it is it a computer is everything

525

00:26:58,350 --> 00:26:55,270

that the mind is able to do and

526

00:27:01,590 --> 00:26:58,360

radicular in doing mathematics but all

527

00:27:06,180 --> 00:27:01,600

the other things that our minds do is it

528

00:27:10,710 --> 00:27:06,190

is this something that a computer could

529

00:27:14,070 --> 00:27:10,720

do and there's reason to think because

530

00:27:15,990 --> 00:27:14,080

of what the computers are you know

531

00:27:18,030 --> 00:27:16,000

everything that happens in a commuter is

532

00:27:23,220 --> 00:27:18,040

computable right it's all working

533

00:27:26,490 --> 00:27:23,230

according to this to these algorithmic

534

00:27:31,620 --> 00:27:26,500

rules that maybe that the powers of the

535

00:27:35,820 --> 00:27:31,630

mind exceed that and that even the

536

00:27:38,820 --> 00:27:35,830

notion of truth itself mathematical

537

00:27:42,450 --> 00:27:38,830

truth itself that starsky's undefinable

538

00:27:47,220 --> 00:27:42,460

'ti theorem the notion of truth itself

539

00:27:51,420 --> 00:27:47,230

can't be formalized in assists in a

540

00:27:52,950 --> 00:27:51,430

formal system it exceeds what we can get

541

00:27:55,350 --> 00:27:52,960

out of a formal system you know one

542

00:27:58,230 --> 00:27:55,360

truth is and mesh with the notion of

543

00:27:59,520 --> 00:27:58,240

meaning and you know and this meaning

544

00:28:04,140 --> 00:27:59,530

that was the whole point of

545

00:28:06,840 --> 00:28:04,150

computability let's get out our

546

00:28:09,570 --> 00:28:06,850

intuitions about truth and about meaning

547

00:28:13,050 --> 00:28:09,580

they're not entirely reliable and they

548

00:28:15,150 --> 00:28:13,060

are not entirely reliable but we can't

549

00:28:18,630 --> 00:28:15,160

get along without them you know we can't

550

00:28:21,290 --> 00:28:18,640

even do mathematics but you know if we

551

00:28:23,880 --> 00:28:21,300

confine ourselves to doing what

552

00:28:25,440 --> 00:28:23,890

computers can do they're very very

553

00:28:28,680 --> 00:28:25,450

useful for solving many mathematical

554

00:28:30,210 --> 00:28:28,690

problems but if we confined ourselves so

555

00:28:31,680 --> 00:28:30,220

that we wouldn't have be able to do

556

00:28:33,900 --> 00:28:31,690

everything that we would you do need

557

00:28:36,990 --> 00:28:33,910

billionaires so it really does relate

558

00:28:38,700 --> 00:28:37,000

these this because of you know the whole

559

00:28:40,620 --> 00:28:38,710

notion of what a formal system is what a

560

00:28:43,200 --> 00:28:40,630

program is a little recursion and

561

00:28:47,940 --> 00:28:43,210

computable you know algorithms all of

562

00:28:51,490 --> 00:28:47,950

these tied up notions and how truth and

563

00:28:53,919 --> 00:28:51,500

meaning are outside of that circle

564

00:28:56,110 --> 00:28:53,929

that's what girdle showed us I mean

565

00:28:58,600 --> 00:28:56,120

that's big stuff that's really big stuff

566

00:29:00,549 --> 00:28:58,610

and turski really cashed out on it with

567

00:29:03,520 --> 00:29:00,559

his underlying ability figure out right

568

00:29:04,930 --> 00:29:03,530

as a historical footnote did girdle come

569

00:29:07,299 --> 00:29:04,940

up with tar skis undefined ability

570

00:29:10,659 --> 00:29:07,309

theorem before him how did you know

571

00:29:13,840 --> 00:29:10,669

yes he did he probably came up with it

572

00:29:18,070 --> 00:29:13,850

he didn't bother to prove it um but yes

573

00:29:21,450 --> 00:29:18,080

he came up I think oh I I haven't

574

00:29:24,490 --> 00:29:21,460

checked dates but I think tarski

575

00:29:28,659 --> 00:29:24,500

published it in 1936 the underlying

576

00:29:34,690 --> 00:29:28,669

ability theorem um and you know a good

577

00:29:38,260 --> 00:29:34,700

old public his theorem said 31 um and I

578

00:29:42,490 --> 00:29:38,270

think he saw thee yes I think it was

579

00:29:44,230 --> 00:29:42,500

around 31 that he also had seen right

580

00:29:45,940 --> 00:29:44,240

okay so let's get to our skis undefined

581

00:29:48,850 --> 00:29:45,950

ability through hey

582

00:29:50,649 --> 00:29:48,860

okay so believe me we didn't completely

583

00:29:52,029 --> 00:29:50,659

finish up with the other day so I mean

584

00:29:54,120 --> 00:29:52,039

here's what I'd say about like a theory

585

00:29:56,940 --> 00:29:54,130

of everything you know which some

586

00:30:00,240 --> 00:29:56,950

extremely smart people have claimed um

587

00:30:06,620 --> 00:30:03,149

has been ruled out by gödel's

588

00:30:09,539 --> 00:30:06,630

incompleteness theorems Freeman Dyson

589

00:30:11,430 --> 00:30:09,549

Stephen Hawking had changed his mind

590

00:30:15,450 --> 00:30:11,440

about this verse he thought it did and

591

00:30:17,760 --> 00:30:15,460

then he thought I did so then it is that

592

00:30:21,419 --> 00:30:17,770

girdle's incompleteness theorems ruled

593

00:30:25,890 --> 00:30:21,429

out a theory of everything so let's say

594

00:30:28,649 --> 00:30:25,900

you have a formal system of physics

595

00:30:32,789 --> 00:30:28,659

right and so besides you know some sides

596

00:30:37,710 --> 00:30:32,799

all the arithmetic that is formalized in

597

00:30:39,750 --> 00:30:37,720

there you also have you know things

598

00:30:42,120 --> 00:30:39,760

referring to you know velocity and mass

599

00:30:43,890 --> 00:30:42,130

and position and its base time all of

600

00:30:49,289 --> 00:30:43,900

this other stuff which you know go

601
00:30:50,940 --> 00:30:49,299
beyond mathematical concepts I think the

602
00:30:53,070 --> 00:30:50,950
only thing that really follows from

603
00:30:55,710 --> 00:30:53,080
girls incompleteness is that there will

604
00:30:57,720 --> 00:30:55,720
be arithmetic improvisation z' within

605
00:31:02,070 --> 00:30:57,730
that formal system that you will not be

606
00:31:06,480 --> 00:31:02,080
able to prove that's what follows that's

607
00:31:10,169 --> 00:31:06,490
what good will showed but this is

608
00:31:13,260 --> 00:31:10,179
nothing about the completeness or lack

609
00:31:15,690 --> 00:31:13,270
of completeness of the physics in this

610
00:31:18,799 --> 00:31:15,700
formal system so I I don't think that

611
00:31:21,390 --> 00:31:18,809
this meta mathematics actually has this

612
00:31:22,590 --> 00:31:21,400
implication so that's anyway that's my

613
00:31:24,930 --> 00:31:22,600

right

614

00:31:26,700 --> 00:31:24,940

just so we're clear for the audience

615

00:31:28,260 --> 00:31:26,710

what does Freeman Dyson position on it

616

00:31:29,940 --> 00:31:28,270

and Stephen Hawking's and then why do

617

00:31:34,799 --> 00:31:29,950

you disagree where's the disappointment

618

00:31:39,120 --> 00:31:34,809

between us he says he's written

619

00:31:42,210 --> 00:31:39,130

extensively on this I think when okay I

620

00:31:49,770 --> 00:31:42,220

think when he was reviewing Brian

621

00:31:53,250 --> 00:31:49,780

Greene's book he the Freeman Dyson yes

622

00:31:55,380 --> 00:31:53,260

really awesome he said look girdles and

623

00:31:58,490 --> 00:31:55,390

completeness theorem shows that there

624

00:32:01,110 --> 00:31:58,500

are an exhaustible number of true

625

00:32:04,260 --> 00:32:01,120

propositions in mathematics that can't

626

00:32:09,060 --> 00:32:04,270

be true and because of that we can't

627

00:32:10,030 --> 00:32:09,070

show is true I'm sorry and because of

628

00:32:14,530 --> 00:32:10,040

this

629

00:32:16,810 --> 00:32:14,540

since physics uses mathematics it

630

00:32:21,220 --> 00:32:16,820

follows that there are an inexhaustible

631

00:32:26,470 --> 00:32:21,230

number of physical propositions which

632

00:32:29,050 --> 00:32:26,480

can't be proved true and I say you think

633

00:32:32,220 --> 00:32:29,060

that that's a mean I say that's a leap I

634

00:32:38,290 --> 00:32:36,010

yeah okay let's get to tarski we could

635

00:32:41,250 --> 00:32:38,300

spend the entire hour talking about this

636

00:32:44,710 --> 00:32:41,260

stuff it's extremely rich and extremely

637

00:32:46,390 --> 00:32:44,720

complicated and I think for me always

638

00:32:49,870 --> 00:32:46,400

it's let's first look at the

639

00:32:54,220 --> 00:32:49,880

incompleteness theorem see what they're

640

00:32:55,870 --> 00:32:54,230

proving how they prove it the limit you

641

00:32:58,020 --> 00:32:55,880

know the fact that they prove me

642

00:33:01,210 --> 00:32:58,030

something about formal systems of

643

00:33:03,940 --> 00:33:01,220

arithmetic we can't prove you know and

644

00:33:07,950 --> 00:33:03,950

so in this theory of everything we will

645

00:33:10,450 --> 00:33:07,960

not be able to prove complicated views

646

00:33:12,790 --> 00:33:10,460

publicly the truth about the integers

647

00:33:14,140 --> 00:33:12,800

but we don't need to do that anyway in

648

00:33:16,210 --> 00:33:14,150

doing physics that's not the kind of

649

00:33:17,950 --> 00:33:16,220

math we use it right although there's a

650

00:33:19,630 --> 00:33:17,960

generalization of girdles theorem which

651
00:33:21,580 --> 00:33:19,640
implies girdles theorem and is easier to

652
00:33:23,050 --> 00:33:21,590
prove and I think was by Turing or

653
00:33:27,010 --> 00:33:23,060
Turing and girdle awesome about

654
00:33:30,460 --> 00:33:27,020
mechanistic know just just about any

655
00:33:36,390 --> 00:33:30,470
mechanized system now someone named

656
00:33:43,690 --> 00:33:39,880
he says at the base of our reality is

657
00:33:45,700 --> 00:33:43,700
computation and I'm curious if that's

658
00:33:47,140 --> 00:33:45,710
the case what do you defines computation

659
00:33:50,110 --> 00:33:47,150
as and what girdles incompleteness

660
00:33:53,580 --> 00:33:50,120
theorem has to say about that yes that's

661
00:33:57,580 --> 00:33:53,590
for me to asking ok so let's get started

662
00:34:00,400 --> 00:33:57,590
notice what is this theorem oh it is

663
00:34:04,000 --> 00:34:00,410

really what I just said that the notion

664

00:34:07,180 --> 00:34:04,010

of an arithmetic 'el truth again it's

665

00:34:09,310 --> 00:34:07,190

about arithmetic someone from girdles

666

00:34:13,810 --> 00:34:09,320

and completely the notion of arithmetic

667

00:34:16,600 --> 00:34:13,820

truth can't be defined arithmetic li

668

00:34:19,770 --> 00:34:16,610

that's basically what it says right um

669

00:34:21,820 --> 00:34:19,780

so again this is quite a limit to the

670

00:34:28,690 --> 00:34:21,830

notion of truth

671

00:34:32,870 --> 00:34:28,700

meaning and all of this can't be defined

672

00:34:34,790 --> 00:34:32,880

syntactically that is by these rules of

673

00:34:36,350 --> 00:34:34,800

how your what are the symbols and how

674

00:34:38,450 --> 00:34:36,360

you can put the symbols together and

675

00:34:39,760 --> 00:34:38,460

which sim which strings that symbols can

676

00:34:42,050 --> 00:34:39,770

fall from other strings of symbols

677

00:34:45,740 --> 00:34:42,060

that's what a formal system tells you

678

00:34:49,220 --> 00:34:45,750

right right you can't get the semantic

679

00:34:51,830 --> 00:34:49,230

notion of Erath manacle truth out of

680

00:34:54,230 --> 00:34:51,840

notes does that have in your estimation

681

00:34:57,290 --> 00:34:54,240

any implications on truth in the way

682

00:34:58,640 --> 00:34:57,300

that people will colloquial use it use

683

00:35:00,710 --> 00:34:58,650

the word truth like I believe that this

684

00:35:06,470 --> 00:35:00,720

is true or this is scientifically true

685

00:35:11,100 --> 00:35:06,480

or objectively true but tarski also

686

00:35:13,320 --> 00:35:11,110

I wrote about semantic truth

687

00:35:16,140 --> 00:35:13,330

that is the thing that we can't get out

688

00:35:21,080 --> 00:35:16,150

of syntactic truth right it's larger

689

00:35:23,580 --> 00:35:21,090

than syntactic truth he also has he has

690

00:35:25,530 --> 00:35:23,590

and this is now we're talking about

691

00:35:27,120 --> 00:35:25,540

philosophy of language we're not talking

692

00:35:29,390 --> 00:35:27,130

about philosophy of mathematics anymore

693

00:35:35,820 --> 00:35:29,400

we're talking about meaning and truth

694

00:35:38,010 --> 00:35:35,830

and so he has this a classic paper on

695

00:35:43,640 --> 00:35:38,020

the semantic notion of truth and when he

696

00:35:45,550 --> 00:35:43,650

basically is proof arguing there is that

697

00:36:00,010 --> 00:35:45,560

you

698

00:36:08,690 --> 00:36:06,110

to the very whole oh it just froze after

699

00:36:11,870 --> 00:36:08,700

you said tarski had a wonderful paper

700

00:36:15,560 --> 00:36:11,880

about the semantic notion of truth truth

701
00:36:19,220 --> 00:36:15,570
in which he in some sense it claims that

702
00:36:23,110 --> 00:36:19,230
truth the semantic notion can't really

703
00:36:29,380 --> 00:36:23,120
be defined either you can have a big

704
00:36:32,930 --> 00:36:29,390
interesting theory of truth the truth is

705
00:36:36,290 --> 00:36:32,940
it's baked in to the very conditions of

706
00:36:39,230 --> 00:36:36,300
assertion that when I assert anything

707
00:36:43,850 --> 00:36:39,240
I'm asserting it's true his example is

708
00:36:48,310 --> 00:36:43,860
the proposition snow is white is true if

709
00:36:50,990 --> 00:36:48,320
and only if snow is white it sounds so

710
00:36:51,850 --> 00:36:51,000
prosaic and in some sense that's what

711
00:36:55,850 --> 00:36:51,860
he's saying

712
00:36:57,500 --> 00:36:55,860
truth is kind of it's prosaic and and

713
00:37:00,650 --> 00:36:57,510

that's why even if you know if you want

714

00:37:02,420 --> 00:37:00,660

to come up with some fancy notion of

715

00:37:06,290 --> 00:37:02,430

truth

716

00:37:08,090 --> 00:37:06,300

I mean even to understand your fancy for

717

00:37:10,010 --> 00:37:08,100

us and shade or a fancy notion of truth

718

00:37:13,370 --> 00:37:10,020

we're just gonna fall back on the old

719

00:37:16,910 --> 00:37:13,380

prosaic notion of truth you know which

720

00:37:19,550 --> 00:37:16,920

is just baked into the very conditions

721

00:37:21,980 --> 00:37:19,560

of being able to speak at all and which

722

00:37:23,650 --> 00:37:21,990

is in the very conditions of language

723

00:37:26,900 --> 00:37:23,660

it's why we trust each other

724

00:37:30,200 --> 00:37:26,910

when people say things we know that to

725

00:37:36,380 --> 00:37:30,210

say to put forth on a proposition is to

726

00:37:38,690 --> 00:37:36,390

say it's true I don't have to say the

727

00:37:41,270 --> 00:37:38,700

proposition I'm gonna stick with the

728

00:37:45,590 --> 00:37:41,280

Trump right the proposition that Trump

729

00:37:48,710 --> 00:37:45,600

is you know it was elected huh let's

730

00:37:54,200 --> 00:37:48,720

make it the proposition that Trump lost

731

00:37:56,450 --> 00:37:54,210

the popular vote in 2016 is true all I

732

00:37:59,390 --> 00:37:56,460

have to say is I don't have to say that

733

00:38:02,840 --> 00:37:59,400

I'll have to say it Trump lost the

734

00:38:06,590 --> 00:38:02,850

popular vote in 2016 I am already saying

735

00:38:09,920 --> 00:38:06,600

it's true let that's more or less what

736

00:38:11,780 --> 00:38:09,930

what and then if you know when it's tied

737

00:38:15,140 --> 00:38:11,790

up with meaning and it's tied up with

738

00:38:17,600 --> 00:38:15,150

very conditions of language and you just

739

00:38:20,230 --> 00:38:17,610

can have any more injury it's a

740

00:38:22,880 --> 00:38:20,240

deflationary view of semantics truth

741

00:38:25,010 --> 00:38:22,890

this is very interesting because people

742

00:38:28,010 --> 00:38:25,020

have put forth all sorts of theories

743

00:38:29,150 --> 00:38:28,020

just a second just singing as far as I

744

00:38:31,040 --> 00:38:29,160

know there's a couple theories which

745

00:38:32,450 --> 00:38:31,050

correspond is pragmatic and deflationary

746

00:38:34,240 --> 00:38:32,460

I never understood so do you mind

747

00:38:36,710 --> 00:38:34,250

explaining what this deflationary means

748

00:38:38,690 --> 00:38:36,720

the inflationary theory of truth there

749

00:38:42,890 --> 00:38:38,700

is no truth it deflates all theories of

750

00:38:45,230 --> 00:38:42,900

truth what it deflates all theories of

751
00:38:47,960 --> 00:38:45,240
truth just because truth is too basic

752
00:38:50,570 --> 00:38:47,970
you can't have a theory of it it's just

753
00:38:52,100 --> 00:38:50,580
baked into what we do the most

754
00:38:54,400 --> 00:38:52,110
fundamental thing that we do with

755
00:38:58,100 --> 00:38:54,410
language which is to make assertions

756
00:38:59,780 --> 00:38:58,110
right to make an assertion is to say

757
00:39:02,450 --> 00:38:59,790
that that thing that you're asserting is

758
00:39:08,110 --> 00:39:02,460
true and that's the most basic thing

759
00:39:10,220 --> 00:39:08,120
that we can say about truths okay yeah

760
00:39:12,290 --> 00:39:10,230
corresponds to reality you don't have to

761
00:39:13,580 --> 00:39:12,300
talk about its coherent with other

762
00:39:14,420 --> 00:39:13,590
things you don't do that certainly

763
00:39:17,180 --> 00:39:14,430

relativized

764

00:39:19,670 --> 00:39:17,190

I'm sorry I don't bogged down in truth

765

00:39:22,760 --> 00:39:19,680

like center a Peters but it sounds like

766

00:39:25,310 --> 00:39:22,770

if you only study correspondence

767

00:39:27,890 --> 00:39:25,320

coherence a minor amount pragmatism

768

00:39:29,720 --> 00:39:27,900

minor amounts and deflationary I know

769

00:39:31,520 --> 00:39:29,730

almost nothing about but it sounded like

770

00:39:33,830 --> 00:39:31,530

when you were explaining to flip a view

771

00:39:35,750 --> 00:39:33,840

which is snow is white and it's true if

772

00:39:37,910 --> 00:39:35,760

snow is white or that particular snow is

773

00:39:38,930 --> 00:39:37,920

white that sounds like a correspondence

774

00:39:41,240 --> 00:39:38,940

because you have a phrase and then you

775

00:39:44,080 --> 00:39:41,250

correspond to the external world is that

776

00:39:46,280 --> 00:39:44,090

not well I mean it's kind of like

777

00:39:48,440 --> 00:39:46,290

correspondence but you don't have to

778

00:39:50,060 --> 00:39:48,450

we don't know I'm so pleased that I

779

00:39:53,420 --> 00:39:50,070

forgive my ignorance

780

00:39:55,100 --> 00:39:53,430

yeah if you don't have to reify states

781

00:39:57,320 --> 00:39:55,110

of affairs you know that a proposition

782

00:40:00,950 --> 00:39:57,330

is true and only if there's a state of

783

00:40:05,030 --> 00:40:00,960

affair that corresponds to it it's just

784

00:40:08,600 --> 00:40:05,040

it's really just pointing to an I mean

785

00:40:11,300 --> 00:40:08,610

way what is it that we do in the most

786

00:40:14,600 --> 00:40:11,310

fundamental language game that we play

787

00:40:16,070 --> 00:40:14,610

with which is to make assertions so that

788

00:40:17,840 --> 00:40:16,080

we can share information with one

789

00:40:20,090 --> 00:40:17,850

another I mean this is the very roots

790

00:40:22,850 --> 00:40:20,100

the genealogy of language why did

791

00:40:24,890 --> 00:40:22,860

language develop among the species of

792

00:40:27,410 --> 00:40:24,900

apes you know it's because some people

793

00:40:30,200 --> 00:40:27,420

a better position of knowing certain

794

00:40:33,890 --> 00:40:30,210

facts and others and we develop language

795

00:40:36,920 --> 00:40:33,900

so we can pool our we don't pool our

796

00:40:39,890 --> 00:40:36,930

knowledge basically and we so it's it's

797

00:40:42,170 --> 00:40:39,900

sort of just comes right out of the very

798

00:40:47,690 --> 00:40:42,180

conditions in which the genealogical

799

00:40:52,760 --> 00:40:47,700

conditions in which language evolved and

800

00:40:54,500 --> 00:40:52,770

it is the to a proposition is true to

801
00:40:57,890 --> 00:40:54,510
assert that this preposition is true is

802
00:41:00,200 --> 00:40:57,900
to assert the proposition itself right

803
00:41:00,800 --> 00:41:00,210
right most interesting thing you can say

804
00:41:03,230 --> 00:41:00,810
about truth

805
00:41:06,020 --> 00:41:03,240
no no post modernists would disagree

806
00:41:08,150 --> 00:41:06,030
with that so I'm curious what do you

807
00:41:10,730 --> 00:41:08,160
feel like is correct generally about

808
00:41:14,720 --> 00:41:10,740
their sentiments and and where do you

809
00:41:18,380 --> 00:41:14,730
disagree and why so I guess is one of

810
00:41:20,360 --> 00:41:18,390
those terms that links together an awful

811
00:41:27,610 --> 00:41:20,370
lot right and so there is post-modernism

812
00:41:31,490 --> 00:41:29,930
you like it because it's interesting or

813
00:41:34,190 --> 00:41:31,500

you like it because we believe what it's

814

00:41:37,010 --> 00:41:34,200

saying is no I don't think so here's I

815

00:41:39,350 --> 00:41:37,020

think maybe in general what we mean by

816

00:41:45,200 --> 00:41:39,360

this term post-modernism wherever we

817

00:41:46,370 --> 00:41:45,210

apply it in intellectual domains where I

818

00:41:50,390 --> 00:41:46,380

think it's worthless

819

00:41:52,070 --> 00:41:50,400

or in artistic domains where I think no

820

00:41:54,620 --> 00:41:52,080

you can get some interesting art out of

821

00:41:58,910 --> 00:41:54,630

it right I think in general what

822

00:42:00,980 --> 00:41:58,920

post-modernism is about is um you know

823

00:42:05,200 --> 00:42:00,990

there are certain conventions that

824

00:42:08,510 --> 00:42:05,210

govern these various domains and

825

00:42:10,970 --> 00:42:08,520

post-modernism and generally they're

826

00:42:14,300 --> 00:42:10,980

invisible you know you do the domain and

827

00:42:18,320 --> 00:42:14,310

you don't think about conventions that

828

00:42:20,450 --> 00:42:18,330

you're implying in doing this thing so

829

00:42:21,620 --> 00:42:20,460

for example you know when I'm novelist

830

00:42:23,720 --> 00:42:21,630

tells a story

831

00:42:25,790 --> 00:42:23,730

you know she's making it up and there

832

00:42:27,650 --> 00:42:25,800

are all sorts of conventions that pull

833

00:42:31,250 --> 00:42:27,660

in the readers and make the readers

834

00:42:32,750 --> 00:42:31,260

think to live this reality and the way

835

00:42:37,010 --> 00:42:32,760

that you have to live it in order for

836

00:42:38,599 --> 00:42:37,020

the novel to work well what if you know

837

00:42:41,059 --> 00:42:38,609

the the novelist

838

00:42:44,059 --> 00:42:41,069

calls attention to the fact that this is

839

00:42:46,670 --> 00:42:44,069

that she is making this all up by

840

00:42:49,299 --> 00:42:46,680

putting herself into the story and so

841

00:42:53,359 --> 00:42:49,309

calling can you know calling attention

842

00:42:59,599 --> 00:42:53,369

conventions and that can be cool I can

843

00:43:02,049 --> 00:42:59,609

you know what your friend is self

844

00:43:04,370 --> 00:43:02,059

reflexivity yes that's not all that

845

00:43:06,049 --> 00:43:04,380

modernism is the philosophical

846

00:43:10,150 --> 00:43:06,059

post-modernism is summed up with

847

00:43:13,069 --> 00:43:10,160

skepticism the grand narratives so in

848

00:43:17,690 --> 00:43:13,079

doing intellectual work there are

849

00:43:19,999 --> 00:43:17,700

certain you know conventions of of truth

850

00:43:22,339 --> 00:43:20,009

right I think

851

00:43:25,309 --> 00:43:22,349

torski that's part of what tarski is

852

00:43:30,460 --> 00:43:25,319

talking about there and what if we you

853

00:43:33,190 --> 00:43:30,470

know call attention to those conventions

854

00:43:35,390 --> 00:43:33,200

themselves showing up there

855

00:43:37,190 --> 00:43:35,400

conventionality and therefore a giving

856

00:43:39,140 --> 00:43:37,200

reason to doubt I mean the same thing is

857

00:43:42,829 --> 00:43:39,150

true wherever we call attention to the

858

00:43:43,940 --> 00:43:42,839

conventions one does it to you know call

859

00:43:47,150 --> 00:43:43,950

attention to the fact that these are

860

00:43:48,710 --> 00:43:47,160

conventional and we and therefore open

861

00:43:50,299 --> 00:43:48,720

to gap you know what would it be like to

862

00:43:53,120 --> 00:43:50,309

doubt them what would be like to produce

863

00:43:54,440 --> 00:43:53,130

art that the you know doesn't play by

864

00:43:56,900 --> 00:43:54,450

those conventions well what would it be

865

00:43:59,229 --> 00:43:56,910

like to produce intellectual work that

866

00:44:01,700 --> 00:43:59,239

doesn't play by the conventions of

867

00:44:05,930 --> 00:44:01,710

say truth and meaning and all of these

868

00:44:06,979 --> 00:44:05,940

things and they're I think because of

869

00:44:10,579 --> 00:44:06,989

what torsi

870

00:44:14,599 --> 00:44:10,589

is saying about truth you end up with

871

00:44:16,700 --> 00:44:14,609

analysis you know you get to assert is

872

00:44:21,289 --> 00:44:16,710

to assert that what you're saying is

873

00:44:24,999 --> 00:44:21,299

true to put forth a theory that call

874

00:44:27,529 --> 00:44:25,009

calls into doubt the conventions of

875

00:44:30,890 --> 00:44:27,539

truth that are baked into the

876

00:44:33,229 --> 00:44:30,900

conventions of assertion if it's

877

00:44:36,349 --> 00:44:33,239

nonsense I'm gonna have to believe what

878

00:44:40,510 --> 00:44:36,359

you're saying about truth using the old

879

00:44:50,590 --> 00:44:44,690

of truth there's there's and and so you

880

00:44:54,410 --> 00:44:50,600

you you end up with paradox right okay

881

00:44:57,140 --> 00:44:54,420

this is something like I have a movie

882

00:44:58,820 --> 00:44:57,150

called better left unsaid which is about

883

00:45:00,050 --> 00:44:58,830

when does the left go too far and I'm

884

00:45:03,710 --> 00:45:00,060

not saying that because I'm right wing

885

00:45:06,170 --> 00:45:03,720

or Orson or Center or alter right it's

886

00:45:08,720 --> 00:45:06,180

it's just because people like Pinker who

887

00:45:10,130 --> 00:45:08,730

considers himself to be on the left also

888

00:45:11,240 --> 00:45:10,140

see that there's an extreme left and

889

00:45:14,270 --> 00:45:11,250

they want to delineate themselves so

890

00:45:16,310 --> 00:45:14,280

it's pretty much about delineation in it

891

00:45:18,020 --> 00:45:16,320

I found that habermas who's a social

892

00:45:19,250 --> 00:45:18,030

constructionist which is extremely

893

00:45:21,440 --> 00:45:19,260

interesting I thought he would disagree

894

00:45:22,940 --> 00:45:21,450

with the postmodernist he critiqued the

895

00:45:25,190 --> 00:45:22,950

post modernist by saying you can't have

896

00:45:27,349 --> 00:45:25,200

these true statements I mean these two

897

00:45:29,900 --> 00:45:27,359

statements which is well you have two

898

00:45:34,460 --> 00:45:29,910

different truths truth sub one is the

899

00:45:40,250 --> 00:45:37,670

I forgot it but whatever it's the truth

900

00:45:41,329 --> 00:45:40,260

exists and then truths up to is truth is

901
00:45:43,339 --> 00:45:41,339
whatever I say - yeah that's right

902
00:45:46,010 --> 00:45:43,349
that's the social constructionist theory

903
00:45:49,099 --> 00:45:46,020
of truth but truth saw - depends on

904
00:45:51,200 --> 00:45:49,109
truth sub-1 so it's essentially saying

905
00:45:53,000 --> 00:45:51,210
there is no truth but that is statement

906
00:45:55,040 --> 00:45:53,010
itself is a truthful statement at least

907
00:45:57,620 --> 00:45:55,050
you're asserting it is that what you

908
00:46:01,640 --> 00:45:57,630
were saying more or less yeah yeah

909
00:46:03,980 --> 00:46:01,650
absolutely yeah yeah I mean if you if

910
00:46:06,650 --> 00:46:03,990
these things are just making and this is

911
00:46:08,599 --> 00:46:06,660
again I think this is hashing out the

912
00:46:10,579 --> 00:46:08,609
what if they said this what if they put

913
00:46:21,950 --> 00:46:10,589

an asterisk there is no truth except

914

00:46:28,099 --> 00:46:21,960

this one what reason would you know so

915

00:46:31,640 --> 00:46:28,109

and I'm sure so there isn't I mean there

916

00:46:33,650 --> 00:46:31,650

is no truth except this one I mean that

917

00:46:35,809 --> 00:46:33,660

there is no truth except this one I'm

918

00:46:39,170 --> 00:46:35,819

sure you can generate other statements

919

00:46:41,329 --> 00:46:39,180

from that you know that that would also

920

00:46:42,890 --> 00:46:41,339

have to be true there I mean there's

921

00:46:46,690 --> 00:46:42,900

there's no way that you could restrict

922

00:46:49,099 --> 00:46:46,700

that to simply that I see I see I see

923

00:46:54,109 --> 00:46:49,109

now what about the power play that comes

924

00:46:55,220 --> 00:46:54,119

hand-in-hand with rain for dominance

925

00:47:03,250 --> 00:46:55,230

yeah

926

00:47:06,890 --> 00:47:03,260

so without truth look I we are we are

927

00:47:08,720 --> 00:47:06,900

hmm we're not my angels the species of

928

00:47:14,270 --> 00:47:08,730

us we've got better angels

929

00:47:18,440 --> 00:47:14,280

we are no angels right and we are we

930

00:47:22,160 --> 00:47:18,450

need something to reign us in and I

931

00:47:27,440 --> 00:47:22,170

think it's us one of our saving grace is

932

00:47:30,530 --> 00:47:27,450

that we we basically do recognize truth

933

00:47:34,329 --> 00:47:30,540

we recognize almost everybody recognizes

934

00:47:36,920 --> 00:47:34,339

that contradictions can't be true I mean

935

00:47:38,809 --> 00:47:36,930

thank goodness this is true because this

936

00:47:41,000 --> 00:47:38,819

is part of the way that we've made

937

00:47:42,020 --> 00:47:41,010

progress I think this is one of the

938

00:47:43,910 --> 00:47:42,030

things that we would like to talk about

939

00:47:46,609 --> 00:47:43,920

how we've made progress but you know a

940

00:47:48,230 --> 00:47:46,619

lot of where we were self-serving

941

00:47:51,390 --> 00:47:48,240

creatures where

942

00:47:53,040 --> 00:47:51,400

we're serving of our kin of our of our

943

00:47:57,480 --> 00:47:53,050

tribe and all of these things all of

944

00:48:01,190 --> 00:47:57,490

this is part of what we bring to the

945

00:48:05,430 --> 00:48:01,200

game right how do we made any progress

946

00:48:09,950 --> 00:48:05,440

well part of it is that you know when

947

00:48:12,750 --> 00:48:09,960

people show us implications of our

948

00:48:15,599 --> 00:48:12,760

various beliefs and show that they lead

949

00:48:18,059 --> 00:48:15,609

to contradictions which is what harbor

950

00:48:22,440 --> 00:48:18,069

Mawson and I would say about serial

951
00:48:28,309 --> 00:48:22,450
truth right needs to contradictions most

952
00:48:30,540 --> 00:48:28,319
people you know the species of apes

953
00:48:32,940 --> 00:48:30,550
understands my contradictions can be

954
00:48:35,069 --> 00:48:32,950
true and you go back and you look at

955
00:48:38,160 --> 00:48:35,079
your premises and you see where the

956
00:48:40,710 --> 00:48:38,170
contradiction is arising and you give up

957
00:48:44,370 --> 00:48:40,720
something and we've a lot of progress

958
00:48:46,170 --> 00:48:44,380
has been made in this way you know or I

959
00:48:48,750 --> 00:48:46,180
mean science itself you know your your

960
00:48:52,559 --> 00:48:48,760
your theory makes a prediction the

961
00:48:55,260 --> 00:48:52,569
prediction is falsified now go back

962
00:48:58,319 --> 00:48:55,270
what's wrong with my theory I mean all

963
00:49:03,510 --> 00:48:58,329

of this scientific progress moral

964

00:49:08,640 --> 00:49:03,520

progress all of this has been made

965

00:49:14,819 --> 00:49:08,650

because we recognize fundamentally

966

00:49:18,690 --> 00:49:14,829

something about truth right and without

967

00:49:22,620 --> 00:49:18,700

that Terenas in its raw power

968

00:49:27,000 --> 00:49:22,630

it's my group gaining dominance against

969

00:49:31,380 --> 00:49:27,010

your group this is this is the very

970

00:49:34,799 --> 00:49:31,390

opposite of progress right this is a

971

00:49:38,460 --> 00:49:34,809

world of you know so without a shared

972

00:49:41,849 --> 00:49:38,470

notion of truth it's conflict it's

973

00:49:43,829 --> 00:49:41,859

nothing but power and you know and you

974

00:49:46,500 --> 00:49:43,839

know that theory of truth that should

975

00:49:48,780 --> 00:49:46,510

not according to tarski

976

00:49:51,660 --> 00:49:48,790

but I take very seriously should not

977

00:49:54,180 --> 00:49:51,670

exist right into this postmodern theory

978

00:49:56,190 --> 00:49:54,190

of truth they come right out at it and

979

00:49:58,500 --> 00:49:56,200

say yeah without chance it's one POW

980

00:49:58,760 --> 00:49:58,510

it's one dominant group you know against

981

00:50:05,080 --> 00:49:58,770

the

982

00:50:07,310 --> 00:50:05,090

I see

983

00:50:09,590 --> 00:50:07,320

seeing some people that I was talking to

984

00:50:12,740 --> 00:50:09,600

say that what we need in this culture is

985

00:50:15,920 --> 00:50:12,750

more dialogue but dialogue is predicated

986

00:50:17,330 --> 00:50:15,930

on a shared notion of truth because if

987

00:50:18,530 --> 00:50:17,340

you don't have that then how do you know

988

00:50:20,030 --> 00:50:18,540

that you're making progress in the

989

00:50:22,730 --> 00:50:20,040

dialogue what's the point of talking to

990

00:50:27,310 --> 00:50:22,740

someone exactly exactly I mean dialogue

991

00:50:33,800 --> 00:50:27,320

is so important because some of our most

992

00:50:36,920 --> 00:50:33,810

efficacious or operative presumptions

993

00:50:38,750 --> 00:50:36,930

are invisible to us they're so deep down

994

00:50:42,830 --> 00:50:38,760

in us that they're there they're quite

995

00:50:44,300 --> 00:50:42,840

invisible to us and often yes we've

996

00:50:46,040 --> 00:50:44,310

gotten them from our group from our

997

00:50:48,470 --> 00:50:46,050

culture and all of these things so it's

998

00:50:50,780 --> 00:50:48,480

extremely important to talk to people

999

00:50:53,690 --> 00:50:50,790

who may not share those presumptions

1000

00:50:55,340 --> 00:50:53,700

because they're coming from maybe you

1001
00:50:58,970 --> 00:50:55,350
know different circumstances I can't

1002
00:51:05,390 --> 00:50:58,980
tell you how the dialog has changed

1003
00:51:08,270 --> 00:51:05,400
since I entered philosophy and was

1004
00:51:12,970 --> 00:51:08,280
always the only woman in the room only

1005
00:51:15,970 --> 00:51:12,980
and now how it has changed because

1006
00:51:21,520 --> 00:51:15,980
certain presumptions just weren't

1007
00:51:28,090 --> 00:51:23,680
there was something I think it's really

1008
00:51:32,900 --> 00:51:28,100
changed they were certain ethical

1009
00:51:35,500 --> 00:51:32,910
dilemmas that arise within families and

1010
00:51:41,140 --> 00:51:35,510
and you know and who do you owe your

1011
00:51:45,230 --> 00:51:41,150
allegiance to that are in really

1012
00:51:49,310 --> 00:51:45,240
strengthened by women entering into into

1013
00:51:51,140 --> 00:51:49,320

the conversation because women you know

1014

00:51:53,720 --> 00:51:51,150

are often pulled in in very many

1015

00:51:56,410 --> 00:51:53,730

directions and have you know family

1016

00:51:59,870 --> 00:51:56,420

obligations or feel family obligations

1017

00:52:03,070 --> 00:51:59,880

in a way sometimes men don't right for

1018

00:52:07,760 --> 00:52:03,080

probably good evolutionary reasons

1019

00:52:10,540 --> 00:52:07,770

that's a politically to say anyway so

1020

00:52:13,900 --> 00:52:10,550

but if it's changed the dialogue

1021

00:52:16,120 --> 00:52:13,910

so no speaking about progress are you of

1022

00:52:19,510 --> 00:52:16,130

the mind that we all pretty much want

1023

00:52:21,340 --> 00:52:19,520

the same thing we just disagree on how

1024

00:52:23,440 --> 00:52:21,350

to get there and what we need to do is

1025

00:52:27,340 --> 00:52:23,450

use rationality and reason to progress

1026
00:52:29,260 --> 00:52:27,350
forward or just I don't think we all

1027
00:52:35,370 --> 00:52:29,270
want the same things I think there are

1028
00:52:39,130 --> 00:52:35,380
many people who want their their group

1029
00:52:43,180 --> 00:52:39,140
their tribe however they define it to

1030
00:52:47,380 --> 00:52:43,190
win at all costs and they will sacrifice

1031
00:52:50,560 --> 00:52:47,390
the truth entirely to to to get what

1032
00:52:56,170 --> 00:52:50,570
they want and no I don't think we all

1033
00:52:58,300 --> 00:52:56,180
want I think without the taming respect

1034
00:53:01,150 --> 00:52:58,310
for the truth yeah that's what it

1035
00:53:04,990 --> 00:53:01,160
descends to but I I think that an awful

1036
00:53:07,510 --> 00:53:05,000
lot of no I don't I really don't uh I

1037
00:53:11,350 --> 00:53:07,520
don't I think that there are still many

1038
00:53:16,600 --> 00:53:11,360

many people who see for me ideology

1039

00:53:18,550 --> 00:53:16,610

means I don't you know to me the word

1040

00:53:20,110 --> 00:53:18,560

ideology is something negative I think

1041

00:53:23,170 --> 00:53:20,120

you use it somewhat differently than I

1042

00:53:24,460 --> 00:53:23,180

do but I do not use the term just

1043

00:53:25,930 --> 00:53:24,470

because it's ill-defined

1044

00:53:27,430 --> 00:53:25,940

many people many different things about

1045

00:53:28,930 --> 00:53:27,440

I just used it when speaking about you

1046

00:53:32,230 --> 00:53:28,940

and Pinker because I thought you might

1047

00:53:35,500 --> 00:53:32,240

want another yes I mean to me it is a

1048

00:53:37,540 --> 00:53:35,510

negative word it's a kind of sacred

1049

00:53:40,960 --> 00:53:37,550

truth thing you know that there are

1050

00:53:43,750 --> 00:53:40,970

certain truths that I'm just not going

1051
00:53:46,300 --> 00:53:43,760
to ever give up even if they were

1052
00:53:50,320 --> 00:53:46,310
empirically dogmatism looped you know

1053
00:53:51,550 --> 00:53:50,330
even if there's hmm don't isn't is it

1054
00:53:54,580 --> 00:53:51,560
different than dogmatism in your in

1055
00:53:56,710 --> 00:53:54,590
Europe right it's different than

1056
00:53:58,690 --> 00:53:56,720
dogmatism it's almost the same thing is

1057
00:54:01,330 --> 00:53:58,700
it okay almost you know but it's a

1058
00:54:04,620 --> 00:54:01,340
except that it's a like a theory it's a

1059
00:54:11,560 --> 00:54:04,630
whole cluster of interlaced groups of

1060
00:54:15,790 --> 00:54:11,570
truths or claims of truths often you

1061
00:54:18,940 --> 00:54:15,800
know politically or yeah politically

1062
00:54:20,710 --> 00:54:18,950
motivated oh I see well why don't we

1063
00:54:23,720 --> 00:54:20,720

define for the audience what ration it

1064

00:54:31,220 --> 00:54:23,730

what you see as rationality and then

1065

00:54:33,870 --> 00:54:31,230

okay well what I see if a chanel is one

1066

00:54:37,019 --> 00:54:33,880

tremendous respect for the truth right

1067

00:54:41,150 --> 00:54:37,029

it's a sort of attitude towards the

1068

00:54:43,079 --> 00:54:41,160

truth it is a recognition of our own

1069

00:54:49,289 --> 00:54:43,089

ability I don't think you can be

1070

00:54:57,029 --> 00:54:49,299

rational without recognizing our

1071

00:55:00,749 --> 00:54:57,039

weakness of epistemic modesty right and

1072

00:55:03,210 --> 00:55:00,759

not only recognizing this about one

1073

00:55:07,289 --> 00:55:03,220

species which is very very easy but

1074

00:55:12,059 --> 00:55:07,299

about oneself and so developing critical

1075

00:55:15,059 --> 00:55:12,069

self critical attitudes towards one's

1076

00:55:17,809 --> 00:55:15,069

belief and being willing to do

1077

00:55:20,730 --> 00:55:17,819

everything you can to challenge those

1078

00:55:22,890 --> 00:55:20,740

beliefs which often you know involves

1079

00:55:23,549 --> 00:55:22,900

talking to people who don't believe as

1080

00:55:27,299 --> 00:55:23,559

you do

1081

00:55:32,390 --> 00:55:27,309

I have changed my beliefs radically in

1082

00:55:36,120 --> 00:55:32,400

my lifetime often a great personal cost

1083

00:55:39,900 --> 00:55:36,130

right I was born into a extremely

1084

00:55:42,180 --> 00:55:39,910

religious family and I don't know how

1085

00:55:45,599 --> 00:55:42,190

those beliefs anymore

1086

00:55:47,670 --> 00:55:45,609

and that is something I didn't want to

1087

00:55:50,940 --> 00:55:47,680

differ from my family this was not a

1088

00:55:54,539 --> 00:55:50,950

rebellion against my family and I am

1089

00:55:57,539 --> 00:55:54,549

still extremely close to my family but

1090

00:56:00,839 --> 00:55:57,549

it was you know an impossibility to

1091

00:56:05,880 --> 00:56:00,849

believe in the way that I had been

1092

00:56:09,799 --> 00:56:05,890

taught to believe and it is you know I

1093

00:56:12,120 --> 00:56:09,809

think that that is you know part of

1094

00:56:15,029 --> 00:56:12,130

maybe I'll change my mind someday it's

1095

00:56:16,319 --> 00:56:15,039

always open this is always open and I've

1096

00:56:19,230 --> 00:56:16,329

changed my mind about many many things

1097

00:56:22,769 --> 00:56:19,240

but that was probably you know the

1098

00:56:27,019 --> 00:56:22,779

deepest one the one that cost me the

1099

00:56:31,710 --> 00:56:27,029

most and cost other people the most so

1100

00:56:35,789 --> 00:56:31,720

yeah I mean so this to me this attitude

1101
00:56:36,420 --> 00:56:35,799
towards truth towards our own salability

1102
00:56:42,120 --> 00:56:36,430
or

1103
00:56:46,740 --> 00:56:42,130
epistemic modesty this is what I want to

1104
00:56:47,850 --> 00:56:46,750
consider cheeky rationality okay you

1105
00:56:49,440 --> 00:56:47,860
just said maybe I'll change my mind

1106
00:56:52,080 --> 00:56:49,450
about that and that's a view that you

1107
00:56:52,890 --> 00:56:52,090
hold for or you hope that you hold for

1108
00:57:00,540 --> 00:56:52,900
all your beliefs

1109
00:57:02,100 --> 00:57:00,550
now what about see to me that would lead

1110
00:57:04,050 --> 00:57:02,110
to nihilism and I would like to know why

1111
00:57:06,600 --> 00:57:04,060
you think it doesn't or maybe you think

1112
00:57:11,790 --> 00:57:06,610
now nihilism is salutary or at least not

1113
00:57:14,070 --> 00:57:11,800

non solitary but either way what about

1114

00:57:16,440 --> 00:57:14,080

saying that what happened in the

1115

00:57:18,060 --> 00:57:16,450

Holocaust was great would you change

1116

00:57:19,590 --> 00:57:18,070

your mind about yeah and if someone said

1117

00:57:22,110 --> 00:57:19,600

that and no well you hold the belief

1118

00:57:23,970 --> 00:57:22,120

that it was for oh and then someone said

1119

00:57:24,990 --> 00:57:23,980

well aren't you willing to change your

1120

00:57:26,970 --> 00:57:25,000

mind about anything

1121

00:57:29,700 --> 00:57:26,980

are you really never mind about that I

1122

00:57:34,410 --> 00:57:29,710

would hear their arguments yes I would

1123

00:57:37,980 --> 00:57:34,420

hear their arguments and I believe I

1124

00:57:42,210 --> 00:57:37,990

could knock them down quite easily but

1125

00:57:47,390 --> 00:57:42,220

yes I would I would engage and I you

1126
00:57:53,640 --> 00:57:51,060
okay okay okay how about this how about

1127
00:57:56,270 --> 00:57:53,650
it well you have a self did you see one

1128
00:57:59,400 --> 00:57:56,280
thing yes let's take heart actually

1129
00:58:02,040 --> 00:57:59,410
showed us this is curse medication we

1130
00:58:04,760 --> 00:58:02,050
don't have to in being open to

1131
00:58:07,980 --> 00:58:04,770
everything and using you know radical

1132
00:58:09,360 --> 00:58:07,990
methods of doubt and all of that we

1133
00:58:11,250 --> 00:58:09,370
don't have to go through every belief

1134
00:58:12,810 --> 00:58:11,260
one by one I mean when they're infinite

1135
00:58:16,230 --> 00:58:12,820
number of beliefs that we have you know

1136
00:58:17,850 --> 00:58:16,240
just looking out at the situation and

1137
00:58:21,630 --> 00:58:17,860
flooded with all sorts of beliefs about

1138
00:58:23,310 --> 00:58:21,640

what things are existing right now in my

1139

00:58:26,610 --> 00:58:23,320

vicinity and what conditions they're in

1140

00:58:29,280 --> 00:58:26,620

but there are you know there are beliefs

1141

00:58:32,700 --> 00:58:29,290

that sort of are all joined together so

1142

00:58:34,170 --> 00:58:32,710

for example so I have a view about the

1143

00:58:38,790 --> 00:58:34,180

basis of morality

1144

00:58:42,600 --> 00:58:38,800

what makes proposition is true I'm open

1145

00:58:45,750 --> 00:58:42,610

very very open to people arguing with me

1146

00:58:47,720 --> 00:58:45,760

about that a consequence of my belief is

1147

00:58:51,829 --> 00:58:47,730

that the Holocaust

1148

00:58:56,630 --> 00:58:51,839

was an abomination and you know so

1149

00:59:01,819 --> 00:58:56,640

somebody would have to so fundamentally

1150

00:59:04,099 --> 00:59:01,829

attack my view as to moral truths as you

1151
00:59:06,620 --> 00:59:04,109
know in such a fundamental way that the

1152
00:59:09,260 --> 00:59:06,630
Holocaust being a good thing Freeman

1153
00:59:11,089 --> 00:59:09,270
looking you know what you know what if

1154
00:59:15,910 --> 00:59:11,099
you really don't believe if you think

1155
00:59:21,380 --> 00:59:15,920
there are the matters is dominance you

1156
00:59:24,049 --> 00:59:21,390
know of one group and you know and you

1157
00:59:27,319 --> 00:59:24,059
and you want to make your group as

1158
00:59:29,359 --> 00:59:27,329
strong as possible right and because

1159
00:59:31,370 --> 00:59:29,369
that's all there is really that's all

1160
00:59:34,760 --> 00:59:31,380
that's left when you can do away with

1161
00:59:38,599 --> 00:59:34,770
truth well scapegoating is an extremely

1162
00:59:42,140 --> 00:59:38,609
effective method of causing coherence in

1163
00:59:44,359 --> 00:59:42,150

your group you know when that um you

1164

00:59:49,069 --> 00:59:44,369

know when Verdun King Ferdinand and

1165

00:59:53,510 --> 00:59:49,079

Queen Isabella and in the 15th and 16th

1166

00:59:56,420 --> 00:59:53,520

century wanted having conquered Spain

1167

00:59:59,329 --> 00:59:56,430

from the Ottoman Empire wanted to unify

1168

01:00:02,870 --> 00:59:59,339

it what did they do picked on the Jews

1169

01:00:06,950 --> 01:00:02,880

right expelled the Jews this was a very

1170

01:00:10,190 --> 01:00:06,960

effective means of unifying and giving a

1171

01:00:14,299 --> 01:00:10,200

national identity because I'm glitterers

1172

01:00:19,240 --> 01:00:14,309

identity to their country so you know if

1173

01:00:22,849 --> 01:00:19,250

I would say it's this view of you know

1174

01:00:26,809 --> 01:00:22,859

all there is is power and dominance and

1175

01:00:29,990 --> 01:00:26,819

dog-eat-dog that's gonna wait to you

1176

01:00:31,640 --> 01:00:30,000

know you could actually try to argue

1177

01:00:34,120 --> 01:00:31,650

that the Holocaust was a good thing

1178

01:00:39,010 --> 01:00:34,130

writing unifying the German nation okay

1179

01:00:43,819 --> 01:00:39,020

just the way expelling the Jews you know

1180

01:00:47,059 --> 01:00:43,829

unified Spain so I don't think you know

1181

01:00:49,940 --> 01:00:47,069

I think their race I think I think hold

1182

01:00:53,059 --> 01:00:49,950

taking truth so seriously that you're

1183

01:00:55,660 --> 01:00:53,069

always willing to look at arguments that

1184

01:00:58,490 --> 01:00:55,670

you know against your premise ease and

1185

01:01:01,990 --> 01:00:58,500

looking at the consequences

1186

01:01:04,550 --> 01:01:02,000

of that um I don't think this leads to

1187

01:01:06,680 --> 01:01:04,560

Neil as Emile is amidst the view that

1188

01:01:09,589 --> 01:01:06,690

you know there is no truth right it is

1189

01:01:12,740 --> 01:01:09,599

all power like it doesn't even lead to

1190

01:01:14,839 --> 01:01:12,750

skepticism Bechet strengthens your own

1191

01:01:20,359 --> 01:01:14,849

views I mean come at me with everything

1192

01:01:22,640 --> 01:01:20,369

you've got to try to dissuade me of the

1193

01:01:25,790 --> 01:01:22,650

things I believe I am grateful for that

1194

01:01:27,620 --> 01:01:25,800

either you're going to show me I'm wrong

1195

01:01:33,020 --> 01:01:27,630

or you're going to strengthen my

1196

01:01:35,599 --> 01:01:33,030

arguments for why I'm right see I'm

1197

01:01:38,870 --> 01:01:35,609

always skeptical because I thought in

1198

01:01:40,849 --> 01:01:38,880

myself of of people who say I'm willing

1199

01:01:42,440 --> 01:01:40,859

to change my mind about virtually

1200

01:01:45,290 --> 01:01:42,450

anything so please let me plead those

1201

01:01:46,810 --> 01:01:45,300

advocates for a second even if you say

1202

01:01:49,970 --> 01:01:46,820

well I'm willing to change my mind about

1203

01:01:53,630 --> 01:01:49,980

let's let's take a more prosaic example

1204

01:01:54,890 --> 01:01:53,640

about littering okay I'm willing to take

1205

01:01:58,400 --> 01:01:54,900

my mind about littering the literary

1206

01:02:02,900 --> 01:01:58,410

littering is actually great littering

1207

01:02:05,510 --> 01:02:02,910

littering like throwing garbage on okay

1208

01:02:07,400 --> 01:02:05,520

Oh a so so whatever the example is you

1209

01:02:09,349 --> 01:02:07,410

have one view and then someone gives you

1210

01:02:10,730 --> 01:02:09,359

a convincing argument and you want to

1211

01:02:12,260 --> 01:02:10,740

cheat and then so you change your mind

1212

01:02:15,260 --> 01:02:12,270

maybe that means you have an updating

1213

01:02:18,920 --> 01:02:15,270

mechanism like you have some way of

1214

01:02:20,990 --> 01:02:18,930

changing from leaf a to belief B do you

1215

01:02:24,020 --> 01:02:21,000

doubt the updating mechanism and then if

1216

01:02:25,190 --> 01:02:24,030

you were to doubt that then that means

1217

01:02:27,560 --> 01:02:25,200

that you change your belief based on

1218

01:02:29,720 --> 01:02:27,570

something else so what is that the top

1219

01:02:30,980 --> 01:02:29,730

and then why don't you doubt that

1220

01:02:33,020 --> 01:02:30,990

because that would just lead to an

1221

01:02:36,290 --> 01:02:33,030

infinite regress do you understand what

1222

01:02:40,300 --> 01:02:36,300

I'm saying or should I just sure I mean

1223

01:02:42,349 --> 01:02:40,310

I think we use the same mechanisms um

1224

01:02:44,450 --> 01:02:42,359

we're playing the same sort of

1225

01:02:47,060 --> 01:02:44,460

mechanisms it's not a different

1226

01:02:50,240 --> 01:02:47,070

mechanism for every belief it's the same

1227

01:02:52,820 --> 01:02:50,250

cognitive mechanism that we're applying

1228

01:02:55,190 --> 01:02:52,830

for all of these things you know we

1229

01:02:57,800 --> 01:02:55,200

first of all you know literate literally

1230

01:02:59,690 --> 01:02:57,810

just like the Holocaust you know it's

1231

01:03:01,790 --> 01:02:59,700

not you know what you release about it

1232

01:03:03,859 --> 01:03:01,800

or not that's the first time this is

1233

01:03:08,989 --> 01:03:03,869

literally like a Holocaust

1234

01:03:10,970 --> 01:03:08,999

oh yeah you probably hear that that is

1235

01:03:14,839 --> 01:03:10,980

that's alright that's alright let's get

1236

01:03:17,390 --> 01:03:14,849

to let's get to okay let's get to the

1237

01:03:23,329 --> 01:03:17,400

Jordan Peterson

1238

01:03:25,069 --> 01:03:23,339

okay yeah right what did you what did

1239

01:03:27,079 --> 01:03:25,079

you want to ask Jordan what did you want

1240

01:03:28,670 --> 01:03:27,089

to respond to Jordan Peterson that you

1241

01:03:31,009 --> 01:03:28,680

didn't get to the chance to respond to

1242

01:03:33,230 --> 01:03:31,019

him with and what did you think about

1243

01:03:37,039 --> 01:03:33,240

that whole debate with William Craig

1244

01:03:42,019 --> 01:03:37,049

yeah oh well it surprised me very much

1245

01:03:45,170 --> 01:03:42,029

I don't debate people um I I dial up

1246

01:03:48,470 --> 01:03:45,180

I hate debates you can understand this

1247

01:03:51,710 --> 01:03:48,480

is my home approach I I don't enter into

1248

01:03:55,009 --> 01:03:51,720

these things train to win you know I

1249

01:03:57,109 --> 01:03:55,019

mean that need is and want to know what

1250

01:04:01,099 --> 01:03:57,119

are your reasons I want to ponder them I

1251

01:04:02,749 --> 01:04:01,109

want to yeah yeah let me rephrase me I'm

1252

01:04:06,710 --> 01:04:02,759

not calling I know the title on the

1253

01:04:08,599 --> 01:04:06,720

video I believe it said debate I feel

1254

01:04:10,009 --> 01:04:08,609

like was more people conversing and

1255

01:04:12,529 --> 01:04:10,019

asking each other questions I don't know

1256

01:04:13,720 --> 01:04:12,539

if you thought it was a debate but it

1257

01:04:14,960 --> 01:04:13,730

doesn't matter what did you think of it

1258

01:04:22,729 --> 01:04:14,970

okay

1259

01:04:24,319 --> 01:04:22,739

um so I had never heard of I of them and

1260

01:04:26,299 --> 01:04:24,329

it was it was sort of when I was asked

1261

01:04:28,910 --> 01:04:26,309

to do this thing it was like we want

1262

01:04:33,380 --> 01:04:28,920

three different views on the meaning of

1263

01:04:37,880 --> 01:04:33,390

life and so and so I you know I gave a

1264

01:04:39,799 --> 01:04:37,890

sort of secularist naturalist view about

1265

01:04:41,479 --> 01:04:39,809

you know because it's often said and in

1266

01:04:43,329 --> 01:04:41,489

fact was said by that other person who

1267

01:04:49,069 --> 01:04:43,339

wasn't Peterson whose name I can't remem

1268

01:04:51,229 --> 01:04:49,079

what Moses knew young William yes said

1269

01:04:53,450 --> 01:04:51,239

something like yeah that you know if you

1270

01:04:56,420 --> 01:04:53,460

don't believe in God you can't have a

1271

01:05:00,470 --> 01:04:56,430

meaningful or moral or a purposeful life

1272

01:05:02,479 --> 01:05:00,480

you know you know and so um it's pretty

1273

01:05:10,099 --> 01:05:02,489

awesome thing to say to somebody

1274

01:05:11,630 --> 01:05:10,109

actually but young uh so I heard that

1275

01:05:14,180 --> 01:05:11,640

kind of thing before but anyway yeah so

1276

01:05:16,489 --> 01:05:14,190

yeah interested in presenting you know

1277

01:05:17,550 --> 01:05:16,499

you can I hadn't realized that the place

1278

01:05:23,520 --> 01:05:17,560

that I was

1279

01:05:25,530 --> 01:05:23,530

Tina was actually a theological home it

1280

01:05:27,600 --> 01:05:25,540

was the University of Toronto so I was

1281

01:05:30,720 --> 01:05:27,610

sort of very surprised by the audience

1282

01:05:35,310 --> 01:05:30,730

they had a home base advantage oh yeah

1283

01:05:36,120 --> 01:05:35,320

oh yeah you know and so um yeah yeah

1284

01:05:40,590 --> 01:05:36,130

really

1285

01:05:44,160 --> 01:05:40,600

surprised I had never heard of Jordan

1286

01:05:46,950 --> 01:05:44,170

Peterson either I think he had he was

1287

01:05:51,060 --> 01:05:46,960

just coming into certain notoriety

1288

01:05:54,150 --> 01:05:51,070

because standing up to for he would be

1289

01:05:55,830 --> 01:05:54,160

dictated to about personal pronouns or

1290

01:05:58,800 --> 01:05:55,840

some you know something right in the

1291

01:06:01,500 --> 01:05:58,810

Kathy Newman video that exploded him yes

1292

01:06:03,990 --> 01:06:01,510

right and he just happened you know and

1293

01:06:05,970 --> 01:06:04,000

I I never know about these things I'm

1294

01:06:07,530 --> 01:06:05,980

thinking about girls incompleteness

1295

01:06:11,370 --> 01:06:07,540

theorems or something completely

1296

01:06:12,870 --> 01:06:11,380

unrelated so um so I was just really

1297

01:06:15,270 --> 01:06:12,880

surprised and then you know it's very

1298

01:06:18,240 --> 01:06:15,280

stern talking and I was just train and

1299

01:06:20,430 --> 01:06:18,250

make sense what he was saying I mean

1300

01:06:23,790 --> 01:06:20,440

because there was this whole long thing

1301

01:06:26,010 --> 01:06:23,800

about suffering is the meaning of life

1302

01:06:27,570 --> 01:06:26,020

and it's like I'm just trying to

1303

01:06:31,230 --> 01:06:27,580

understand what that man and it seemed

1304

01:06:34,680 --> 01:06:31,240

to just come down to his belief an

1305

01:06:36,570 --> 01:06:34,690

empirical belief you know that you know

1306

01:06:40,710 --> 01:06:36,580

terrible suffering can happen in life

1307

01:06:43,140 --> 01:06:40,720

that's undeniable I may be even the

1308

01:06:45,080 --> 01:06:43,150

stronger belief which I don't know it's

1309

01:06:50,340 --> 01:06:45,090

true or not again it's an empirical

1310

01:06:52,800 --> 01:06:50,350

belief that um suffering terrible

1311

01:06:55,740 --> 01:06:52,810

suffering has to happen life you know

1312

01:06:57,600 --> 01:06:55,750

that that I mean I think that's what he

1313

01:07:00,450 --> 01:06:57,610

was meaning by saying that it was the

1314

01:07:06,600 --> 01:07:00,460

meaning of life and that we need

1315

01:07:08,790 --> 01:07:06,610

something very strong to make us feel

1316

01:07:14,220 --> 01:07:08,800

that life it's nevertheless worth living

1317

01:07:17,940 --> 01:07:14,230

and that he so there was that that you

1318

01:07:22,410 --> 01:07:17,950

know that suffering is unavoidable

1319

01:07:23,340 --> 01:07:22,420

perhaps he was saying and that's what he

1320

01:07:29,200 --> 01:07:23,350

meant by saying it was the meaning of

1321

01:07:31,870 --> 01:07:29,210

life and that we need something and

1322

01:07:33,760 --> 01:07:31,880

rationality will do thinking won't do

1323

01:07:39,430 --> 01:07:33,770

don't overthink it I remember he said

1324

01:07:41,200 --> 01:07:39,440

that people love to hear that people

1325

01:07:45,010 --> 01:07:41,210

love to hear that go with the emotions

1326

01:07:46,990 --> 01:07:45,020

go with what you know and that's also

1327

01:07:50,079 --> 01:07:47,000

what he was saying like there is this

1328

01:07:54,250 --> 01:07:50,089

kind of transcendence this experience of

1329

01:07:57,370 --> 01:07:54,260

transcendence when you feel yourself or

1330

01:07:59,650 --> 01:07:57,380

know yourself to be something more than

1331

01:08:01,779 --> 01:07:59,660

human human is suffering but you know

1332

01:08:03,069 --> 01:08:01,789

feel you know what is transcendent

1333

01:08:06,130 --> 01:08:03,079

supposed to mean and you know something

1334

01:08:09,279 --> 01:08:06,140

your your takes you beyond your here

1335

01:08:11,740 --> 01:08:09,289

here here beyond the humans and and it's

1336

01:08:14,859 --> 01:08:11,750

not an intellectual thing it reveals

1337

01:08:16,510 --> 01:08:14,869

itself these were the things I think

1338

01:08:18,700 --> 01:08:16,520

that he was saying that's what I was

1339

01:08:20,680 --> 01:08:18,710

able to get out of that I haven't read

1340

01:08:23,289 --> 01:08:20,690

him since or listened to him since but

1341

01:08:25,289 --> 01:08:23,299

that's you know what I was able to get

1342

01:08:29,019 --> 01:08:25,299

out in the moment of what he was saying

1343

01:08:31,329 --> 01:08:29,029

right that's not to be Peterson or speak

1344

01:08:32,709 --> 01:08:31,339

for him I think what he meant when it

1345

01:08:34,689 --> 01:08:32,719

comes to the meaning in life and

1346

01:08:38,289 --> 01:08:34,699

relationship to suffering is you can

1347

01:08:39,939 --> 01:08:38,299

take meaning to mean either effect so

1348

01:08:41,860 --> 01:08:39,949

sensory data it has a meaning or

1349

01:08:43,269 --> 01:08:41,870

implication for behavior so this cuff

1350

01:08:44,800 --> 01:08:43,279

means something because it means well

1351
01:08:47,979 --> 01:08:44,810
there you go because it means you can

1352
01:08:50,380 --> 01:08:47,989
quench your thirst and suffering is that

1353
01:08:51,610 --> 01:08:50,390
so suffering is a meaning of life so

1354
01:08:53,110 --> 01:08:51,620
what someone says there's no meaning in

1355
01:08:55,419 --> 01:08:53,120
life well you do have a meaning it's

1356
01:08:57,579 --> 01:08:55,429
just negative what you're truly asking

1357
01:09:02,050 --> 01:08:57,589
is is there a positive meaning to offset

1358
01:09:06,249 --> 01:09:02,060
the negative okay basically the same

1359
01:09:12,070 --> 01:09:06,259
thing you know that that is oh but the

1360
01:09:17,349 --> 01:09:12,080
thing that I really um disagreed just a

1361
01:09:20,439 --> 01:09:17,359
great is um look he started out by

1362
01:09:24,249 --> 01:09:20,449
talking about I mean really extreme case

1363
01:09:26,950 --> 01:09:24,259

of suffering fortunately most of us do

1364

01:09:29,079 --> 01:09:26,960

not have to go through you know a child

1365

01:09:31,809 --> 01:09:29,089

suffering in Auschwitz I come from a

1366

01:09:34,149 --> 01:09:31,819

family that was destroyed by that my

1367

01:09:35,590 --> 01:09:34,159

Hungarian family can guarantee his

1368

01:09:38,229 --> 01:09:35,600

family was destroyed by that so I grew

1369

01:09:40,539 --> 01:09:38,239

up on these stories I mean I lived these

1370

01:09:42,550 --> 01:09:40,549

stories I heard them said you were named

1371

01:09:45,100 --> 01:09:42,560

after yes

1372

01:09:47,530 --> 01:09:45,110

every child in my generation and next

1373

01:09:52,530 --> 01:09:47,540

generation was named after this very

1374

01:09:57,520 --> 01:09:52,540

large family that was like down so um I

1375

01:10:01,540 --> 01:09:57,530

am very and I think maybe this is this

1376

01:10:04,300 --> 01:10:01,550

motivated me and my entire life um I'm

1377

01:10:05,740 --> 01:10:04,310

how does this happen how does this

1378

01:10:09,430 --> 01:10:05,750

happen how does this happen in a

1379

01:10:12,850 --> 01:10:09,440

civilized culture like German culture my

1380

01:10:15,940 --> 01:10:12,860

family revered German culture as a

1381

01:10:19,700 --> 01:10:15,950

facility educated Jews do right and so

1382

01:10:23,910 --> 01:10:19,710

how can this happen genocide

1383

01:10:28,780 --> 01:10:25,920

you

1384

01:10:31,360 --> 01:10:28,790

there's one second I'm sorry I'm sorry

1385

01:10:33,340 --> 01:10:31,370

my my headphones just died so I'm gonna

1386

01:10:40,420 --> 01:10:33,350

have to take them off and listen to you

1387

01:10:47,500 --> 01:10:40,430

from the speaker speaker because I value

1388

01:10:50,110 --> 01:10:47,510

your time your thank you so much great

1389

01:10:50,830 --> 01:10:50,120

thank you thank you so much thank you so

1390

01:10:52,180 --> 01:10:50,840

where were we

1391

01:10:56,740 --> 01:10:52,190

okay let me do that let me just have

1392

01:10:59,230 --> 01:10:56,750

something I'll just make it a a segue

1393

01:11:01,750 --> 01:10:59,240

okay so you were saying you were talking

1394

01:11:03,700 --> 01:11:01,760

about how you felt about the Petersons

1395

01:11:10,390 --> 01:11:03,710

debate and you said I think we just left

1396

01:11:12,640 --> 01:11:10,400

off there yes so okay so this

1397

01:11:14,380 --> 01:11:12,650

transcending kind of experience that

1398

01:11:19,210 --> 01:11:14,390

just sort of reveals itself when you

1399

01:11:21,970 --> 01:11:19,220

feel you know you're you are in touch

1400

01:11:24,820 --> 01:11:21,980

with something transcendent that makes

1401

01:11:26,440 --> 01:11:24,830

you transcendent you know that there's

1402

01:11:28,990 --> 01:11:26,450

you're you know larger than like

1403

01:11:32,770 --> 01:11:29,000

something more than people who don't

1404

01:11:35,580 --> 01:11:32,780

have this experience this is there's a

1405

01:11:42,730 --> 01:11:35,590

very intoxicating feeling I know

1406

01:11:45,240 --> 01:11:42,740

extremely wary of it that because you

1407

01:11:49,230 --> 01:11:45,250

know I think that it's that that that is

1408

01:11:57,600 --> 01:11:49,240

Hartley that is a mechanism that can go

1409

01:12:02,290 --> 01:12:00,490

not to put too fine a point in it the

1410

01:12:03,820 --> 01:12:02,300

Nazis preached just such a thing when

1411

01:12:10,680 --> 01:12:03,830

you were at these nerve if these at

1412

01:12:16,720 --> 01:12:13,270

greater greater than you know the

1413

01:12:19,660 --> 01:12:16,730

destiny of the German people you know

1414

01:12:21,840 --> 01:12:19,670

and it's it was just self revealing and

1415

01:12:24,310 --> 01:12:21,850

it says you know was such a powerful

1416

01:12:26,260 --> 01:12:24,320

feeling it's a kind of religious feeling

1417

01:12:29,530 --> 01:12:26,270

I mean religion has can happen as well

1418

01:12:31,060 --> 01:12:29,540

when you feel yourself chosen by God or

1419

01:12:35,020 --> 01:12:31,070

God is with you know and it's just a

1420

01:12:38,470 --> 01:12:35,030

sort of self revelatory feeling I mean

1421

01:12:39,010 --> 01:12:38,480

sometimes it can be in self lifting and

1422

01:12:41,980 --> 01:12:39,020

urine

1423

01:12:44,130 --> 01:12:41,990

you're more than human I hate anything

1424

01:12:46,960 --> 01:12:44,140

that makes us more than you I'm very

1425

01:12:49,630 --> 01:12:46,970

wary of it

1426

01:12:55,590 --> 01:12:49,640

I know it's enchantments I know it's

1427

01:12:59,980 --> 01:12:55,600

intoxications I think human is enough

1428

01:13:02,650 --> 01:12:59,990

really use enough understanding your

1429

01:13:08,080 --> 01:13:02,660

humanity and the humanity of everybody

1430

01:13:14,950 --> 01:13:08,090

else and how the same we are that's a

1431

01:13:17,590 --> 01:13:14,960

much safer way to feel and and and it is

1432

01:13:21,760 --> 01:13:17,600

it's it's it's there's nothing

1433

01:13:29,490 --> 01:13:21,770

grandiose is nothing self-deceptive

1434

01:13:36,910 --> 01:13:33,790

alarms were going off between these two

1435

01:13:40,870 --> 01:13:36,920

people between these two men both of

1436

01:13:42,130 --> 01:13:40,880

whom know I think I realized that I was

1437

01:13:55,180 --> 01:13:42,140

one never mind I don't know anything

1438

01:14:01,030 --> 01:13:55,190

I've got there but I don't have really

1439

01:14:02,770 --> 01:14:01,040

sound grounds to okay so but you know on

1440

01:14:04,990 --> 01:14:02,780

the one side you know somebody saying

1441

01:14:07,900 --> 01:14:05,000

you know believe it's I do or your life

1442

01:14:09,990 --> 01:14:07,910

is you can't even world creature you

1443

01:14:14,470 --> 01:14:10,000

know you can't have no meaning you can

1444

01:14:18,100 --> 01:14:14,480

have no purpose and on the other side

1445

01:14:21,100 --> 01:14:18,110

they sort of like you know self you know

1446

01:14:23,410 --> 01:14:21,110

this transcendence that reveals itself

1447

01:14:25,390 --> 01:14:23,420

and and it reveals itself and it the

1448

01:14:26,860 --> 01:14:25,400

experience itself so when somebody tries

1449

01:14:28,510 --> 01:14:26,870

to talk you out of it or something

1450

01:14:32,170 --> 01:14:28,520

look this is taking you in a wrong place

1451

01:14:38,020 --> 01:14:32,180

no it is self proofing

1452

01:14:42,490 --> 01:14:38,030

self-authenticating this this is anti

1453

01:14:44,860 --> 01:14:42,500

rational and this is for me danger so

1454

01:14:49,360 --> 01:14:44,870

both of these people all my alarms were

1455

01:14:51,090 --> 01:14:49,370

going off ah this is precisely these are

1456

01:14:55,380 --> 01:14:51,100

the things I don't believe in

1457

01:14:56,830 --> 01:14:55,390

and I and I see dangers in both of these

1458

01:15:01,030 --> 01:14:56,840

sorts of things

1459

01:15:03,430 --> 01:15:01,040

I see suffering suffering coming from

1460

01:15:06,459 --> 01:15:03,440

from trusting your feelings of self

1461

01:15:08,110 --> 01:15:06,469

transcendence or danger coming from

1462

01:15:11,320 --> 01:15:08,120

thinking here that this way is morality

1463

01:15:13,270 --> 01:15:11,330

other people can't be moral right which

1464

01:15:17,140 --> 01:15:13,280

makes them less than you so either be

1465

01:15:17,470 --> 01:15:17,150

more than human or you're less than

1466

01:15:20,979 --> 01:15:17,480

human

1467

01:15:24,820 --> 01:15:20,989

I okay I think I've said enough I don't

1468

01:15:25,810 --> 01:15:24,830

believe I this is goes against

1469

01:15:28,510 --> 01:15:25,820

everything I believe in

1470

01:15:31,810 --> 01:15:28,520

I see I see now with respect to morality

1471

01:15:33,729 --> 01:15:31,820

are you more of a Sam Harris type that

1472

01:15:37,090 --> 01:15:33,739

would say that we can derive morality

1473

01:15:42,300 --> 01:15:37,100

from something objective or scientific

1474

01:15:50,979 --> 01:15:47,050

I am more with Harris than not that is I

1475

01:15:54,510 --> 01:15:50,989

believe morality is objective yes I do

1476

01:15:59,470 --> 01:15:54,520

I don't think it is the same thing as

1477

01:16:02,649 --> 01:15:59,480

science I don't think that and I'm not a

1478

01:16:05,590 --> 01:16:02,659

utilitarian as a matter of fact I don't

1479

01:16:09,520 --> 01:16:05,600

I don't hold by that theory of morality

1480

01:16:11,979 --> 01:16:09,530

I think that perhaps Sam I haven't

1481

01:16:16,600 --> 01:16:11,989

discussed this with him I would like to

1482

01:16:22,899 --> 01:16:16,610

discuss it with him more is too hasty to

1483

01:16:27,160 --> 01:16:22,909

go from morality has to do with human

1484

01:16:29,280 --> 01:16:27,170

well-being to utilitarianism Wright said

1485

01:16:33,310 --> 01:16:29,290

that there there there are other

1486

01:16:35,860 --> 01:16:33,320

alternatives not where you dismiss human

1487

01:16:38,050 --> 01:16:35,870

well-being I think he says about Rawls a

1488

01:16:43,620 --> 01:16:38,060

Content theory that I take quite

1489

01:16:47,229 --> 01:16:43,630

seriously that it is it's it's us it's

1490

01:16:49,750 --> 01:16:47,239

separate from it doesn't think of human

1491

01:16:52,720 --> 01:16:49,760

well-being it this is not true this is

1492

01:16:54,520 --> 01:16:52,730

certainly not true but it does you know

1493

01:16:59,410 --> 01:16:54,530

there are other alternates you can think

1494

01:17:02,410 --> 01:16:59,420

that morality is objective but it has to

1495

01:17:03,460 --> 01:17:02,420

do with human flourishing flourishing of

1496

01:17:07,330 --> 01:17:03,470

all

1497

01:17:09,250 --> 01:17:07,340

and not being a utilitarian and there

1498

01:17:12,520 --> 01:17:09,260

are tremendous problems with

1499

01:17:16,180 --> 01:17:12,530

utilitarianism I do think there's a way

1500

01:17:20,370 --> 01:17:16,190

of deriving you know epochs and the

1501

01:17:23,200 --> 01:17:20,380

fundamental fact of ethics which is the

1502

01:17:25,990 --> 01:17:23,210

equitable distribution of mattering over

1503

01:17:28,390 --> 01:17:26,000

all humans which is not to say that only

1504

01:17:30,790 --> 01:17:28,400

humans matter but it is to say that all

1505

01:17:32,530 --> 01:17:30,800

humans matter right other things to

1506

01:17:35,440 --> 01:17:32,540

other sentient creatures matter to you

1507

01:17:40,690 --> 01:17:35,450

the planet works of art matter also sees

1508

01:17:42,880 --> 01:17:40,700

matter that aren't humans but that all

1509

01:17:44,110 --> 01:17:42,890

humans do matter and that's where we get

1510

01:17:46,410 --> 01:17:44,120

into some of the problems with

1511

01:17:49,830 --> 01:17:46,420

utilitarianism you know can you

1512

01:17:53,320 --> 01:17:49,840

sacrifice an innocent if it's going to

1513

01:17:56,320 --> 01:17:53,330

be good for the you know in general it's

1514

01:17:58,390 --> 01:17:56,330

gonna maximize well-being for everybody

1515

01:18:02,170 --> 01:17:58,400

or there's some things that just can't

1516

01:18:04,900 --> 01:18:02,180

you know it's a fundamental fact of

1517

01:18:06,310 --> 01:18:04,910

everybody's matter in the way that we

1518

01:18:11,830 --> 01:18:06,320

know ourselves to matter and certainly

1519

01:18:13,120 --> 01:18:11,840

ones that we love matter then we run

1520

01:18:15,160 --> 01:18:13,130

into certain problems with

1521

01:18:18,100 --> 01:18:15,170

utilitarianism but so anyway that's

1522

01:18:20,620 --> 01:18:18,110

basically all I would say I take moral

1523

01:18:23,350 --> 01:18:20,630

theory is very very difficult

1524

01:18:25,180 --> 01:18:23,360

how does happen how is it how our morals

1525

01:18:30,030 --> 01:18:25,190

objective like how does one make an

1526

01:18:34,870 --> 01:18:30,040

objective case for morality okay um

1527

01:18:41,250 --> 01:18:34,880

there are certain fundamental just a

1528

01:18:45,910 --> 01:18:41,260

victorie principles that we use in logic

1529

01:18:48,550 --> 01:18:45,920

in the rules of deduction in empirical

1530

01:18:52,990 --> 01:18:48,560

thinking the rules of induction and

1531

01:18:56,230 --> 01:18:53,000

abduction that give us the concepts of

1532

01:19:00,850 --> 01:18:56,240

evidence right and deduction that gives

1533

01:19:04,020 --> 01:19:00,860

us the concepts of proving things you

1534

01:19:08,840 --> 01:19:04,030

know of logical consequence

1535

01:19:18,780 --> 01:19:08,850

and also in impractical reason right in

1536

01:19:21,150 --> 01:19:18,790

in pursuing our lives and we justify was

1537

01:19:25,160 --> 01:19:21,160

the kind of content argument we cannot

1538

01:19:28,200 --> 01:19:25,170

justify any of these just of Kotori

1539

01:19:31,170 --> 01:19:28,210

principles because they are the means by

1540

01:19:35,790 --> 01:19:31,180

which we justify in these various fields

1541

01:19:40,340 --> 01:19:35,800

if I try to prove logic I'm gonna have

1542

01:19:46,740 --> 01:19:42,480

that's where Descartes got himself into

1543

01:19:51,950 --> 01:19:46,750

the famous Cartesian Circle um David

1544

01:19:56,040 --> 01:19:51,960

Hume great an Enlightenment thinker

1545

01:19:58,530 --> 01:19:56,050

showed us that empirical reasoning you

1546

01:20:01,280 --> 01:19:58,540

know just thinking that the universe is

1547

01:20:04,050 --> 01:20:01,290

lot alike and so using certain

1548

01:20:06,030 --> 01:20:04,060

observable things as evidence for these

1549

01:20:08,460 --> 01:20:06,040

laws on the basis of which we make

1550

01:20:11,130 --> 01:20:08,470

predictions which we use in both

1551
01:20:16,410 --> 01:20:11,140
induction and abduction inference to the

1552
01:20:19,290 --> 01:20:16,420
best explanation they that presumption

1553
01:20:25,380 --> 01:20:19,300
that underlies all of this scientific

1554
01:20:27,920 --> 01:20:25,390
reasoning cannot itself be justified

1555
01:20:32,070 --> 01:20:27,930
because you can't justify it through

1556
01:20:34,350 --> 01:20:32,080
deductive reasoning not up I mean I

1557
01:20:38,400 --> 01:20:34,360
can't use empirical reasoning because

1558
01:20:42,270 --> 01:20:38,410
empirical reasoning presumes the normal

1559
01:20:43,740 --> 01:20:42,280
logical nature you know that nature is a

1560
01:20:46,920 --> 01:20:43,750
lot alike you know that there are laws

1561
01:20:48,750 --> 01:20:46,930
exactly fine and anomaly as Newtonian

1562
01:20:50,760 --> 01:20:48,760
physics doesn't accord with their

1563
01:20:53,220 --> 01:20:50,770

observations we don't say oh well maybe

1564

01:20:55,950 --> 01:20:53,230

a nature is just not no like no we go

1565

01:21:01,160 --> 01:20:55,960

back when six our approximation of what

1566

01:21:04,800 --> 01:21:01,170

the lots of nature are these you know in

1567

01:21:07,170 --> 01:21:04,810

all of our reasoning in logic and

1568

01:21:08,940 --> 01:21:07,180

empirical reason we there are certain

1569

01:21:13,290 --> 01:21:08,950

things look we these are the principles

1570

01:21:15,750 --> 01:21:13,300

that we are using and we can't pursue a

1571

01:21:19,649 --> 01:21:15,760

coherent life with

1572

01:21:24,989 --> 01:21:19,659

using them right in practical reason as

1573

01:21:28,379 --> 01:21:24,999

well I cannot pursue my life without

1574

01:21:31,049 --> 01:21:28,389

thinking you know that I matter you know

1575

01:21:35,640 --> 01:21:31,059

if that in my pain matters you know that

1576

01:21:38,489 --> 01:21:35,650

if I'm so you know it's if I put my hand

1577

01:21:41,370 --> 01:21:38,499

on a hot rate it hurts

1578

01:21:43,560 --> 01:21:41,380

I've got reason right to remove it or I

1579

01:21:47,100 --> 01:21:43,570

you know if something's going to be good

1580

01:21:50,970 --> 01:21:47,110

for me in the future you know then I

1581

01:21:53,279 --> 01:21:50,980

launch my plans and try to get there you

1582

01:21:55,169 --> 01:21:53,289

know and then and then all of my

1583

01:21:56,700 --> 01:21:55,179

emotions as well you know it's it's all

1584

01:22:00,989 --> 01:21:56,710

wrapped up you know what I feel

1585

01:22:03,149 --> 01:22:00,999

frustrated or happy or gratified hopeful

1586

01:22:05,609 --> 01:22:03,159

or fearful or anything all of this is

1587

01:22:07,770 --> 01:22:05,619

all presuming you know my life matters

1588

01:22:09,689 --> 01:22:07,780

so you know in some sense I can step

1589

01:22:12,239 --> 01:22:09,699

outside of my life and say yeah it

1590

01:22:14,399 --> 01:22:12,249

doesn't really matter um you know maybe

1591

01:22:16,379 --> 01:22:14,409

I'll decide it does it and then I'm

1592

01:22:19,470 --> 01:22:16,389

going to go into some sort of nihilistic

1593

01:22:24,470 --> 01:22:19,480

funk cuz my mattering matters to me so

1594

01:22:27,689 --> 01:22:24,480

much even thinking that I don't matter

1595

01:22:30,209 --> 01:22:27,699

you know is going to you know get me

1596

01:22:32,549 --> 01:22:30,219

into a funk you know because that itself

1597

01:22:33,359 --> 01:22:32,559

is a testament to how much you know we

1598

01:22:35,180 --> 01:22:33,369

all our lives

1599

01:22:39,450 --> 01:22:35,190

never trust we can't pursue them without

1600

01:22:44,459 --> 01:22:39,460

that sort of the kind of just at the

1601
01:22:46,290 --> 01:22:44,469
Katori mechanism that we use in pursuing

1602
01:22:48,359 --> 01:22:46,300
our lives we can't coherently pursue our

1603
01:22:52,350 --> 01:22:48,369
lives just as but that logic or that

1604
01:22:54,509 --> 01:22:52,360
empirical reason we can't pursue or lies

1605
01:22:56,339 --> 01:22:54,519
without feeling that we I think you

1606
01:22:59,009 --> 01:22:56,349
might think well what is it about me

1607
01:23:00,839 --> 01:22:59,019
that makes me matter so much I mean I

1608
01:23:02,640 --> 01:23:00,849
can't possibly be sure that I'm just me

1609
01:23:04,979 --> 01:23:02,650
because everybody else feels the same

1610
01:23:06,540 --> 01:23:04,989
way about them well maybe it's because

1611
01:23:09,000 --> 01:23:06,550
some you know I belong to the right

1612
01:23:12,750 --> 01:23:09,010
people the right country the right this

1613
01:23:13,830 --> 01:23:12,760

you talk to enough people who maybe I

1614

01:23:18,209 --> 01:23:13,840

have the right reach the right

1615

01:23:21,089 --> 01:23:18,219

complexion right oh yeah well you know

1616

01:23:25,430 --> 01:23:21,099

slowly slowly those ideas have been

1617

01:23:27,149 --> 01:23:25,440

knocked down right that's progress right

1618

01:23:29,429 --> 01:23:27,159

and

1619

01:23:31,679 --> 01:23:29,439

you know basically what you would you

1620

01:23:33,390 --> 01:23:31,689

come out to look I can't prove soon my

1621

01:23:36,659 --> 01:23:33,400

life without just the presumption that I

1622

01:23:39,419 --> 01:23:36,669

matter the same as everybody else right

1623

01:23:41,580 --> 01:23:39,429

and so whatever whatever mattering I do

1624

01:23:44,339 --> 01:23:41,590

have or don't have it's equally

1625

01:23:46,620 --> 01:23:44,349

distributed it's her it's interrupts

1626
01:23:49,080 --> 01:23:46,630
bethenny sounds more of a pragmatic

1627
01:23:52,109 --> 01:23:49,090
approach that is I can't pursue my life

1628
01:23:53,549 --> 01:23:52,119
if if I don't have this as a as a

1629
01:23:57,120 --> 01:23:53,559
grounding as a justification which I

1630
01:24:00,390 --> 01:23:57,130
can't justify but how what is that what

1631
01:24:03,839 --> 01:24:00,400
is that to say about the truth it's in

1632
01:24:07,919 --> 01:24:03,849
the same category with logic and

1633
01:24:12,600 --> 01:24:07,929
empirical reasoning I can't justify

1634
01:24:15,569 --> 01:24:12,610
logic right without presuming logic I

1635
01:24:17,279 --> 01:24:15,579
can't justify empirically you know are

1636
01:24:20,040 --> 01:24:17,289
we gonna stop feeling science are we

1637
01:24:23,549 --> 01:24:20,050
gonna stop believin in causality and

1638
01:24:26,669 --> 01:24:23,559

evidence and law likeness I mean there

1639

01:24:28,770 --> 01:24:26,679

these are fundamental you know to what

1640

01:24:32,219 --> 01:24:28,780

it is to pursue a coherent life it's the

1641

01:24:33,270 --> 01:24:32,229

best we can do however you did say

1642

01:24:34,620 --> 01:24:33,280

earlier you're willing to change your

1643

01:24:39,299 --> 01:24:34,630

mind about anything that means nothing

1644

01:24:46,739 --> 01:24:43,709

um it's a very oh yeah

1645

01:24:50,579 --> 01:24:46,749

I can't think myself outside the very

1646

01:24:53,309 --> 01:24:50,589

mechanisms of thinking right if so many

1647

01:24:56,189 --> 01:24:53,319

can give me an alternate to logic that

1648

01:24:58,199 --> 01:24:56,199

wouldn't require me to use logic in

1649

01:25:00,389 --> 01:24:58,209

order to apply this alternate logic

1650

01:25:04,739 --> 01:25:00,399

which is by the way the great lesson of

1651
01:25:05,579 --> 01:25:04,749
Lewis Carroll's brilliant essay what The

1652
01:25:08,159 --> 01:25:05,589
Tortoise and the hare

1653
01:25:09,989 --> 01:25:08,169
are right that is exhibit open alternate

1654
01:25:12,299 --> 01:25:09,999
logics will won't work because we have

1655
01:25:17,099 --> 01:25:12,309
to use our logic in order to apply that

1656
01:25:21,739 --> 01:25:17,109
new logic um that if these are the very

1657
01:25:24,629 --> 01:25:21,749
mechanisms by which Homo sapiens think

1658
01:25:26,699 --> 01:25:24,639
nobody is going to be able to get me to

1659
01:25:31,439 --> 01:25:26,709
think outside them they can get me to

1660
01:25:34,529 --> 01:25:31,449
see I'm just that's the basics that's

1661
01:25:36,209 --> 01:25:34,539
that's how we think that's that we can

1662
01:25:38,609 --> 01:25:36,219
pursue or lies with Albus

1663
01:25:42,689 --> 01:25:38,619

that's a kind of justification we're

1664

01:25:46,469 --> 01:25:42,699

entitled to anything that we need just

1665

01:25:50,250 --> 01:25:46,479

in order to be able to pursue a coherent

1666

01:25:57,270 --> 01:25:50,260

life at all you know that the to be able

1667

01:25:59,399 --> 01:25:57,280

to pursue coherent conversation really I

1668

01:26:01,079 --> 01:25:59,409

agree to some degree but I'm just

1669

01:26:03,599 --> 01:26:01,089

playing devil's advocate so what if

1670

01:26:05,189 --> 01:26:03,609

someone says the skeptic that maybe even

1671

01:26:06,629 --> 01:26:05,199

the suicidal skeptic cause like my life

1672

01:26:09,719 --> 01:26:06,639

doesn't matter and now you say well it

1673

01:26:11,369 --> 01:26:09,729

matters because I'm I'm self questioning

1674

01:26:14,459 --> 01:26:11,379

but that's not what I mean when I say

1675

01:26:15,779 --> 01:26:14,469

matters I mean it doesn't matter enough

1676

01:26:18,649 --> 01:26:15,789

that I should go on or doesn't matter

1677

01:26:20,819 --> 01:26:18,659

enough that pain should be stopped from

1678

01:26:22,829 --> 01:26:20,829

self-inflicted pain or means whipping

1679

01:26:25,439 --> 01:26:22,839

pain on others you know it can't happen

1680

01:26:28,559 --> 01:26:25,449

you know your life matters so much to

1681

01:26:32,069 --> 01:26:28,569

you and your own suffering matters so

1682

01:26:38,009 --> 01:26:32,079

much to you that you you know decide not

1683

01:26:40,859 --> 01:26:38,019

to continue it you know if life is and

1684

01:26:42,540 --> 01:26:40,869

at the same time so nothing can be taken

1685

01:26:45,209 --> 01:26:42,550

off the rails but mattering too much is

1686

01:26:47,069 --> 01:26:45,219

narcissism and that can lead you to want

1687

01:26:49,899 --> 01:26:47,079

to you know if you read the diaries of

1688

01:26:52,930 --> 01:26:49,909

people who are serial killers there

1689

01:26:55,390 --> 01:26:52,940

egotist most of the time so the real

1690

01:26:56,520 --> 01:26:55,400

thing to do and you know soaking this

1691

01:26:58,479 --> 01:26:56,530

whole thing of you know

1692

01:27:00,129 --> 01:26:58,489

self-transcendence and becoming an uber

1693

01:27:03,430 --> 01:27:00,139

mansion you know I think that this can

1694

01:27:05,680 --> 01:27:03,440

also lead you to thinking and has in the

1695

01:27:12,189 --> 01:27:05,690

history in the sad history of humanity

1696

01:27:19,419 --> 01:27:12,199

has up and led to yeah two atrocities

1697

01:27:21,500 --> 01:27:19,429

yes I'm still a way of arguing that

1698

01:27:25,230 --> 01:27:21,510

would say look

1699

01:27:29,190 --> 01:27:25,240

the very mechanisms that we all have in

1700

01:27:33,240 --> 01:27:29,200

in in thinking about our own lives and

1701

01:27:36,330 --> 01:27:33,250

even in deciding sometimes to give up

1702

01:27:39,690 --> 01:27:36,340

our lives for a cause or something you

1703

01:27:41,970 --> 01:27:39,700

know that certainly happens right this

1704

01:27:44,220 --> 01:27:41,980

doesn't mean that this doesn't entail

1705

01:27:46,110 --> 01:27:44,230

that one sometimes the very reason you

1706

01:27:50,880 --> 01:27:46,120

have to live give me a reason to die

1707

01:27:53,040 --> 01:27:50,890

Socrates demonstrated to us in the very

1708

01:27:56,900 --> 01:27:53,050

dawn of philosophy so it's not an

1709

01:28:01,890 --> 01:27:56,910

argument that you know life above all

1710

01:28:04,680 --> 01:28:01,900

but it is that none of us can matter any

1711

01:28:06,720 --> 01:28:04,690

more than any others just as you can

1712

01:28:09,780 --> 01:28:06,730

have all you know that the this is the

1713

01:28:11,400 --> 01:28:09,790

principles that we all have in just

1714

01:28:13,440 --> 01:28:11,410

pursuing our lives or sometimes in

1715

01:28:16,140 --> 01:28:13,450

deciding that our lives should not be

1716

01:28:18,060 --> 01:28:16,150

pursued any further but you know that we

1717

01:28:25,380 --> 01:28:18,070

are invested in our life there's a

1718

01:28:27,690 --> 01:28:25,390

wonderful article by Tom Nagel on called

1719

01:28:29,060 --> 01:28:27,700

the observe the philosopher Tom Nagel

1720

01:28:33,060 --> 01:28:29,070

happen to have been my dissertation

1721

01:28:36,420 --> 01:28:33,070

adviser all that I do totally different

1722

01:28:38,310 --> 01:28:36,430

things than this but it's called the

1723

01:28:40,080 --> 01:28:38,320

absurd and it's sort of about this gap

1724

01:28:43,050 --> 01:28:40,090

you know when we're in our lives we have

1725

01:28:47,580 --> 01:28:43,060

to pursue our lives right I mean we have

1726

01:28:50,640 --> 01:28:47,590

to our whole emotional apparatus is all

1727

01:28:53,220 --> 01:28:50,650

giving us feedback and how well this

1728

01:28:56,460 --> 01:28:53,230

life of mine is going know sometimes

1729

01:28:57,870 --> 01:28:56,470

life's can go pretty terribly and people

1730

01:29:02,490 --> 01:28:57,880

may actually even want to exit them

1731

01:29:05,610 --> 01:29:02,500

that's that's not the point

1732

01:29:08,880 --> 01:29:05,620

but the point is you know that we are we

1733

01:29:10,740 --> 01:29:08,890

we pursue our lives I mean who else's

1734

01:29:14,420 --> 01:29:10,750

life are you're going to pursue have not

1735

01:29:18,420 --> 01:29:14,430

your own there is a certain commitment

1736

01:29:20,400 --> 01:29:18,430

to this life and then when you think

1737

01:29:22,770 --> 01:29:20,410

about well what justifies it the only

1738

01:29:24,470 --> 01:29:22,780

thing that can justify it are the kinds

1739

01:29:27,420 --> 01:29:24,480

of grounds that would justify

1740

01:29:30,360 --> 01:29:27,430

everybody's life to themselves everybody

1741

01:29:31,529 --> 01:29:30,370

takes this their lives seriously that's

1742

01:29:35,819 --> 01:29:31,539

enough

1743

01:29:38,910 --> 01:29:35,829

that slavery is wrong right those slaves

1744

01:29:41,370 --> 01:29:38,920

lives mattered as much to them as my

1745

01:29:43,950 --> 01:29:41,380

life matters to me the lives of their

1746

01:29:46,560 --> 01:29:43,960

children mattered much to them all of it

1747

01:29:49,020 --> 01:29:46,570

was there everything that's there when I

1748

01:29:52,529 --> 01:29:49,030

introspect about my life that makes me

1749

01:29:57,149 --> 01:29:52,539

know how much matters was there for them

1750

01:30:00,410 --> 01:29:57,159

right that richness and so that you know

1751

01:30:03,509 --> 01:30:00,420

to actually just come to terms with what

1752

01:30:05,759 --> 01:30:03,519

what we are just and being human that's

1753

01:30:08,240 --> 01:30:05,769

what I say being human is enough I mean

1754

01:30:11,759 --> 01:30:08,250

if we can really understand the full

1755

01:30:13,500 --> 01:30:11,769

implications of that that would be

1756

01:30:15,810 --> 01:30:13,510

enough right this would be a good world

1757

01:30:19,319 --> 01:30:15,820

a better world you know oneself it

1758

01:30:23,939 --> 01:30:19,329

wouldn't cure coronavirus but it would

1759

01:30:27,810 --> 01:30:23,949

tell us how important the cure is for

1760

01:30:29,970 --> 01:30:27,820

everybody right not not more important

1761

01:30:32,910 --> 01:30:29,980

for the rich you can escape it or you

1762

01:30:34,680 --> 01:30:32,920

know in this country there's anyway okay

1763

01:30:38,189 --> 01:30:34,690

you wrap up you just use the word better

1764

01:30:40,200 --> 01:30:38,199

which implies progress however not every

1765

01:30:41,939 --> 01:30:40,210

culture would obviously not every

1766

01:30:43,859 --> 01:30:41,949

culture would believe that slavery is

1767

01:30:46,680 --> 01:30:43,869

wrong for certain types of people even

1768

01:30:48,200 --> 01:30:46,690

within your own race yeah does that mean

1769

01:30:53,419 --> 01:30:48,210

that progress is incompatible with

1770

01:30:59,810 --> 01:30:53,429

multiculturalism yeah well if

1771

01:31:02,910 --> 01:30:59,820

multiculturalism means not only you know

1772

01:31:06,750 --> 01:31:02,920

different morality different moralities

1773

01:31:10,049 --> 01:31:06,760

in that sense you know that one doesn't

1774

01:31:13,020 --> 01:31:10,059

accept the mattering the equal battery

1775

01:31:15,330 --> 01:31:13,030

of all human beings if that's an

1776

01:31:17,279 --> 01:31:15,340

objective fact which I think it is I

1777

01:31:21,950 --> 01:31:17,289

think that's an objective fact you know

1778

01:31:24,540 --> 01:31:21,960

that just comes out of how we

1779

01:31:26,729 --> 01:31:24,550

practically reason in our own case and

1780

01:31:28,140 --> 01:31:26,739

then have to universalize it to others

1781

01:31:31,500 --> 01:31:28,150

if that's an objective fact yeah they're

1782

01:31:33,600 --> 01:31:31,510

making a huge mistake um yeah just as

1783

01:31:36,569 --> 01:31:33,610

the clinic does that mean that we can

1784

01:31:38,879 --> 01:31:36,579

rank orders cultures in terms of which

1785

01:31:41,700 --> 01:31:38,889

ones are more progressive and then if so

1786

01:31:44,189 --> 01:31:41,710

I think this is extremely yeah I'm not

1787

01:31:45,089 --> 01:31:44,199

trying true I'm not trying to put a

1788

01:31:47,639 --> 01:31:45,099

gotcha on you

1789

01:31:51,270 --> 01:31:47,649

but if so would you say that the West

1790

01:31:53,639 --> 01:31:51,280

has the most progressive cultures my

1791

01:31:56,580 --> 01:31:53,649

depends what you mean by progressive

1792

01:32:00,649 --> 01:31:56,590

look do I think that a culture that

1793

01:32:04,919 --> 01:32:00,659

doesn't believe in genocide is it's

1794

01:32:06,719 --> 01:32:04,929

morally superior to one that does

1795

01:32:08,279 --> 01:32:06,729

believe in Janice I guess of course I do

1796

01:32:11,339 --> 01:32:08,289

I mean that's what it is to believe in

1797

01:32:13,409 --> 01:32:11,349

the objectivity of morality so I mean as

1798

01:32:15,659 --> 01:32:13,419

soon as you say you know you commit

1799

01:32:21,869 --> 01:32:15,669

yourself to the objectivity of morality

1800

01:32:23,969 --> 01:32:21,879

which I put on the yes which I rank with

1801

01:32:27,089 --> 01:32:23,979

the objectivity of logic and computer

1802

01:32:28,830 --> 01:32:27,099

reasoning um you know of course you're

1803

01:32:33,239 --> 01:32:28,840

going to say that certain cultures got

1804

01:32:36,779 --> 01:32:33,249

things terribly wrong yes and rape

1805

01:32:38,399 --> 01:32:36,789

cultures get things terribly wrong even

1806

01:32:40,109 --> 01:32:38,409

if let's just do a thought experiment

1807

01:32:41,969 --> 01:32:40,119

and this culture who's that said that

1808

01:32:43,020 --> 01:32:41,979

genocide is great be killed all the rest

1809

01:32:46,049 --> 01:32:43,030

of people who thought the genocide

1810

01:32:47,520 --> 01:32:46,059

wasn't great and now going back to your

1811

01:32:49,529 --> 01:32:47,530

argument about it's a human universal

1812

01:32:52,169 --> 01:32:49,539

now they have as a human Universal

1813

01:32:53,549 --> 01:32:52,179

genocide is okay and they can reason and

1814

01:32:55,199 --> 01:32:53,559

say that well look it's a human

1815

01:32:59,549 --> 01:32:55,209

universal this is the way our brains are

1816

01:33:00,929 --> 01:32:59,559

built this is objective morality so then

1817

01:33:04,349 --> 01:33:00,939

we have two disparate accounts on

1818

01:33:08,129 --> 01:33:04,359

whatever yes morality does not depend on

1819

01:33:13,020 --> 01:33:08,139

how our brains are built it's not

1820

01:33:14,939 --> 01:33:13,030

reducible I think that Harris is wrong

1821

01:33:17,250 --> 01:33:14,949

about this I don't think that the

1822

01:33:18,929 --> 01:33:17,260

neuroscience is wrong relevant you know

1823

01:33:22,679 --> 01:33:18,939

and the fact that consciousness is a

1824

01:33:24,959 --> 01:33:22,689

brain process is all relevant to this no

1825

01:33:28,830 --> 01:33:24,969

they would still be wrong even though it

1826

01:33:32,580 --> 01:33:28,840

it would be an empirical fact that

1827

01:33:35,820 --> 01:33:32,590

everybody just everybody bird just flew

1828

01:33:35,820 --> 01:33:35,830

into one of her windows

1829

01:33:35,830 --> 01:33:40,790

it was a big birds of hopefully survived

1830

01:33:45,919 --> 01:33:43,459

you know even if it was a universally

1831

01:33:49,720 --> 01:33:45,929

accepted fact that everybody believes

1832

01:33:54,950 --> 01:33:49,730

that yes he's the sub-base you know once

1833

01:33:57,020 --> 01:33:54,960

tainted our Aryan purity and that was a

1834

01:33:59,870 --> 01:33:57,030

worst world we would be wrong that was a

1835

01:34:01,700 --> 01:33:59,880

better world and what they did in order

1836

01:34:04,700 --> 01:34:01,710

to get you this world of universal

1837

01:34:06,319 --> 01:34:04,710

agreement was egregious and was

1838

01:34:09,890 --> 01:34:06,329

objectively wrong

1839

01:34:12,910 --> 01:34:09,900

those people mattered those people

1840

01:34:16,310 --> 01:34:12,920

mattered they're suffering mattered

1841

01:34:21,399 --> 01:34:16,320

nothing will ever convince me I didn't

1842

01:34:24,530 --> 01:34:21,409

that that is wrong you know that there's

1843

01:34:26,060 --> 01:34:24,540

my agree I agree I'm just I just hope

1844

01:34:27,649 --> 01:34:26,070

you know I was playing devil's advocate

1845

01:34:30,439 --> 01:34:27,659

but then we just found something that

1846

01:34:33,169 --> 01:34:30,449

you said that you is immovable when you

1847

01:34:36,760 --> 01:34:33,179

were willing to because I cannot think

1848

01:34:40,490 --> 01:34:36,770

it is immutable because it derives from

1849

01:34:43,990 --> 01:34:40,500

the very mechanisms by which I think

1850

01:34:47,299 --> 01:34:44,000

about my own life in order to pursue it

1851
01:34:50,950 --> 01:34:47,309
it derives from that you know and

1852
01:34:55,069 --> 01:34:50,960
anything I think that's a way of

1853
01:34:58,160 --> 01:34:55,079
justifying a whole lot of propositions

1854
01:35:01,459 --> 01:34:58,170
we do it in logic we do it in empirical

1855
01:35:03,439 --> 01:35:01,469
reasoning how do we do it in practical

1856
01:35:07,970 --> 01:35:03,449
reason as well as in moral reasoning as

1857
01:35:10,310 --> 01:35:07,980
well that and then and I would equate

1858
01:35:12,200 --> 01:35:10,320
all of them so that's a different way of

1859
01:35:17,479 --> 01:35:12,210
going about trying to justify these

1860
01:35:22,490 --> 01:35:17,489
things right there's no coherence you

1861
01:35:24,919 --> 01:35:22,500
know without certain mechanisms of

1862
01:35:29,020 --> 01:35:24,929
thinking I can't think myself outside of

1863
01:35:31,640 --> 01:35:29,030

them because they are what I think with

1864

01:35:34,720 --> 01:35:31,650

so what's next for you work in the

1865

01:35:40,250 --> 01:35:34,730

audience find more out more about you

1866

01:35:43,970 --> 01:35:40,260

well I've written 10 books and they are

1867

01:35:47,330 --> 01:35:43,980

you know both some fiction fiction and

1868

01:35:51,260 --> 01:35:47,340

nonfiction I often in the past have used

1869

01:35:53,320 --> 01:35:51,270

novels for fictional and I think there

1870

01:35:59,350 --> 01:35:53,330

are certain things that

1871

01:36:00,520 --> 01:35:59,360

one can do it in fiction they help you

1872

01:36:02,230 --> 01:36:00,530

wrote a fictional book that's actually

1873

01:36:04,210 --> 01:36:02,240

how I found out about your husband who's

1874

01:36:06,120 --> 01:36:04,220

a physicist because I saw you wrote one

1875

01:36:08,500 --> 01:36:06,130

that deals with quantum physics and

1876

01:36:09,760 --> 01:36:08,510

background in physics and math and so I

1877

01:36:13,030 --> 01:36:09,770

was wondering well you know most people

1878

01:36:15,880 --> 01:36:13,040

misuse quantum physics it tells like

1879

01:36:18,450 --> 01:36:15,890

well let's see Oh her husband at the

1880

01:36:20,230 --> 01:36:18,460

time was okay great so at least he could

1881

01:36:25,060 --> 01:36:20,240

corrected her if she was going off the

1882

01:36:27,130 --> 01:36:25,070

rails like Deepak Chopra I can hear that

1883

01:36:29,470 --> 01:36:27,140

that's it at least then if you were

1884

01:36:30,970 --> 01:36:29,480

saying something that wasn't comports

1885

01:36:34,120 --> 01:36:30,980

with the data when it comes to quantum

1886

01:36:40,180 --> 01:36:34,130

physics or taking the metaphor to to

1887

01:36:41,890 --> 01:36:40,190

metaphorically like Deepak might served

1888

01:36:43,600 --> 01:36:41,900

as a correction mechanism well I

1889

01:36:49,630 --> 01:36:43,610

actually studied physics as well that

1890

01:36:51,250 --> 01:36:49,640

was my first major and so I actually

1891

01:36:56,130 --> 01:36:51,260

come from a background in math and

1892

01:37:01,540 --> 01:36:56,140

physics never you know I would do

1893

01:37:04,150 --> 01:37:01,550

something like another but yeah I hear

1894

01:37:07,420 --> 01:37:04,160

so I went from physics to philosophy to

1895

01:37:09,250 --> 01:37:07,430

physics and so and people who do

1896

01:37:14,050 --> 01:37:09,260

philosophy physics usually have to know

1897

01:37:16,210 --> 01:37:14,060

good to you're basic yeah but yeah I

1898

01:37:19,060 --> 01:37:16,220

mean I have always been interested in

1899

01:37:21,130 --> 01:37:19,070

the foundations of quantum mechanics

1900

01:37:22,990 --> 01:37:21,140

which is you know philosophical you can

1901

01:37:25,360 --> 01:37:23,000

use this theory and know how to use this

1902

01:37:28,330 --> 01:37:25,370

theory and disagree tremendously on

1903

01:37:30,430 --> 01:37:28,340

interpretations of quantum mechanics and

1904

01:37:32,650 --> 01:37:30,440

I'm also always been extremely

1905

01:37:34,900 --> 01:37:32,660

interested in the not really

1906

01:37:37,450 --> 01:37:34,910

contradiction but the tension between

1907

01:37:40,810 --> 01:37:37,460

relativity theory and quantum mechanics

1908

01:37:43,660 --> 01:37:40,820

you know our two most successful

1909

01:37:46,930 --> 01:37:43,670

theories robust as far as predictions

1910

01:37:52,060 --> 01:37:46,940

are made but there is a deep tension

1911

01:37:53,860 --> 01:37:52,070

between them and so you know that that

1912

01:37:57,880 --> 01:37:53,870

is very interesting you know and that is

1913

01:38:01,060 --> 01:37:57,890

said something yeah and the novel came

1914

01:38:03,490 --> 01:38:01,070

out of that yes and I you know I'm in

1915

01:38:06,310 --> 01:38:03,500

being interested in you

1916

01:38:07,750 --> 01:38:06,320

potations of quantum mechanics I became

1917

01:38:12,960 --> 01:38:07,760

very interested in David bones

1918

01:38:17,620 --> 01:38:15,730

it caught on more in bed my ex-husband

1919

01:38:23,530 --> 01:38:17,630

had a lot to do with it

1920

01:38:26,080 --> 01:38:23,540

right yeah he's a very strong

1921

01:38:29,770 --> 01:38:26,090

well me and we knew david bohm towards

1922

01:38:33,460 --> 01:38:29,780

the end of his life and he was a

1923

01:38:35,440 --> 01:38:33,470

fantastic guy and the whole thing that

1924

01:38:36,940 --> 01:38:35,450

happened to him I mean it's you know

1925

01:38:39,160 --> 01:38:36,950

it's a very dramatic it's a novelistic

1926

01:38:42,030 --> 01:38:39,170

kind of thing I mean it was sort of

1927

01:38:49,590 --> 01:38:42,040

inspired by bohmian interpretation of

1928

01:38:52,360 --> 01:38:49,600

Galax I mean so you know yeah I think I

1929

01:38:54,010 --> 01:38:52,370

feel bad that I implied like like the

1930

01:38:55,930 --> 01:38:54,020

the radical left would say that I was

1931

01:38:58,660 --> 01:38:55,940

indoctrinated by the patriarchy to

1932

01:39:00,070 --> 01:38:58,670

suggest that that your book was correct

1933

01:39:01,870 --> 01:39:00,080

because of your husband or not because

1934

01:39:05,560 --> 01:39:01,880

of your own knowledge my bad

1935

01:39:08,410 --> 01:39:05,570

no it's it's it's perfectly fine and you

1936

01:39:12,400 --> 01:39:08,420

know most people who you know write

1937

01:39:17,230 --> 01:39:12,410

novels you know don't have a background

1938

01:39:21,160 --> 01:39:17,240

in the more technical stuff it's too bad

1939

01:39:23,290 --> 01:39:21,170

right because I you know like um I think

1940

01:39:27,220 --> 01:39:23,300

that they should feed off of each other

1941

01:39:29,860 --> 01:39:27,230

you know the arts and and the technical

1942

01:39:32,560 --> 01:39:29,870

sciences and both are extremely

1943

01:39:35,050 --> 01:39:32,570

beautiful and their beauty has a lot to

1944

01:39:38,380 --> 01:39:35,060

do with structure and so I mean to me it

1945

01:39:42,220 --> 01:39:38,390

just seems very natural so anyway yeah I

1946

01:39:47,410 --> 01:39:42,230

sometimes write novels that you want to

1947

01:39:50,470 --> 01:39:47,420

plug any website I don't have a website

1948

01:39:52,440 --> 01:39:50,480

and I'm not on Facebook but when I

1949

01:39:55,810 --> 01:39:52,450

published my last book you know I

1950

01:39:56,440 --> 01:39:55,820

completely surround every book on links

1951

01:40:00,750 --> 01:39:56,450

to your books

1952

01:40:04,210 --> 01:40:00,760

yeah yeah um but when I last book was

1953

01:40:07,950 --> 01:40:04,220

published my publisher sort of begged me

1954

01:40:11,860 --> 01:40:07,960

to get some sort of social media

1955

01:40:13,750 --> 01:40:11,870

presence and so I I do have a Twitter

1956

01:40:14,260 --> 01:40:13,760

feed but I don't lose it or check it

1957

01:40:16,870 --> 01:40:14,270

often

1958

01:40:20,440 --> 01:40:16,880

yeah it's okay I'll still include it

1959

01:40:21,910 --> 01:40:20,450

and and that's very very last you can

1960

01:40:23,920 --> 01:40:21,920

answer the super super briefly it's

1961

01:40:26,470 --> 01:40:23,930

about women in the STEM fields we were

1962

01:40:28,420 --> 01:40:26,480

talking about that so do you feel like

1963

01:40:30,480 --> 01:40:28,430

women are still discriminated against in

1964

01:40:35,040 --> 01:40:30,490

the STEM fields or if they ever were or

1965

01:40:42,910 --> 01:40:37,060

you know I'm outside of the STEM fields

1966

01:40:49,170 --> 01:40:42,920

now but you know I did I think you know

1967

01:40:52,600 --> 01:40:49,180

there is in general a presumption of

1968

01:40:56,190 --> 01:40:52,610

there's often a presumption that women

1969

01:40:59,650 --> 01:40:56,200

are don't think as well but you know and

1970

01:41:04,330 --> 01:40:59,660

you know one of the you know men are

1971

01:41:08,530 --> 01:41:04,340

often very interested and very motivated

1972

01:41:11,500 --> 01:41:08,540

to impress women and nerdy men try to

1973

01:41:17,890 --> 01:41:11,510

impress women with their nerdiness I

1974

01:41:26,650 --> 01:41:17,900

mean I've had I serums explain to me by

1975

01:41:29,110 --> 01:41:26,660

you know OBGYNs right who say Minh said

1976

01:41:32,830 --> 01:41:29,120

a party and this woman introduced me to

1977

01:41:34,210 --> 01:41:32,840

her her husband was a doctor and said oh

1978

01:41:36,670 --> 01:41:34,220

you know Rebecca's very interested in

1979

01:41:41,710 --> 01:41:36,680

Goodall and he starts explaining to me

1980

01:41:43,480 --> 01:41:41,720

their dozen cleanest parents and he his

1981

01:41:46,720 --> 01:41:43,490

knowledge had come from reading the

1982

01:41:49,180 --> 01:41:46,730

review of my book in the New York Times

1983

01:41:51,340 --> 01:41:49,190

Book Review that was his knowledge and

1984

01:41:53,230 --> 01:41:51,350

then I kept trying to say oh yeah that

1985

01:41:55,360 --> 01:41:53,240

was of my book he couldn't take it in

1986

01:41:58,030 --> 01:41:55,370

that that was my book right he was so

1987

01:41:59,440 --> 01:41:58,040

busy you know explaining it to me you

1988

01:42:03,190 --> 01:41:59,450

know and of course explaining it wrong

1989

01:42:06,880 --> 01:42:03,200

so look you experience these things you

1990

01:42:08,770 --> 01:42:06,890

know as a woman you do man eight has to

1991

01:42:12,010 --> 01:42:08,780

do with you know the psychology and

1992

01:42:14,620 --> 01:42:12,020

whatever you know I will say this about

1993

01:42:16,930 --> 01:42:14,630

you know I've been in a lot of fields as

1994

01:42:19,140 --> 01:42:16,940

I say you know I've been in technical

1995

01:42:22,060 --> 01:42:19,150

fields I was in philosophy

1996

01:42:23,979 --> 01:42:22,070

manners I guess I still AM I've been in

1997

01:42:27,160 --> 01:42:23,989

the arts

1998

01:42:30,550 --> 01:42:27,170

I think stem this is my own personal

1999

01:42:32,830 --> 01:42:30,560

experience is the best for all of these

2000

01:42:35,620 --> 01:42:32,840

things yep there's always that sort of

2001

01:42:37,750 --> 01:42:35,630

calm Annette who's mad at mutes and all

2002

01:42:43,290 --> 01:42:37,760

this stuff right you get used to this

2003

01:42:46,330 --> 01:42:43,300

right and you call me try to explain

2004

01:42:50,500 --> 01:42:46,340

doesn't matter

2005

01:42:54,190 --> 01:42:50,510

here's what math and the sciences have

2006

01:42:57,490 --> 01:42:54,200

that the arts and philosophy doesn't

2007

01:42:59,890 --> 01:42:57,500

have to the same extent in minute you

2008

01:43:04,479 --> 01:42:59,900

can prove your results right you've got

2009

01:43:06,490 --> 01:43:04,489

a good proof you know they can smell a

2010

01:43:09,160 --> 01:43:06,500

until the cows come in it's not gonna

2011

01:43:12,160 --> 01:43:09,170

make a difference you've got a good than

2012

01:43:15,729 --> 01:43:12,170

poop for a hard theorem an elegant proof

2013

01:43:17,950 --> 01:43:15,739

it can be checked out with the sciences

2014

01:43:22,180 --> 01:43:17,960

we've got reality

2015

01:43:24,850 --> 01:43:22,190

we've got predictions you know so a I'm

2016

01:43:29,290 --> 01:43:24,860

very good friends with a cosmologists

2017

01:43:31,270 --> 01:43:29,300

female cosmologists and who's went

2018

01:43:36,459 --> 01:43:31,280

through all sorts of problems wasn't

2019

01:43:40,390 --> 01:43:36,469

tenured and then she made some radical

2020

01:43:47,140 --> 01:43:40,400

prediction the evidence just came in

2021

01:43:49,860 --> 01:43:47,150

Thank You universe stem right you can

2022

01:43:53,620 --> 01:43:49,870

make pretty you know you've caught

2023

01:43:57,940 --> 01:43:53,630

universe can give can give you data and

2024

01:43:59,709 --> 01:43:57,950

can validate your your and you so it's

2025

01:44:03,220 --> 01:43:59,719

in the arts it's all much more

2026

01:44:04,630 --> 01:44:03,230

subjective and I think women have a

2027

01:44:07,570 --> 01:44:04,640

tougher time I mean there are certain

2028

01:44:10,930 --> 01:44:07,580

kinds of women subjects you write novels

2029

01:44:12,729 --> 01:44:10,940

about family dynamics and you know

2030

01:44:17,229 --> 01:44:12,739

that's what you know and you're gonna do

2031

01:44:19,510 --> 01:44:17,239

fine but you know I I do think that you

2032

01:44:22,150 --> 01:44:19,520

know since there's really nothing like

2033

01:44:25,530 --> 01:44:22,160

what you get in math proof or in the

2034

01:44:28,630 --> 01:44:25,540

sciences I'm sure a call absence to show

2035

01:44:32,229 --> 01:44:28,640

that's what your work is good or not in

2036

01:44:33,280 --> 01:44:32,239

the arts it's much much harder that's uh

2037

01:44:38,940 --> 01:44:33,290

yeah

2038

01:44:41,440 --> 01:44:38,950

so give as far as being a woman

2039

01:44:45,460 --> 01:44:41,450

it's better to be in stem that's what I

2040

01:44:48,550 --> 01:44:45,470

say does that make sense to you

2041

01:44:52,630 --> 01:44:48,560

thank you so much Rebecca appreciate

2042

01:44:54,670 --> 01:44:52,640

your your generosity with your time well

2043

01:44:58,270 --> 01:44:54,680

I appreciate your questions they're good

2044

01:45:02,100 --> 01:44:58,280

and you know they were their substitute