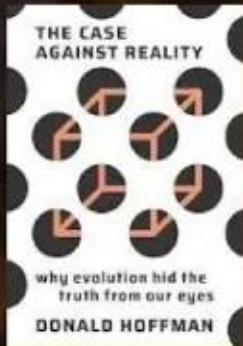


Dr. Donald Hoffman

skeptiko #436



Death-Blow For Materialism?

Skeptiko Topics:
Consciousness Science
Parapsychology
Near-Death Experience
Spirituality
Skeptics/Skepticism
Psi
Psychics & Mediums
Atheism
UFO
Neuroscience
Conspiracy Theories
Contactee Experience
OBE

1
00:00:05,059 --> 00:00:02,450
on this episode of skeptic Oh noted

2
00:00:07,340 --> 00:00:05,069
cognitive science researcher at the

3
00:00:09,680 --> 00:00:07,350
University of California Irvine and the

4
00:00:13,060 --> 00:00:09,690
guy who's blowing the doors off of

5
00:00:16,990 --> 00:00:13,070
consciousness science dr. Donald Hoffman

6
00:00:19,910 --> 00:00:17,000
are we preparing for another version of

7
00:00:21,920 --> 00:00:19,920
shut up and calculate so one reason why

8
00:00:25,429 --> 00:00:21,930
scientists do mathematical theories is

9
00:00:27,950 --> 00:00:25,439
because they surprise us they become

10
00:00:30,439 --> 00:00:27,960
smarter than us and eventually we become

11
00:00:32,510 --> 00:00:30,449
the students of the theory but I do

12
00:00:35,120 --> 00:00:32,520
agree that consciousness is the

13
00:00:36,889 --> 00:00:35,130

fundamental reality and that it

14

00:00:38,630 --> 00:00:36,899

transcends any of our theories and

15

00:00:40,940 --> 00:00:38,640

getting a direct connection with that

16

00:00:42,979 --> 00:00:40,950

conscious experience is very very

17

00:00:45,830 --> 00:00:42,989

important I actually spend time everyday

18

00:00:48,020 --> 00:00:45,840

in meditation doing exactly that and

19

00:00:51,260 --> 00:00:48,030

stick around after the interview for my

20

00:00:52,180 --> 00:00:51,270

chat about the interview with dr. rich

21

00:00:54,040 --> 00:00:52,190

Griego

22

00:00:56,029 --> 00:00:54,050

everybody has their metaphysical

23

00:00:58,610 --> 00:00:56,039

interpretation of the math and they have

24

00:01:06,700 --> 00:00:58,620

math that backs up their interpretation

25

00:01:11,179 --> 00:01:09,140

welcome to skeptical where we explore

26

00:01:14,060 --> 00:01:11,189

controversial science and spirituality

27

00:01:15,140 --> 00:01:14,070

with leading researchers thinkers and

28

00:01:18,710 --> 00:01:15,150

their critics

29

00:01:21,620 --> 00:01:18,720

I'm your host Alex Karras and as you

30

00:01:24,649 --> 00:01:21,630

know we spend a lot of time talking

31

00:01:28,039 --> 00:01:24,659

about consciousness on skeptic oh but as

32

00:01:31,429 --> 00:01:28,049

you also know if you bring this topic up

33

00:01:35,569 --> 00:01:31,439

with most people in your life you get at

34

00:01:37,550 --> 00:01:35,579

best a blank stare and more likely kind

35

00:01:41,270 --> 00:01:37,560

of a slow nodding of the head as they

36

00:01:43,100 --> 00:01:41,280

look for a way to get out of the room so

37

00:01:46,880 --> 00:01:43,110

I think that's what makes it even more

38

00:01:49,429 --> 00:01:46,890

amazing that today's guest best-selling

39

00:01:52,520 --> 00:01:49,439

author in highly regarded University of

40

00:01:55,240 --> 00:01:52,530

California Irvine professor dr. Donald

41

00:01:58,940 --> 00:01:55,250

Hoffman has been able to break through

42

00:02:01,039 --> 00:01:58,950

the apathy and confusion over the

43

00:02:04,399 --> 00:02:01,049

mind-body problem evolutionary

44

00:02:06,830 --> 00:02:04,409

psychology and what we typically talk

45

00:02:09,650 --> 00:02:06,840

about as the hard problem of

46

00:02:11,490 --> 00:02:09,660

consciousness he's done that through

47

00:02:14,160 --> 00:02:11,500

what is now kind of a

48

00:02:17,820 --> 00:02:14,170

in our field a famous TED talk that's

49

00:02:21,240 --> 00:02:17,830

received over 2.7 billion views and is

50

00:02:24,810 --> 00:02:21,250

titled do we see reality as it is and

51
00:02:25,950 --> 00:02:24,820
that is quite a remarkable talk if you

52
00:02:29,970 --> 00:02:25,960
haven't heard it before

53
00:02:31,950 --> 00:02:29,980
it not only shatters the existing brain

54
00:02:34,170 --> 00:02:31,960
centric neuroscience model of

55
00:02:39,120 --> 00:02:34,180
consciousness but more importantly

56
00:02:41,460 --> 00:02:39,130
offers a new testable theory to replace

57
00:02:43,860 --> 00:02:41,470
it a theory that is spelled out in his

58
00:02:45,510 --> 00:02:43,870
excellent and best-selling book that

59
00:02:49,470 --> 00:02:45,520
we're going to talk about today

60
00:02:54,600 --> 00:02:49,480
the case against reality why evolution

61
00:02:57,330 --> 00:02:54,610
hid the truth from our eyes so done it's

62
00:02:59,580 --> 00:02:57,340
really great to have you here thanks so

63
00:03:01,980 --> 00:02:59,590

much for joining me on skeptic oh thank

64

00:03:05,250 --> 00:03:01,990

you alex thanks for inviting me well as

65

00:03:08,730 --> 00:03:05,260

I mentioned you know there's this TED

66

00:03:10,170 --> 00:03:08,740

talk that is out there that is really

67

00:03:12,300 --> 00:03:10,180

quite amazing and I think a lot of

68

00:03:15,960 --> 00:03:12,310

people have seen and there's also this

69

00:03:18,150 --> 00:03:15,970

book can you tell us just can you tell

70

00:03:20,070 --> 00:03:18,160

us anything more about the TED talk how

71

00:03:21,800 --> 00:03:20,080

that came to be and since I mentioned

72

00:03:24,600 --> 00:03:21,810

that you know most of us who have

73

00:03:27,560 --> 00:03:24,610

explored this topic or publicly talked

74

00:03:30,690 --> 00:03:27,570

about it we're just amazed and delighted

75

00:03:32,250 --> 00:03:30,700

that you've got such great traction with

76

00:03:34,320 --> 00:03:32,260

this it would you get to credit for

77

00:03:37,080 --> 00:03:34,330

you're the guy who delivered it but were

78

00:03:40,050 --> 00:03:37,090

you at all surprised that so many people

79

00:03:43,560 --> 00:03:40,060

were interested in this topic and and

80

00:03:45,240 --> 00:03:43,570

your ideas yes so getting the chance to

81

00:03:48,800 --> 00:03:45,250

give the TED talk was a big surprise to

82

00:03:50,670 --> 00:03:48,810

me I was giving a talk at the Tucson

83

00:03:53,509 --> 00:03:50,680

towards a science of consciousness

84

00:03:56,729 --> 00:03:53,519

conference so that's you know a lot of

85

00:03:59,870 --> 00:03:56,739

researchers technical people there and I

86

00:04:03,180 --> 00:03:59,880

was giving a more technical talk about

87

00:04:05,160 --> 00:04:03,190

perception and reality evolution

88

00:04:07,740 --> 00:04:05,170

arguments that we don't see reality as

89

00:04:10,470 --> 00:04:07,750

it is and then a theory of consciousness

90

00:04:13,590 --> 00:04:10,480

and and I was you know had the chance to

91

00:04:15,570 --> 00:04:13,600

be on stage with David Chalmers and Dan

92

00:04:17,729 --> 00:04:15,580

Dennett so we had some good discussions

93

00:04:23,310 --> 00:04:17,739

of the ideas that I was presenting there

94

00:04:25,020 --> 00:04:23,320

and after after that talk Chris Anderson

95

00:04:26,940 --> 00:04:25,030

who had been in the he's he's the the

96

00:04:28,320 --> 00:04:26,950

guy that runs Ted he was in the audience

97

00:04:30,540 --> 00:04:28,330

and he'd watched that whole conversation

98

00:04:32,550 --> 00:04:30,550

and so that was when he came up

99

00:04:35,279 --> 00:04:32,560

afterwards and invited me to talk about

100

00:04:37,500 --> 00:04:35,289

the first part of my conversation with

101
00:04:39,810 --> 00:04:37,510
him which was about perception and

102
00:04:42,150 --> 00:04:39,820
reality the stuff about consciousness I

103
00:04:44,670 --> 00:04:42,160
didn't really talk about in my TED talk

104
00:04:46,860 --> 00:04:44,680
because I whole mathematical theory of

105
00:04:48,600 --> 00:04:46,870
consciousness and so forth and a jet

106
00:04:51,300 --> 00:04:48,610
talk can only be 15 to 18 minutes

107
00:04:54,360 --> 00:04:51,310
maximum so you have to pick one thing

108
00:04:55,710 --> 00:04:54,370
and go after that so so Chris Anderson

109
00:04:58,320 --> 00:04:55,720
worked very well with me he was very

110
00:05:00,630 --> 00:04:58,330
very helpful in helping me shape my TED

111
00:05:03,150 --> 00:05:00,640
talk and and he really helped me get the

112
00:05:04,560 --> 00:05:03,160
ideas out there and you know he was

113
00:05:07,290 --> 00:05:04,570

interested in the stuff on consciousness

114

00:05:09,510 --> 00:05:07,300

as well but we but we couldn't you know

115

00:05:13,170 --> 00:05:09,520

do it all in one 18 minute thing right

116

00:05:15,839 --> 00:05:13,180

but I think you you lay the foundation

117

00:05:18,779 --> 00:05:15,849

for it and for anyone who's really kind

118

00:05:20,339 --> 00:05:18,789

of paid attention to the field you

119

00:05:22,980 --> 00:05:20,349

definitely see where you're going with

120

00:05:26,790 --> 00:05:22,990

the TED talk so right that was quite

121

00:05:29,610 --> 00:05:26,800

quite exciting really so I'll tell you

122

00:05:31,890 --> 00:05:29,620

what done as you know from the slides

123

00:05:35,010 --> 00:05:31,900

that I sent you in advance I like to

124

00:05:38,279 --> 00:05:35,020

play a little game here I call skeptical

125

00:05:41,760 --> 00:05:38,289

jeopardy kind of turns the tables around

126

00:05:43,950 --> 00:05:41,770

and lets you pick the topics that we

127

00:05:46,500 --> 00:05:43,960

talk about so I've shared mostly

128

00:05:49,409 --> 00:05:46,510

information behind these slides with you

129

00:05:51,420 --> 00:05:49,419

in advance so I'll go over them for

130

00:05:55,490 --> 00:05:51,430

those who are listening and then we'll

131

00:06:02,570 --> 00:05:55,500

have you pick so I have reality robots

132

00:06:07,110 --> 00:06:02,580

science the spiritual path math yogi ISM

133

00:06:10,399 --> 00:06:07,120

extended and philosophy so Don where

134

00:06:13,409 --> 00:06:10,409

would you like to go first well maybe

135

00:06:15,060 --> 00:06:13,419

we'll start with science and just my

136

00:06:16,710 --> 00:06:15,070

view about what science is and what it's

137

00:06:19,740 --> 00:06:16,720

about because that that's sort of the

138

00:06:22,560 --> 00:06:19,750

general framework that I'm working in

139

00:06:25,710 --> 00:06:22,570

and and so that might be very very

140

00:06:27,390 --> 00:06:25,720

helpful well let's go there now I'm

141

00:06:28,980 --> 00:06:27,400

taking this in maybe a slightly

142

00:06:31,770 --> 00:06:28,990

different direction but I think it ties

143

00:06:34,050 --> 00:06:31,780

back to what you're saying so you know

144

00:06:36,530 --> 00:06:34,060

one of the reoccurring questions on

145

00:06:39,860 --> 00:06:36,540

skeptic Oh has been how

146

00:06:42,530 --> 00:06:39,870

kids science science as we know it be so

147

00:06:45,050 --> 00:06:42,540

wrong about consciousness I mean we're

148

00:06:48,980 --> 00:06:45,060

talking about a situation where poll

149

00:06:53,090 --> 00:06:48,990

after poll shows that 90% of people in

150

00:06:56,030 --> 00:06:53,100

the United States worldwide completely

151
00:06:58,490 --> 00:06:56,040
disagree with this biological robot

152
00:07:00,910 --> 00:06:58,500
meaningless universe brain centered idea

153
00:07:04,160 --> 00:07:00,920
that we have about consciousness and

154
00:07:06,860 --> 00:07:04,170
maybe even more significantly if we look

155
00:07:09,200 --> 00:07:06,870
at every civilization we've known

156
00:07:11,750 --> 00:07:09,210
throughout time would just kind of

157
00:07:14,810 --> 00:07:11,760
reject out of hand kind of laughingly

158
00:07:19,240 --> 00:07:14,820
this idea that we are this narrowly

159
00:07:22,430 --> 00:07:19,250
defined brain based kind of thing so

160
00:07:24,140 --> 00:07:22,440
this seems to me like an absurd notion

161
00:07:26,330 --> 00:07:24,150
that science has come up with about

162
00:07:29,240 --> 00:07:26,340
consciousness so the real question I

163
00:07:31,550 --> 00:07:29,250

guess I had is how can we really trust

164

00:07:34,460 --> 00:07:31,560

science going forward you're a great

165

00:07:37,940 --> 00:07:34,470

advocate of science you speak eloquently

166

00:07:40,520 --> 00:07:37,950

about the scientific method about how

167

00:07:43,190 --> 00:07:40,530

beautiful science is done properly but I

168

00:07:45,260 --> 00:07:43,200

guess I'd turn it around can we really

169

00:07:49,310 --> 00:07:45,270

trust science when they've dropped the

170

00:07:52,460 --> 00:07:49,320

ball so badly already I agree that the

171

00:07:54,920 --> 00:07:52,470

current theories of consciousness among

172

00:07:57,860 --> 00:07:54,930

my scientific colleagues really do drop

173

00:08:02,150 --> 00:07:57,870

the ball they they really start with an

174

00:08:03,740 --> 00:08:02,160

unconscious objective reality of space

175

00:08:07,670 --> 00:08:03,750

time and matter and they try to boot up

176

00:08:09,320 --> 00:08:07,680

consciousness from that and and I you

177

00:08:11,000 --> 00:08:09,330

know I of course I disagree with him I

178

00:08:13,550 --> 00:08:11,010

think that that's not the right way to

179

00:08:15,050 --> 00:08:13,560

go about it and it's interesting to ask

180

00:08:17,150 --> 00:08:15,060

why they do then what's the history

181

00:08:19,340 --> 00:08:17,160

behind that and why I still have

182

00:08:22,130 --> 00:08:19,350

confidence in science so so first I

183

00:08:24,710 --> 00:08:22,140

should should say that my colleagues who

184

00:08:26,810 --> 00:08:24,720

are physicalists who assume that's based

185

00:08:29,420 --> 00:08:26,820

on a matter of fundamental then they're

186

00:08:31,850 --> 00:08:29,430

well-meaning they they're doing the best

187

00:08:33,409 --> 00:08:31,860

that they know as as scientists and

188

00:08:36,469 --> 00:08:33,419

human beings so there's no conspiracy

189

00:08:38,630 --> 00:08:36,479

there there's no it's not that at all

190

00:08:40,130 --> 00:08:38,640

it's really so here's here's part of the

191

00:08:42,620 --> 00:08:40,140

history about why they're thinking the

192

00:08:45,530 --> 00:08:42,630

way they do it has to do partly with

193

00:08:48,730 --> 00:08:45,540

Galileo and what happened between the

194

00:08:50,530 --> 00:08:48,740

church and Galileo right so Galileo

195

00:08:53,150 --> 00:08:50,540

overthrew

196

00:08:55,370 --> 00:08:53,160

centuries of church dogma that the earth

197

00:08:57,530 --> 00:08:55,380

is the center of the universe with with

198

00:08:59,900 --> 00:08:57,540

his telescope and and and is evidence

199

00:09:01,910 --> 00:08:59,910

for Copernicus the Copernican theory

200

00:09:03,410 --> 00:09:01,920

that you know the earth is not the

201
00:09:06,980 --> 00:09:03,420
center of the university or earth goes

202
00:09:10,970 --> 00:09:06,990
around the Sun and the the religious

203
00:09:13,670 --> 00:09:10,980
people didn't buy that and they put

204
00:09:15,320 --> 00:09:13,680
Galileo and in house arrests and

205
00:09:19,550 --> 00:09:15,330
threatened him with torture if he didn't

206
00:09:23,420 --> 00:09:19,560
recant and that that sort of set the

207
00:09:25,100 --> 00:09:23,430
stage for this battle between science

208
00:09:27,500 --> 00:09:25,110
and and spirituality

209
00:09:30,290 --> 00:09:27,510
way back then and and many scientists

210
00:09:31,790 --> 00:09:30,300
still have a feeling that you know if

211
00:09:33,920 --> 00:09:31,800
that's what spirituality means at all

212
00:09:36,110 --> 00:09:33,930
then I will have none of it and the

213
00:09:38,060 --> 00:09:36,120

other aspect to it is they feel like

214

00:09:39,920 --> 00:09:38,070

look we've had starting with Galileo in

215

00:09:43,040 --> 00:09:39,930

them especially with Newton and been

216

00:09:46,639 --> 00:09:43,050

following on science made great strides

217

00:09:48,740 --> 00:09:46,649

in the using the assumption that

218

00:09:50,810 --> 00:09:48,750

space-time and unconscious matter are

219

00:09:52,460 --> 00:09:50,820

the foundations and it's it's truly

220

00:09:54,740 --> 00:09:52,470

stunning what's happened in the last

221

00:09:57,710 --> 00:09:54,750

three three and a half centuries it's it

222

00:09:59,389 --> 00:09:57,720

is completely revolutionized our

223

00:10:01,340 --> 00:09:59,399

understanding of the universe the

224

00:10:03,530 --> 00:10:01,350

technology that's come out has been

225

00:10:07,040 --> 00:10:03,540

stunning and it's raised humanity's

226

00:10:10,160 --> 00:10:07,050

level of life dramatically

227

00:10:12,920 --> 00:10:10,170

so so there's this feeling among the

228

00:10:16,190 --> 00:10:12,930

scientists that look the physicalist

229

00:10:18,380 --> 00:10:16,200

framework was our way of getting away

230

00:10:20,630 --> 00:10:18,390

from the the weirdness of the spiritual

231

00:10:23,389 --> 00:10:20,640

traditions and breaking free look what

232

00:10:26,780 --> 00:10:23,399

it's look what it's done and it has been

233

00:10:29,420 --> 00:10:26,790

dramatically successful so that's part

234

00:10:32,920 --> 00:10:29,430

of where they're coming from it's a big

235

00:10:35,540 --> 00:10:32,930

part of the whole culture but now and

236

00:10:37,370 --> 00:10:35,550

the question of the origin of

237

00:10:40,340 --> 00:10:37,380

consciousness how does consciousness

238

00:10:42,889 --> 00:10:40,350

arise for and when I was a graduate

239

00:10:45,500 --> 00:10:42,899

student that was not an acceptable topic

240

00:10:48,620 --> 00:10:45,510

so I was a graduate student at MIT from

241

00:10:49,850 --> 00:10:48,630

1979 to 1983 and the artificial

242

00:10:51,440 --> 00:10:49,860

intelligence lab and what's now the

243

00:10:54,230 --> 00:10:51,450

brain and cognitive science department

244

00:10:55,790 --> 00:10:54,240

and I knew that even if I was interested

245

00:10:58,519 --> 00:10:55,800

in consciousness that was not a serious

246

00:11:00,110 --> 00:10:58,529

topic for a serious researcher but but

247

00:11:02,480 --> 00:11:00,120

about ten years later it became a

248

00:11:05,320 --> 00:11:02,490

serious topic that was

249

00:11:07,910 --> 00:11:05,330

viewed as a genuine worthwhile

250

00:11:11,510 --> 00:11:07,920

scientific endeavor largely perhaps due

251
00:11:14,420 --> 00:11:11,520
to Francis Crick who said we really need

252
00:11:17,000 --> 00:11:14,430
to take this quite seriously and when

253
00:11:19,160 --> 00:11:17,010
when Francis said that then the rest of

254
00:11:20,720 --> 00:11:19,170
the scientists said okay then if a Nobel

255
00:11:23,120 --> 00:11:20,730
Prize winner says that it's legit then

256
00:11:25,880 --> 00:11:23,130
we should jump in and what's what we're

257
00:11:27,980 --> 00:11:25,890
finding and here's where that now I I do

258
00:11:29,300 --> 00:11:27,990
have faith in science all of the

259
00:11:31,340 --> 00:11:29,310
theories that my colleagues are

260
00:11:32,870 --> 00:11:31,350
proposing are of course physical

261
00:11:35,450 --> 00:11:32,880
Asterius there's integrated information

262
00:11:37,730 --> 00:11:35,460
theory there's collapse of microtubules

263
00:11:40,010 --> 00:11:37,740

we can talk about these there's global

264

00:11:42,080 --> 00:11:40,020

work space or global neural neuronal

265

00:11:44,510 --> 00:11:42,090

work space theories there are a variety

266

00:11:48,950 --> 00:11:44,520

of these kinds of theories that are all

267

00:11:52,520 --> 00:11:48,960

physicalists but we know they don't work

268

00:11:55,940 --> 00:11:52,530

and when I go to conferences I can

269

00:11:57,590 --> 00:11:55,950

actually say to my colleagues and by the

270

00:11:59,690 --> 00:11:57,600

way there's nothing personal here I like

271

00:12:01,430 --> 00:11:59,700

these guys there and and guys in the

272

00:12:02,780 --> 00:12:01,440

generic sense they're there they're

273

00:12:06,140 --> 00:12:02,790

brilliant they're nice people

274

00:12:08,240 --> 00:12:06,150

we disagree deeply but it's not ad

275

00:12:10,400 --> 00:12:08,250

hominem it's it's it's we're all trying

276
00:12:12,620 --> 00:12:10,410
by our best lights to understand what's

277
00:12:16,190 --> 00:12:12,630
going on and so I will say - you know

278
00:12:20,300 --> 00:12:16,200
like - Stuart Hameroff so what is the

279
00:12:22,520 --> 00:12:20,310
collapse of microtubules that is the

280
00:12:24,490 --> 00:12:22,530
taste of vanilla and and you can't do

281
00:12:29,390 --> 00:12:24,500
that and so the thing about science is

282
00:12:31,160 --> 00:12:29,400
at some point because science requires

283
00:12:33,530 --> 00:12:31,170
mathematically precise theories and

284
00:12:36,230 --> 00:12:33,540
experiments at some point you can no

285
00:12:38,930 --> 00:12:36,240
longer fool yourself you realize you

286
00:12:43,130 --> 00:12:38,940
just don't have the beef you can't do it

287
00:12:46,310 --> 00:12:43,140
and so I'm I'm I'm I know these guys I'm

288
00:12:49,040 --> 00:12:46,320

friends with them and I'm telling them

289

00:12:50,540 --> 00:12:49,050

you don't have the beef and I think that

290

00:12:51,860 --> 00:12:50,550

it's in principle that you don't have

291

00:12:54,530 --> 00:12:51,870

the beef and you're going to have to do

292

00:12:57,710 --> 00:12:54,540

something different you're gonna need a

293

00:13:01,040 --> 00:12:57,720

deeper theory and so you are you are

294

00:13:03,950 --> 00:13:01,050

telling them I I agree let me play a

295

00:13:05,990 --> 00:13:03,960

clip from when I had Bernardo Kastrup

296

00:13:07,550 --> 00:13:06,000

dr. Bernardo Kastrup who you know right

297

00:13:10,880 --> 00:13:07,560

you know Bernard oh yeah we're friends

298

00:13:14,630 --> 00:13:10,890

so that maybe gets more to the point

299

00:13:15,950 --> 00:13:14,640

that I'm trying to make here these

300

00:13:18,260 --> 00:13:15,960

people are just generally

301
00:13:19,670 --> 00:13:18,270
regarded as scientists as the mainstream

302
00:13:21,830 --> 00:13:19,680
scientists we're talking about Richard

303
00:13:23,840 --> 00:13:21,840
Dawkins Lawrence Krauss neil degrasse

304
00:13:26,360 --> 00:13:23,850
tyson i mean the other best tyson

305
00:13:30,320 --> 00:13:26,370
whether we like it or not is the face of

306
00:13:34,940 --> 00:13:30,330
science for many many many americans so

307
00:13:37,970 --> 00:13:34,950
let's see what mainstream science has to

308
00:13:39,830 --> 00:13:37,980
say about consciousness here we go i'm

309
00:13:43,160 --> 00:13:39,840
going to play this clip you can see it

310
00:13:44,990 --> 00:13:43,170
there i'm gonna play it showed you but

311
00:13:47,180 --> 00:13:45,000
you can say something about the question

312
00:13:50,390 --> 00:13:47,190
which you really would wish to know the

313
00:13:50,960 --> 00:13:50,400

answer to and i mean for me it would be

314

00:14:01,130 --> 00:13:50,970

what

315

00:14:03,970 --> 00:14:01,140

that's totally baffling not that you

316

00:14:07,370 --> 00:14:03,980

asked but what i think on this is

317

00:14:11,000 --> 00:14:07,380

consciousness has kind of baffled us for

318

00:14:12,830 --> 00:14:11,010

a while okay and evidence that we

319

00:14:16,790 --> 00:14:12,840

haven't a clue about what consciousness

320

00:14:18,650 --> 00:14:16,800

is is drawn from the image from the fact

321

00:14:21,020 --> 00:14:18,660

of how many books are published on the

322

00:14:24,550 --> 00:14:21,030

topic right we're not really continuing

323

00:14:27,770 --> 00:14:24,560

to publish books not really on like

324

00:14:30,740 --> 00:14:27,780

Newtonian scissors it's done alright so

325

00:14:32,540 --> 00:14:30,750

so the fact that people keep publishing

326

00:14:33,860 --> 00:14:32,550

books on consciousness is the evidence

327

00:14:35,630 --> 00:14:33,870

we don't know anything about it because

328

00:14:37,970 --> 00:14:35,640

if we knew all about it you wouldn't

329

00:14:39,450 --> 00:14:37,980

have to keep published so so what I

330

00:14:49,560 --> 00:14:39,460

wonder

331

00:14:51,600 --> 00:14:49,570

really is no such thing as consciousness

332

00:14:53,220 --> 00:14:51,610

at all and that there's some other

333

00:14:55,350 --> 00:14:53,230

understanding of the functioning of the

334

00:14:59,710 --> 00:14:55,360

human brain that renders that question

335

00:15:10,820 --> 00:14:59,720

obsolete to that I gotta say like oh wow

336

00:15:26,329 --> 00:15:24,110

okay what is so funny about that of

337

00:15:30,319 --> 00:15:26,339

course that last place was Bill Nye the

338

00:15:37,670 --> 00:15:30,329

Science Guy what he was astonished and

339

00:15:40,220 --> 00:15:37,680

Bill was astonished I mean the idea that

340

00:15:43,370 --> 00:15:40,230

maybe consciousness is not there it's

341

00:15:46,730 --> 00:15:43,380

probably the weirdest stupidest idea

342

00:15:48,980 --> 00:15:46,740

ever conceived by a human thought I mean

343

00:15:51,740 --> 00:15:48,990

where does thought take place it takes

344

00:15:55,639 --> 00:15:51,750

place in consciousness so here we have

345

00:15:57,829 --> 00:15:55,649

consciousness speculating about the

346

00:16:00,860 --> 00:15:57,839

possibility that consciousness does not

347

00:16:03,430 --> 00:16:00,870

exist and it may not be there I mean the

348

00:16:05,750 --> 00:16:03,440

very thought is that in your face

349

00:16:07,190 --> 00:16:05,760

contradiction and the fact that

350

00:16:09,139 --> 00:16:07,200

something like this is not only

351

00:16:12,740 --> 00:16:09,149

seriously entertained but even

352

00:16:17,710 --> 00:16:12,750

verbalized by a person with the public

353

00:16:22,819 --> 00:16:17,720

exposure of the gentleman we just saw is

354

00:16:28,760 --> 00:16:22,829

a worrying sign of cultural sickness a

355

00:16:32,269 --> 00:16:28,770

very serious one a worrying sign of

356

00:16:35,510 --> 00:16:32,279

cultural sickness I guess that's closer

357

00:16:38,449 --> 00:16:35,520

to kind of my position regarding science

358

00:16:42,170 --> 00:16:38,459

so let's loop back around it and hit

359

00:16:44,540 --> 00:16:42,180

that again what do you think well yeah I

360

00:16:46,430 --> 00:16:44,550

take a slightly different view I'm more

361

00:16:48,949 --> 00:16:46,440

optimistic about I mean I know these

362

00:16:52,430 --> 00:16:48,959

guys they're my friends and what what I

363

00:16:55,880 --> 00:16:52,440

see is that their the way their thinking

364

00:16:57,769 --> 00:16:55,890

is physicalism the idea that space time

365

00:17:01,040 --> 00:16:57,779

and matter are fundamental has worked

366

00:17:04,040 --> 00:17:01,050

for so many other problems that we've

367

00:17:07,100 --> 00:17:04,050

got to try our best to make it work on

368

00:17:10,069 --> 00:17:07,110

this problem so it's it's not like that

369

00:17:13,790 --> 00:17:10,079

they're degenerate or anything like that

370

00:17:14,750 --> 00:17:13,800

it's rather look this hammer has hit a

371

00:17:16,490 --> 00:17:14,760

lot of other nails

372

00:17:18,470 --> 00:17:16,500

hopefully this hammer will hit the nail

373

00:17:21,020 --> 00:17:18,480

of consciousness we need to keep trying

374

00:17:23,850 --> 00:17:21,030

you know I'm a gadfly the one thing I

375

00:17:25,260 --> 00:17:23,860

guess I interject there is it the same

376

00:17:30,570 --> 00:17:25,270

you know you said you're in the AI lab

377

00:17:33,270 --> 00:17:30,580

at MIT and I was 73 right 79 to 83 79-83

378

00:17:35,970 --> 00:17:33,280

great I was studying hey I as well at

379

00:17:40,440 --> 00:17:35,980

that time ph.d program at the university

380

00:17:43,320 --> 00:17:40,450

or ism at that same time and Stanford

381

00:17:45,510 --> 00:17:43,330

Research Institute helped put up in

382

00:17:48,180 --> 00:17:45,520

Russell Targ we're way past this right

383

00:17:50,720 --> 00:17:48,190

they were doing experiments with remote

384

00:17:53,130 --> 00:17:50,730

viewing the presuppose that the silly

385

00:17:55,410 --> 00:17:53,140

physicalism thing was just they knew

386

00:17:57,299 --> 00:17:55,420

that was blown away because they'd

387

00:18:00,390 --> 00:17:57,309

already proven it over and over again in

388

00:18:02,610 --> 00:18:00,400

the lab so we have this kind of hidden

389

00:18:05,549 --> 00:18:02,620

college thing going on here as well

390

00:18:08,370 --> 00:18:05,559

where there's some people in the know

391

00:18:10,919 --> 00:18:08,380

who have moved way past this long ago

392

00:18:13,320 --> 00:18:10,929

and they seem to really be closer to the

393

00:18:15,900 --> 00:18:13,330

folks who are in power and then we have

394

00:18:17,669 --> 00:18:15,910

kind of Neil deGrasse Tyson playing this

395

00:18:19,289 --> 00:18:17,679

little kind of mean Boston the woods

396

00:18:22,470 --> 00:18:19,299

kind of thing and we can all laugh at it

397

00:18:25,070 --> 00:18:22,480

but are they really not worthy actions

398

00:18:28,890 --> 00:18:25,080

at that's another question I guess idea

399

00:18:30,930 --> 00:18:28,900

right well I think that that's the way

400

00:18:35,520 --> 00:18:30,940

revolutions in science happen you

401
00:18:37,140 --> 00:18:35,530
usually have a few people who are doing

402
00:18:40,400 --> 00:18:37,150
something different than the mainstream

403
00:18:42,840 --> 00:18:40,410
and it it takes a long time for

404
00:18:44,580 --> 00:18:42,850
scientists we're a conservative group

405
00:18:47,070 --> 00:18:44,590
we're very very conservative in the

406
00:18:49,380 --> 00:18:47,080
sense that you know if you're going to

407
00:18:51,690 --> 00:18:49,390
rattle a deep theory you're gonna have

408
00:18:55,320 --> 00:18:51,700
to really rattle it hard before we we

409
00:18:57,390 --> 00:18:55,330
take it seriously so so yeah a few

410
00:18:59,640 --> 00:18:57,400
people here they're doing some you know

411
00:19:01,380 --> 00:18:59,650
finding some psy phenomenon so forth

412
00:19:04,770 --> 00:19:01,390
isn't gonna be enough to rattle that

413
00:19:08,070 --> 00:19:04,780

that cage partly because there's no

414

00:19:11,039 --> 00:19:08,080

theory now if for example of help put

415

00:19:12,990 --> 00:19:11,049

Hough and his team had proposed a

416

00:19:15,480 --> 00:19:13,000

mathematically precise theory where they

417

00:19:17,039 --> 00:19:15,490

say exactly what the parameters of

418

00:19:18,090 --> 00:19:17,049

remote viewing would be when it would be

419

00:19:20,280 --> 00:19:18,100

when it would happen

420

00:19:23,340 --> 00:19:20,290

or like precognition the work that Daryl

421

00:19:25,200 --> 00:19:23,350

BEM did if if they had a mathematical

422

00:19:27,659 --> 00:19:25,210

theory that said here's why it'll be a

423

00:19:32,310 --> 00:19:27,669

400 millisecond precognition signal not

424

00:19:34,440 --> 00:19:32,320

4,000 or 400,000 milliseconds then that

425

00:19:36,840 --> 00:19:34,450

would really have shaken people up in

426

00:19:37,940 --> 00:19:36,850

the in the scientific community so so

427

00:19:42,870 --> 00:19:37,950

there's

428

00:19:45,120 --> 00:19:42,880

do to get the attention of these people

429

00:19:47,820 --> 00:19:45,130

in the sciences it's not just the

430

00:19:52,440 --> 00:19:47,830

experiments you need a predictive theory

431

00:19:54,510 --> 00:19:52,450

so so for example if Einstein in 1905

432

00:19:57,210 --> 00:19:54,520

had just said you know I think Newton

433

00:20:01,110 --> 00:19:57,220

was wrong and you know I think the

434

00:20:03,330 --> 00:20:01,120

perihelion of mercury moving around is

435

00:20:06,000 --> 00:20:03,340

is evidence of that we would never have

436

00:20:07,710 --> 00:20:06,010

heard of him but what he did instead you

437

00:20:09,630 --> 00:20:07,720

know in 1905 and then in this general

438

00:20:11,340 --> 00:20:09,640

theory of relativity he said here's my

439

00:20:13,650 --> 00:20:11,350

equation here's exactly I'm gonna

440

00:20:16,919 --> 00:20:13,660

predict exactly how much light will Bend

441

00:20:19,980 --> 00:20:16,929

and precisely where mercury will be and

442

00:20:22,289 --> 00:20:19,990

we'll see what you know and we'll test

443

00:20:24,659 --> 00:20:22,299

that against Newton and it was when the

444

00:20:26,789 --> 00:20:24,669

experiments confirmed the precise

445

00:20:28,740 --> 00:20:26,799

mathematical predictions of his equation

446

00:20:31,680 --> 00:20:28,750

of general activity that's when he burst

447

00:20:33,450 --> 00:20:31,690

on the scene until then he was nobody to

448

00:20:36,510 --> 00:20:33,460

the world and that's what we're going to

449

00:20:38,070 --> 00:20:36,520

have to have the the scientists this is

450

00:20:40,110 --> 00:20:38,080

just the way the game is played if you

451
00:20:42,630 --> 00:20:40,120
don't have a mathematical theory you're

452
00:20:45,360 --> 00:20:42,640
not even in the game experiments by

453
00:20:46,860 --> 00:20:45,370
themselves are not enough and so that's

454
00:20:48,419 --> 00:20:46,870
what I'm working on right now is trying

455
00:20:50,130 --> 00:20:48,429
to get a mathematical theory of

456
00:20:53,280 --> 00:20:50,140
consciousness that's completely rigorous

457
00:20:55,530 --> 00:20:53,290
and try to make new predictions in space

458
00:20:59,490 --> 00:20:55,540
and time in what I call our interface um

459
00:21:02,159 --> 00:20:59,500
that they cannot make what once we do

460
00:21:04,440 --> 00:21:02,169
that watch them take us very very

461
00:21:06,030 --> 00:21:04,450
seriously so what we have to understand

462
00:21:08,669 --> 00:21:06,040
is how the game of science is played

463
00:21:10,500 --> 00:21:08,679

it's not just experiments it's really

464

00:21:13,680 --> 00:21:10,510

precise mathematically precise theories

465

00:21:16,020 --> 00:21:13,690

that make stunning new predictions the

466

00:21:17,850 --> 00:21:16,030

last one will get their attention so so

467

00:21:20,060 --> 00:21:17,860

again Mike these are these all these

468

00:21:21,960 --> 00:21:20,070

people are my friends and they're sharp

469

00:21:25,470 --> 00:21:21,970

and they're waiting for us to come up

470

00:21:28,110 --> 00:21:25,480

with a theory maybe maybe we'll put a

471

00:21:30,870 --> 00:21:28,120

pin in that as they say and see if we

472

00:21:31,770 --> 00:21:30,880

can come back to that uh where should we

473

00:21:35,010 --> 00:21:31,780

go next

474

00:21:37,110 --> 00:21:35,020

on these categories actually let me pick

475

00:21:41,310 --> 00:21:37,120

one because you're generous to kind of

476

00:21:43,919 --> 00:21:41,320

skip past just really talking about your

477

00:21:46,440 --> 00:21:43,929

book your amazing book which does lay

478

00:21:49,830 --> 00:21:46,450

out as you just said this theory of

479

00:21:51,420 --> 00:21:49,840

consciousness and how we may get to the

480

00:21:54,870 --> 00:21:51,430

math behind it

481

00:21:58,640 --> 00:21:54,880

the book is the case against reality why

482

00:22:03,300 --> 00:21:58,650

evolution hid the truth from our eyes

483

00:22:07,650 --> 00:22:03,310

tell folks in a nutshell what the theory

484

00:22:11,070 --> 00:22:07,660

is about so what I do in this theory is

485

00:22:13,280 --> 00:22:11,080

I assume for sake of argument that

486

00:22:15,390 --> 00:22:13,290

evolution by natural selection is true

487

00:22:20,310 --> 00:22:15,400

because all of my colleagues believe

488

00:22:22,440 --> 00:22:20,320

that and I asked the question if our

489

00:22:26,510 --> 00:22:22,450

sense is evolved and were shaped by

490

00:22:31,380 --> 00:22:26,520

natural selection would we be shaped by

491

00:22:34,020 --> 00:22:31,390

evolution to see truths about objective

492

00:22:35,730 --> 00:22:34,030

reality now no one thinks we see all the

493

00:22:37,740 --> 00:22:35,740

truth about objective reality but the

494

00:22:40,080 --> 00:22:37,750

question is would we be shaped to see

495

00:22:42,900 --> 00:22:40,090

some truths like our perceptions of

496

00:22:46,400 --> 00:22:42,910

space and time of an apple of the moon

497

00:22:48,720 --> 00:22:46,410

of a table and chair are we truly seeing

498

00:22:50,880 --> 00:22:48,730

something about objective reality a

499

00:22:52,230 --> 00:22:50,890

reality that would exist even if no one

500

00:22:54,780 --> 00:22:52,240

were there to look at it

501
00:22:57,150 --> 00:22:54,790
so does that Apple exist and have that

502
00:22:58,770 --> 00:22:57,160
red color on that Apple shape even if

503
00:23:01,260 --> 00:22:58,780
there were no creatures to perceive it

504
00:23:05,010 --> 00:23:01,270
so most of my colleagues would say

505
00:23:07,080 --> 00:23:05,020
absolutely space-time exists the Apple

506
00:23:09,570 --> 00:23:07,090
exists the moon exists and it has

507
00:23:12,510 --> 00:23:09,580
roughly the properties that we see even

508
00:23:14,940 --> 00:23:12,520
if no one looks at it and they give an

509
00:23:17,390 --> 00:23:14,950
evolutionary argument they say the

510
00:23:21,420 --> 00:23:17,400
reason we can believe that is because

511
00:23:25,910 --> 00:23:21,430
organisms that see reality as it is have

512
00:23:28,290 --> 00:23:25,920
a competitive advantage in the the big

513
00:23:30,120 --> 00:23:28,300

processes of life feeding fighting

514

00:23:31,440 --> 00:23:30,130

fleeing and mating they have a

515

00:23:33,870 --> 00:23:31,450

competitive advantage over those who

516

00:23:35,640 --> 00:23:33,880

don't see reality as it is so those who

517

00:23:37,920 --> 00:23:35,650

see more accurately are more likely to

518

00:23:39,870 --> 00:23:37,930

pass on their genes and so we can be

519

00:23:42,720 --> 00:23:39,880

confident that we see reality as it is

520

00:23:45,150 --> 00:23:42,730

and this is by the way one reason why

521

00:23:47,160 --> 00:23:45,160

physicalism is a dominant view what we

522

00:23:48,720 --> 00:23:47,170

see is a space and time and physical

523

00:23:49,590 --> 00:23:48,730

universe that looks like it's you know

524

00:23:51,600 --> 00:23:49,600

unconscious

525

00:23:53,010 --> 00:23:51,610

you know rocks don't look conscious

526

00:23:54,500 --> 00:23:53,020

planets don't look conscious and so

527

00:23:59,760 --> 00:23:54,510

forth space doesn't look conscious and

528

00:24:03,180 --> 00:23:59,770

so I decided to tackle that question are

529

00:24:05,040 --> 00:24:03,190

we mistaken when we think that evolution

530

00:24:06,270 --> 00:24:05,050

shaped just to see the truth

531

00:24:07,860 --> 00:24:06,280

and what I was able to show in

532

00:24:09,870 --> 00:24:07,870

simulations with with my graduate

533

00:24:12,530 --> 00:24:09,880

students Justin mark and Brian Marian

534

00:24:15,000 --> 00:24:12,540

and then with my my mathematical

535

00:24:18,380 --> 00:24:15,010

professor colleague and friend Chetan

536

00:24:22,320 --> 00:24:18,390

Prakash we were able to show that

537

00:24:24,810 --> 00:24:22,330

evolution does not favor creatures that

538

00:24:28,110 --> 00:24:24,820

see reality as it is it drives them to

539

00:24:29,700 --> 00:24:28,120

extinction and that's that's important

540

00:24:30,930 --> 00:24:29,710

for this question about the physical

541

00:24:33,540 --> 00:24:30,940

world and consciousness for the

542

00:24:35,820 --> 00:24:33,550

following reason what it what it means

543

00:24:38,820 --> 00:24:35,830

is that our perceptions of space and

544

00:24:40,080 --> 00:24:38,830

time and physical objects is not an

545

00:24:42,810 --> 00:24:40,090

insight into the truth

546

00:24:45,150 --> 00:24:42,820

it's just our user interface its

547

00:24:47,370 --> 00:24:45,160

evolution has given us like a desktop

548

00:24:50,490 --> 00:24:47,380

interface that's there to keep us alive

549

00:24:52,770 --> 00:24:50,500

and to hide hide the truth I like to

550

00:24:54,480 --> 00:24:52,780

give the example of like the desktop on

551
00:24:58,020 --> 00:24:54,490
your computer right if you're if you're

552
00:25:00,780 --> 00:24:58,030
writing a book and the icon for your

553
00:25:01,890 --> 00:25:00,790
book is you know green and rectangular

554
00:25:03,000 --> 00:25:01,900
in the middle of your screen does it

555
00:25:05,160 --> 00:25:03,010
mean that the book itself in your

556
00:25:06,870 --> 00:25:05,170
computer is green and rectangular in the

557
00:25:08,460 --> 00:25:06,880
middle of the computer of course not

558
00:25:10,230 --> 00:25:08,470
anybody who thought that is missing the

559
00:25:11,610 --> 00:25:10,240
whole point of the interface it's not

560
00:25:13,260 --> 00:25:11,620
there to show you the truth which in

561
00:25:15,990 --> 00:25:13,270
that metaphor is the diodes and

562
00:25:17,430 --> 00:25:16,000
resistors and voltages and software it's

563
00:25:19,530 --> 00:25:17,440

there to hide that the interface is to

564

00:25:22,080 --> 00:25:19,540

hide the truth to hide all that

565

00:25:24,420 --> 00:25:22,090

complexity and give you simple eye candy

566

00:25:27,290 --> 00:25:24,430

that lets you control the reality even

567

00:25:30,510 --> 00:25:27,300

though you're ignorant of it and so so

568

00:25:32,970 --> 00:25:30,520

but that's what evolution has done it

569

00:25:35,490 --> 00:25:32,980

has given us an interface of virtual

570

00:25:37,800 --> 00:25:35,500

reality that hides whatever the

571

00:25:40,980 --> 00:25:37,810

objective reality might be and gives us

572

00:25:42,690 --> 00:25:40,990

just simple species-specific bells and

573

00:25:44,850 --> 00:25:42,700

whistles and you know eye candy that we

574

00:25:47,700 --> 00:25:44,860

can use to interact with that reality

575

00:25:48,900 --> 00:25:47,710

and the reason that's important for my

576

00:25:51,240 --> 00:25:48,910

interaction with my colleagues on this

577

00:25:52,680 --> 00:25:51,250

is that they think that well what we see

578

00:25:55,680 --> 00:25:52,690

space time and matter we're seeing the

579

00:25:56,760 --> 00:25:55,690

truth I'm saying no no we're we create

580

00:25:59,190 --> 00:25:56,770

space time and matter

581

00:26:01,470 --> 00:25:59,200

that's not fundamental that's something

582

00:26:03,090 --> 00:26:01,480

that our consciousness creates space

583

00:26:06,420 --> 00:26:03,100

time and matter are the products of our

584

00:26:09,200 --> 00:26:06,430

consciousness not vice-versa let's move

585

00:26:12,630 --> 00:26:09,210

on where would you like to go next

586

00:26:14,730 --> 00:26:12,640

well let's see it's harder from here I

587

00:26:18,600 --> 00:26:14,740

got but there's still jeopardy in there

588

00:26:19,180 --> 00:26:18,610

too no there is okay well so maybe we

589

00:26:22,330 --> 00:26:19,190

could talk

590

00:26:22,900 --> 00:26:22,340

good about the math side of things okay

591

00:26:25,390 --> 00:26:22,910

great

592

00:26:27,340 --> 00:26:25,400

one of the things that we have on

593

00:26:29,470 --> 00:26:27,350

skeptiko that I really appreciate is we

594

00:26:31,180 --> 00:26:29,480

have an online forum where people can

595

00:26:32,590 --> 00:26:31,190

get on and talk about topics after we

596

00:26:34,240 --> 00:26:32,600

talk about them on the show and I really

597

00:26:37,210 --> 00:26:34,250

appreciate I've learned so much from

598

00:26:38,470 --> 00:26:37,220

people who listen to the show and as I

599

00:26:40,720 --> 00:26:38,480

was are preparing for this I remember

600

00:26:42,280 --> 00:26:40,730

one thing particularly that really one

601
00:26:45,100 --> 00:26:42,290
instance when I learned a lot we're

602
00:26:48,100 --> 00:26:45,110
talking about simulation theory and the

603
00:26:52,360 --> 00:26:48,110
idea that maybe our reality since we're

604
00:26:58,930 --> 00:26:52,370
talking about reality is an matrix kinda

605
00:27:01,660 --> 00:26:58,940
AI driven version of virtual reality and

606
00:27:06,400 --> 00:27:01,670
I thought one very succinct comment from

607
00:27:08,380 --> 00:27:06,410
the forum was simulation of what because

608
00:27:11,050 --> 00:27:08,390
those of us who are drawn to the

609
00:27:12,700 --> 00:27:11,060
simulation theory accept this idea that

610
00:27:15,100 --> 00:27:12,710
there's a simulation never ask a

611
00:27:17,770 --> 00:27:15,110
simulation of what who is the designer

612
00:27:19,540 --> 00:27:17,780
who is the Grand Master who's simulated

613
00:27:22,150 --> 00:27:19,550

Nedim who's simulating their reality and

614

00:27:25,290 --> 00:27:22,160

it's Turtles all the way down if you

615

00:27:29,800 --> 00:27:25,300

know anything so I wonder the same thing

616

00:27:32,980 --> 00:27:29,810

about math I appreciate that what you

617

00:27:35,470 --> 00:27:32,990

said earlier about science at its core

618

00:27:39,460 --> 00:27:35,480

is driven by models that are best

619

00:27:42,340 --> 00:27:39,470

expressed as mathematical equations but

620

00:27:44,530 --> 00:27:42,350

those are abstractions of reality at the

621

00:27:46,720 --> 00:27:44,540

same time and we appreciate that but I

622

00:27:51,550 --> 00:27:46,730

wonder if we kind of gloss over the fact

623

00:27:55,600 --> 00:27:51,560

that the model is a model of what what

624

00:27:58,840 --> 00:27:55,610

is the underlying reality of that model

625

00:28:00,910 --> 00:27:58,850

and before I even let you jump in there

626

00:28:03,700 --> 00:28:00,920

I'd kind of point out our history here

627

00:28:07,660 --> 00:28:03,710

which we know the history of quantum

628

00:28:08,080 --> 00:28:07,670

physics if you will and a hundred years

629

00:28:10,450 --> 00:28:08,090

ago

630

00:28:13,480 --> 00:28:10,460

all the great quantum physicists who

631

00:28:16,570 --> 00:28:13,490

basically reached this same point and

632

00:28:19,270 --> 00:28:16,580

said what Max Planck is famous for

633

00:28:23,470 --> 00:28:19,280

saying I regard consciousness as

634

00:28:27,120 --> 00:28:23,480

fundamental which is very close to what

635

00:28:30,040 --> 00:28:27,130

you're saying as well but then as you

636

00:28:31,850 --> 00:28:30,050

basically recounted in the segment we

637

00:28:34,700 --> 00:28:31,860

did about science

638

00:28:36,200 --> 00:28:34,710

what we've done is just an end run on

639

00:28:37,760 --> 00:28:36,210

that which we can understand and

640

00:28:40,460 --> 00:28:37,770

appreciate that the shut up and

641

00:28:43,340 --> 00:28:40,470

calculate forget about the philosophical

642

00:28:46,930 --> 00:28:43,350

implications of that let's just see what

643

00:28:49,760 --> 00:28:46,940

we can crank out in terms of dazzling

644

00:28:54,440 --> 00:28:49,770

technology that we can build off of that

645

00:28:58,340 --> 00:28:54,450

and I guess that's my concern about the

646

00:29:00,650 --> 00:28:58,350

modeling that you're doing and where

647

00:29:04,430 --> 00:29:00,660

we're going with that and are we just

648

00:29:06,530 --> 00:29:04,440

preparing for another version of shut up

649

00:29:10,070 --> 00:29:06,540

and calculate where we don't really

650

00:29:14,210 --> 00:29:10,080

address the underlying implications of

651
00:29:16,220 --> 00:29:14,220
that reality shattering new reality so

652
00:29:18,590 --> 00:29:16,230
any thoughts on any of that

653
00:29:21,110 --> 00:29:18,600
yes well first I certainly agree with

654
00:29:22,520 --> 00:29:21,120
mocks plunk that consciousness is

655
00:29:25,400 --> 00:29:22,530
fundamental and matter is derivative

656
00:29:28,070 --> 00:29:25,410
absolutely it's it's well spoken and and

657
00:29:30,070 --> 00:29:28,080
other of the great quantum theorists

658
00:29:32,510 --> 00:29:30,080
that the foundation of it thought that

659
00:29:34,010 --> 00:29:32,520
big nura think thought that in von

660
00:29:38,270 --> 00:29:34,020
Neumann thought the consciousness was

661
00:29:41,240 --> 00:29:38,280
was important and fundamental many of

662
00:29:43,039 --> 00:29:41,250
the early quantum theorists were very

663
00:29:44,240 --> 00:29:43,049

interested in the broader implications

664

00:29:46,669 --> 00:29:44,250

of the theory they it seemed to be

665

00:29:48,020 --> 00:29:46,679

challenging our thoughts about reality

666

00:29:51,560 --> 00:29:48,030

and they wanted to really explore that

667

00:29:53,270 --> 00:29:51,570

and then World War two came along and

668

00:29:54,710 --> 00:29:53,280

that really sidetracked everything

669

00:29:58,130 --> 00:29:54,720

because what happened was they needed

670

00:30:00,620 --> 00:29:58,140

all these quantum physicists to help

671

00:30:03,919 --> 00:30:00,630

them with technology to win the war and

672

00:30:07,280 --> 00:30:03,929

it and they did they built the atomic

673

00:30:09,680 --> 00:30:07,290

bomb it was revolutionary and all of a

674

00:30:12,320 --> 00:30:09,690

sudden there was big big money and so

675

00:30:15,080 --> 00:30:12,330

that that changed the whole framework of

676

00:30:17,600 --> 00:30:15,090

physics it became a part of the

677

00:30:19,610 --> 00:30:17,610

military-industrial complex and the shut

678

00:30:22,580 --> 00:30:19,620

up and calculate attitude came out of

679

00:30:24,950 --> 00:30:22,590

World War two and the big money so so

680

00:30:26,390 --> 00:30:24,960

that was a big a big tragedy World War

681

00:30:29,200 --> 00:30:26,400

two is a big tragedy in a number of ways

682

00:30:31,370 --> 00:30:29,210

it stopped this deep philosophical

683

00:30:33,080 --> 00:30:31,380

inquiry into what the mathematics was

684

00:30:35,030 --> 00:30:33,090

telling us and it got us into this more

685

00:30:37,970 --> 00:30:35,040

military industrial complex kind of

686

00:30:39,530 --> 00:30:37,980

attitude and we're now slowly wrestling

687

00:30:41,570 --> 00:30:39,540

our way out of that that attitude and

688

00:30:43,610 --> 00:30:41,580

going back to trying to ask the deeper

689

00:30:45,560 --> 00:30:43,620

questions but the question you ask is a

690

00:30:52,490 --> 00:30:45,570

good one what what is the math of

691

00:30:55,430 --> 00:30:52,500

about and one reason why scientists love

692

00:30:57,200 --> 00:30:55,440

mathematics is it forces you to be

693

00:30:59,960 --> 00:30:57,210

absolutely precise in what you predict

694

00:31:02,690 --> 00:30:59,970

you can't hide it's more much much

695

00:31:04,640 --> 00:31:02,700

harder to hide and you you know what

696

00:31:07,220 --> 00:31:04,650

Einstein wrote down his equations if he

697

00:31:10,880 --> 00:31:07,230

was off by 5% or 10% on predictions

698

00:31:12,980 --> 00:31:10,890

about where mercury is then that's gonna

699

00:31:17,030 --> 00:31:12,990

be a problem for him and so you you you

700

00:31:18,560 --> 00:31:17,040

you do mathematics in part to be precise

701
00:31:21,470 --> 00:31:18,570
you can find out precisely where you're

702
00:31:23,720 --> 00:31:21,480
wrong but also because once you write

703
00:31:25,430 --> 00:31:23,730
down a mathematical theory the theory

704
00:31:27,380 --> 00:31:25,440
becomes smarter than the person who

705
00:31:30,320 --> 00:31:27,390
wrote it down like when Einstein wrote

706
00:31:32,510 --> 00:31:30,330
down the equation of generality he had

707
00:31:35,150 --> 00:31:32,520
no idea that it was going to predict

708
00:31:37,100 --> 00:31:35,160
black holes he didn't know that but the

709
00:31:38,930 --> 00:31:37,110
equations do predict black holes and he

710
00:31:41,390 --> 00:31:38,940
didn't like it he didn't believe in them

711
00:31:43,160 --> 00:31:41,400
but he was wrong and the theory had a

712
00:31:45,200 --> 00:31:43,170
deeper in some sense a deeper insight

713
00:31:47,960 --> 00:31:45,210

into reality than the person who wrote

714

00:31:50,480 --> 00:31:47,970

it down so one reason why scientists do

715

00:31:53,570 --> 00:31:50,490

mathematical theories is because they

716

00:31:55,880 --> 00:31:53,580

surprised us they become smarter than us

717

00:31:59,360 --> 00:31:55,890

and eventually we become the students of

718

00:32:00,770 --> 00:31:59,370

the theory now of course Einstein's

719

00:32:03,620 --> 00:32:00,780

general relativity is not the final

720

00:32:05,870 --> 00:32:03,630

answer his equation we know there has to

721

00:32:08,660 --> 00:32:05,880

be something deeper but we know that

722

00:32:11,180 --> 00:32:08,670

because his equation is so precise we

723

00:32:14,270 --> 00:32:11,190

begin to get insights into precisely

724

00:32:17,000 --> 00:32:14,280

where it fails and that's the power of

725

00:32:19,820 --> 00:32:17,010

the mathematics it tells you it's so

726

00:32:21,550 --> 00:32:19,830

precise that it tells you when the

727

00:32:23,810 --> 00:32:21,560

mathematics stops and fails so

728

00:32:26,570 --> 00:32:23,820

Einstein's equations have a singularity

729

00:32:28,630 --> 00:32:26,580

at a black hole when you have it with an

730

00:32:31,130 --> 00:32:28,640

infinity in your equations that means

731

00:32:33,500 --> 00:32:31,140

you've got an error that's it that's a

732

00:32:35,570 --> 00:32:33,510

big big error signal so we know that

733

00:32:38,360 --> 00:32:35,580

general relativity can't be the final

734

00:32:40,250 --> 00:32:38,370

answer and it tells it to us itself by

735

00:32:42,440 --> 00:32:40,260

saying I get the answer infinity here

736

00:32:47,360 --> 00:32:42,450

there's something wrong with the theory

737

00:32:50,720 --> 00:32:47,370

so but hold on because sure again it is

738

00:32:54,120 --> 00:32:50,730

still an abstraction so it's a great

739

00:32:57,390 --> 00:32:54,130

tool and you do an awesome job of

740

00:33:01,350 --> 00:32:57,400

quickly describing how beautiful that

741

00:33:04,680 --> 00:33:01,360

tool is but we don't want to slip into

742

00:33:07,799 --> 00:33:04,690

the mode of starting to believe that the

743

00:33:10,320 --> 00:33:07,809

tool is the ultimate reality right

744

00:33:12,750 --> 00:33:10,330

because I think that is fundamental that

745

00:33:15,900 --> 00:33:12,760

is the philosophical part and maybe

746

00:33:19,830 --> 00:33:15,910

we'll even jump to the philosophical

747

00:33:24,210 --> 00:33:19,840

slide in this because philosophy in my

748

00:33:28,980 --> 00:33:24,220

view it begins where science cannot go

749

00:33:31,080 --> 00:33:28,990

so you know the philosophical quote that

750

00:33:35,399 --> 00:33:31,090

I popped up on the screen is one of my

751
00:33:37,970 --> 00:33:35,409
favorite ones from Albert Camus there's

752
00:33:41,940 --> 00:33:37,980
only one true serious philosophical

753
00:33:44,669 --> 00:33:41,950
problem and that is suicide and the

754
00:33:47,640 --> 00:33:44,679
reason I like it is because it's so

755
00:33:50,820 --> 00:33:47,650
stark in drawing our attention to the

756
00:33:54,539 --> 00:33:50,830
fact that the true deepest questions

757
00:33:57,960 --> 00:33:54,549
that we can ask about who are we and why

758
00:34:02,220 --> 00:33:57,970
are we here always get down to a

759
00:34:05,190 --> 00:34:02,230
question of meaning and models can never

760
00:34:07,409 --> 00:34:05,200
answer the meaning question so it's fun

761
00:34:09,599 --> 00:34:07,419
to play with the models and explore the

762
00:34:12,149 --> 00:34:09,609
limits of the models the equations like

763
00:34:16,109 --> 00:34:12,159

you're talking about but I do think

764

00:34:19,470 --> 00:34:16,119

there is peril in avoiding the deeper

765

00:34:21,720 --> 00:34:19,480

philosophical questions and this one in

766

00:34:24,300 --> 00:34:21,730

particular you have any thoughts on how

767

00:34:26,300 --> 00:34:24,310

we get to the meaning questions because

768

00:34:29,580 --> 00:34:26,310

that's what I think people really live

769

00:34:31,050 --> 00:34:29,590

right your point is well-taken so for

770

00:34:34,290 --> 00:34:31,060

example if I'm using a mathematical

771

00:34:35,609 --> 00:34:34,300

model to simulate the weather and I

772

00:34:37,680 --> 00:34:35,619

bring you into the computer room where

773

00:34:39,149 --> 00:34:37,690

I'm running this simulation you don't

774

00:34:42,030 --> 00:34:39,159

need an umbrella you're not going to get

775

00:34:44,790 --> 00:34:42,040

wet the math isn't the territory and the

776

00:34:47,010 --> 00:34:44,800

math will never create the phenomena

777

00:34:49,230 --> 00:34:47,020

that that you're modeling so the math is

778

00:34:51,389 --> 00:34:49,240

just a model it's not that it's not the

779

00:34:52,740 --> 00:34:51,399

reality and so we shouldn't make that

780

00:34:56,280 --> 00:34:52,750

mistake I absolutely agree with you on

781

00:34:58,890 --> 00:34:56,290

that point so this comes up with the

782

00:35:00,930 --> 00:34:58,900

spirituality thing as well so someone at

783

00:35:03,060 --> 00:35:00,940

one point when I was giving my my

784

00:35:07,200 --> 00:35:03,070

mathematical theory of consciousness at

785

00:35:07,950 --> 00:35:07,210

the end said quoted a famous spiritual

786

00:35:11,310 --> 00:35:07,960

teacher

787

00:35:16,410 --> 00:35:11,320

you his name will come to me he said the

788

00:35:22,109 --> 00:35:16,420

the language of God is silence all else

789

00:35:23,670 --> 00:35:22,119

is poor translation great and and of

790

00:35:25,800 --> 00:35:23,680

course the point that this person was

791

00:35:28,680 --> 00:35:25,810

making was that my mathematical model of

792

00:35:30,390 --> 00:35:28,690

consciousness is just math and you know

793

00:35:32,730 --> 00:35:30,400

the reality transcends anything that

794

00:35:34,829 --> 00:35:32,740

math could possibly discuss and and and

795

00:35:38,190 --> 00:35:34,839

I think that's this point well taken

796

00:35:40,680 --> 00:35:38,200

so my attitude is is this um I think

797

00:35:42,960 --> 00:35:40,690

pointed point is well-taken if someone

798

00:35:45,270 --> 00:35:42,970

says to me the language of God is

799

00:35:49,290 --> 00:35:45,280

silence all else's poor translation and

800

00:35:52,170 --> 00:35:49,300

then being consistent says nothing else

801
00:35:54,270 --> 00:35:52,180
I would actually very much respect that

802
00:35:58,230 --> 00:35:54,280
I'm not being facetious I would if

803
00:35:59,640 --> 00:35:58,240
someone said look the reality transcends

804
00:36:03,390 --> 00:35:59,650
math and words

805
00:36:05,760 --> 00:36:03,400
end of story and you just have to be

806
00:36:07,589 --> 00:36:05,770
with the reality I completely respect

807
00:36:09,630 --> 00:36:07,599
that but but when you look at the

808
00:36:12,030 --> 00:36:09,640
spiritual traditions what what most of

809
00:36:14,730 --> 00:36:12,040
them do is they write lots of words they

810
00:36:18,180 --> 00:36:14,740
write there's the Bible the Koran the

811
00:36:21,180 --> 00:36:18,190
Bhagavad Gita and so forth and so so my

812
00:36:25,740 --> 00:36:21,190
attitude then is if we're going to not

813
00:36:29,190 --> 00:36:25,750

be silent then the question is don't we

814

00:36:31,560 --> 00:36:29,200

want to use the most precise language we

815

00:36:34,109 --> 00:36:31,570

possibly can so that we can find out as

816

00:36:37,020 --> 00:36:34,119

quickly as possible if what we're saying

817

00:36:39,300 --> 00:36:37,030

is nonsense or not if we jet and it

818

00:36:41,609 --> 00:36:39,310

turns out with mathematics you can

819

00:36:43,500 --> 00:36:41,619

quickly find out if if you're being

820

00:36:44,970 --> 00:36:43,510

inconsistent and you can actually

821

00:36:48,060 --> 00:36:44,980

quickly find out if you are making

822

00:36:49,560 --> 00:36:48,070

predictions that are that are false it's

823

00:36:52,109 --> 00:36:49,570

hard to do that with just everyday

824

00:36:53,700 --> 00:36:52,119

language it's easier to hide if you use

825

00:36:56,940 --> 00:36:53,710

everyday language it's very easier to

826

00:36:59,820 --> 00:36:56,950

hide and and say and even to say

827

00:37:02,700 --> 00:36:59,830

nonsense and not be caught so if we so

828

00:37:05,460 --> 00:37:02,710

my attitude is again and I'm not at all

829

00:37:06,990 --> 00:37:05,470

being facetious someone who says silence

830

00:37:09,390 --> 00:37:07,000

is it and remains in silence I

831

00:37:11,430 --> 00:37:09,400

completely respect that that may be the

832

00:37:12,960 --> 00:37:11,440

deepest point of view it may be far far

833

00:37:14,940 --> 00:37:12,970

deeper than a mathematical point of view

834

00:37:17,010 --> 00:37:14,950

and I and I really mean that but if

835

00:37:19,770 --> 00:37:17,020

we're going to talk if we're going to

836

00:37:21,520 --> 00:37:19,780

have discussions then I think there's no

837

00:37:23,310 --> 00:37:21,530

reason for us not used

838

00:37:26,260 --> 00:37:23,320

the best tools we have to avoid

839

00:37:27,190 --> 00:37:26,270

self-deception to avoid making no

840

00:37:30,040 --> 00:37:27,200

mistakes

841

00:37:33,010 --> 00:37:30,050

okay okay I'm not sure I can let you off

842

00:37:36,280 --> 00:37:33,020

the hook on that one I'm gonna pick this

843

00:37:40,060 --> 00:37:36,290

topic I've titled it yogi and it's

844

00:37:43,090 --> 00:37:40,070

really non-duality as well you're pretty

845

00:37:44,590 --> 00:37:43,100

well plugged into the non-dual community

846

00:37:47,080 --> 00:37:44,600

you from at the science and non-duality

847

00:37:49,240 --> 00:37:47,090

conference you know this dick and you

848

00:37:51,250 --> 00:37:49,250

verb contributor keynote speaker there

849

00:37:53,710 --> 00:37:51,260

people love you there for good reason

850

00:37:58,030 --> 00:37:53,720

because you are approaching these topics

851
00:37:59,730 --> 00:37:58,040
in a brilliantly new way but at the same

852
00:38:04,390 --> 00:37:59,740
time there's a lot of very

853
00:38:07,090 --> 00:38:04,400
well-established wisdom that seems to

854
00:38:08,260 --> 00:38:07,100
kind of not totally square with what

855
00:38:12,700 --> 00:38:08,270
you're talking about and one of the

856
00:38:15,340 --> 00:38:12,710
problems I see is that spirituality as I

857
00:38:18,130 --> 00:38:15,350
understand it is particularly this non

858
00:38:21,880 --> 00:38:18,140
dual understanding of spirituality is

859
00:38:23,790 --> 00:38:21,890
really about creating space between what

860
00:38:26,440 --> 00:38:23,800
I guess we might call our habitual

861
00:38:29,950 --> 00:38:26,450
consciousness and this higher

862
00:38:32,370 --> 00:38:29,960
consciousness that resides inside of us

863
00:38:35,050 --> 00:38:32,380

and I don't have a mathematical equation

864

00:38:37,540 --> 00:38:35,060

for that but again I challenge this idea

865

00:38:39,570 --> 00:38:37,550

that you had before that experience kind

866

00:38:42,580 --> 00:38:39,580

of doesn't matter I think that's a very

867

00:38:43,780 --> 00:38:42,590

kind of narrows you that's not exactly

868

00:38:47,440 --> 00:38:43,790

what you said so I don't want to put

869

00:38:49,360 --> 00:38:47,450

words in your mouth but I think we could

870

00:38:51,760 --> 00:38:49,370

turn that around and say experience is

871

00:38:54,520 --> 00:38:51,770

the only thing that matters and Yogi's

872

00:38:56,920 --> 00:38:54,530

who have experienced and played with

873

00:38:58,720 --> 00:38:56,930

this consciousness idea for thousands of

874

00:39:00,460 --> 00:38:58,730

years they don't have any theorems but

875

00:39:02,440 --> 00:39:00,470

they can prove it over and over again

876

00:39:04,750 --> 00:39:02,450

and have and that's why people have

877

00:39:06,250 --> 00:39:04,760

found this to be a meaningful way of

878

00:39:08,260 --> 00:39:06,260

doing it one of the things I had in the

879

00:39:11,500 --> 00:39:08,270

earlier slide is this idea that sums it

880

00:39:14,350 --> 00:39:11,510

up very quickly as we are not cannot be

881

00:39:17,560 --> 00:39:14,360

anything which we observe right we

882

00:39:19,180 --> 00:39:17,570

observe the computer screen we know that

883

00:39:20,590 --> 00:39:19,190

we are not the computer screen because

884

00:39:22,360 --> 00:39:20,600

we're observing the computer screen we

885

00:39:25,110 --> 00:39:22,370

are the observer of the computer screen

886

00:39:27,280 --> 00:39:25,120

and in the same way when we observe

887

00:39:31,000 --> 00:39:27,290

consciousness when we observe the

888

00:39:34,300 --> 00:39:31,010

habitual mind we know we are not the

889

00:39:37,150 --> 00:39:34,310

habitual mind and yet that

890

00:39:41,590 --> 00:39:37,160

habitual mind as well as the higher mind

891

00:39:44,830 --> 00:39:41,600

is residing in what we call

892

00:39:47,800 --> 00:39:44,840

consciousness so let me share get a one

893

00:39:49,480 --> 00:39:47,810

guy he's not exactly in this community

894

00:39:51,370 --> 00:39:49,490

but I think he does he's very popular

895

00:39:53,830 --> 00:39:51,380

and does a good job of kind of summing

896

00:39:56,020 --> 00:39:53,840

up some of these ideas Eckhart totally

897

00:39:58,090 --> 00:39:56,030

another person I really appreciate I

898

00:40:00,610 --> 00:39:58,100

think doesn't even better job is Michael

899

00:40:03,730 --> 00:40:00,620

singer Mickey singer of feathered soul

900

00:40:07,750 --> 00:40:03,740

but let me play this clip from Eckhart

901
00:40:12,760 --> 00:40:07,760
Tolle and then we'll talk about non

902
00:40:16,200 --> 00:40:12,770
duality and the observer so you give up

903
00:40:21,000 --> 00:40:16,210
all knowing the accumulated knowledge

904
00:40:26,050 --> 00:40:21,010
and mind mate itself that consists of

905
00:40:30,240 --> 00:40:26,060
accumulated thought forms so as we sit

906
00:40:35,160 --> 00:40:30,250
here we are dying little death and

907
00:40:41,920 --> 00:40:35,170
realize that nothing real actually died

908
00:40:49,360 --> 00:40:41,930
only the illusion of a false self what

909
00:40:54,160 --> 00:40:49,370
remains is consciousness the very bare

910
00:40:56,950 --> 00:40:54,170
fact that you are so in this moment is

911
00:41:00,160 --> 00:40:56,960
the opportunity of sensing something

912
00:41:04,690 --> 00:41:00,170
much more fundamental than the history

913
00:41:09,250 --> 00:41:04,700

of who you think you are in the mind my

914

00:41:10,320 --> 00:41:09,260

past your sense of identity but who are

915

00:41:18,100 --> 00:41:10,330

you really

916

00:41:20,260 --> 00:41:18,110

beyond the story I think a lot of folks

917

00:41:23,080 --> 00:41:20,270

in the spiritual community will relate

918

00:41:27,670 --> 00:41:23,090

with that question who are you really

919

00:41:30,970 --> 00:41:27,680

beyond the story and I just can't quite

920

00:41:34,660 --> 00:41:30,980

connect that hierarchy if you will that

921

00:41:36,810 --> 00:41:34,670

he's pointing to with your theory so

922

00:41:40,300 --> 00:41:36,820

let's jump in there and talk about that

923

00:41:42,310 --> 00:41:40,310

yes I like Eckhart Tolle his ideas very

924

00:41:45,490 --> 00:41:42,320

much I've listened to a number of his

925

00:41:47,740 --> 00:41:45,500

his talks and I do agree that

926

00:41:50,800 --> 00:41:47,750

consciousness is the fundamental

927

00:41:53,050 --> 00:41:50,810

and that it transcends any of our

928

00:41:55,770 --> 00:41:53,060

theories including my my own scientific

929

00:41:59,380 --> 00:41:55,780

theories my own mathematical models and

930

00:42:03,070 --> 00:41:59,390

that going into silence and letting go

931

00:42:04,359 --> 00:42:03,080

of our thoughts is and getting a direct

932

00:42:06,670 --> 00:42:04,369

connection with that conscious

933

00:42:08,440 --> 00:42:06,680

experience is very very important I

934

00:42:13,630 --> 00:42:08,450

actually spend time every day in

935

00:42:14,859 --> 00:42:13,640

meditation doing exactly that and I

936

00:42:17,320 --> 00:42:14,869

actually didn't reject your question

937

00:42:19,120 --> 00:42:17,330

right there because I do too not so much

938

00:42:21,490 --> 00:42:19,130

because I don't know

939

00:42:23,859 --> 00:42:21,500

I think meditation is an ongoing process

940

00:42:28,089 --> 00:42:23,869

if we really kind of take it seriously

941

00:42:31,000 --> 00:42:28,099

but in that moment what is going on as

942

00:42:32,830 --> 00:42:31,010

you would understand it or explain it in

943

00:42:34,980 --> 00:42:32,840

terms of your model and I think you get

944

00:42:37,810 --> 00:42:34,990

what I mean when you realize that

945

00:42:40,690 --> 00:42:37,820

separation between you and the habitual

946

00:42:43,060 --> 00:42:40,700

mind that is always that is doing the

947

00:42:45,700 --> 00:42:43,070

math that is doing the observation both

948

00:42:48,970 --> 00:42:45,710

good and bad not to kind of put down

949

00:42:52,690 --> 00:42:48,980

that habitual mind but when you are in

950

00:42:56,320 --> 00:42:52,700

that other space where are you in dr.

951
00:42:58,030 --> 00:42:56,330
Donald Hoffman's model well I'm a I'm a

952
00:43:01,780 --> 00:42:58,040
consciousness what I call a conscious

953
00:43:03,670 --> 00:43:01,790
agent and in effect in the meditation

954
00:43:07,650 --> 00:43:03,680
process when you're letting go of your

955
00:43:10,450 --> 00:43:07,660
thoughts and emotions and so forth

956
00:43:13,480 --> 00:43:10,460
you're in some sense letting go of your

957
00:43:15,609 --> 00:43:13,490
interface instead of having this virtual

958
00:43:18,579 --> 00:43:15,619
headset on by which you're interacting

959
00:43:21,310 --> 00:43:18,589
with the reality of consciousness you're

960
00:43:23,410 --> 00:43:21,320
slowly learning to let go of that and

961
00:43:26,440 --> 00:43:23,420
appreciate consciousness on its own

962
00:43:28,420 --> 00:43:26,450
terms to be be the consciousness and be

963
00:43:30,700 --> 00:43:28,430

aware of the consciousness and I think

964

00:43:32,550 --> 00:43:30,710

that there are fundamental limitations

965

00:43:35,050 --> 00:43:32,560

to mathematics and what it can model

966

00:43:37,060 --> 00:43:35,060

that comes out of I believe something

967

00:43:40,270 --> 00:43:37,070

called Girdle's theorem it's it's the

968

00:43:43,089 --> 00:43:40,280

mathematics itself and Girdles theorem

969

00:43:47,170 --> 00:43:43,099

that makes me think that no scientific

970

00:43:48,940 --> 00:43:47,180

theory can ever be truly fundamental in

971

00:43:51,240 --> 00:43:48,950

the sense that every scientific theory

972

00:43:53,680 --> 00:43:51,250

always has to have certain assumptions

973

00:43:55,390 --> 00:43:53,690

incompleteness right that's right it's

974

00:43:58,690 --> 00:43:55,400

all it's always going to be incomplete

975

00:44:01,660 --> 00:43:58,700

and and might my take on Girdles theorem

976

00:44:04,319 --> 00:44:01,670

is it says that

977

00:44:06,819 --> 00:44:04,329

the quest for mathematical models is

978

00:44:09,549 --> 00:44:06,829

never-ending and it will never

979

00:44:11,680 --> 00:44:09,559

fundamentally reach the bottom there

980

00:44:15,190 --> 00:44:11,690

will always be the deeper reality that

981

00:44:17,319 --> 00:44:15,200

goes beyond any mathematical quest so

982

00:44:20,950 --> 00:44:17,329

but so the question that we have as

983

00:44:23,500 --> 00:44:20,960

human beings is we can again this goes

984

00:44:27,599 --> 00:44:23,510

back to the silence versus non silence

985

00:44:30,160 --> 00:44:27,609

issue if we as Eckhart patola was

986

00:44:33,039 --> 00:44:30,170

encouraging us in that meditative peace

987

00:44:35,170 --> 00:44:33,049

if we let go of all of our models and

988

00:44:37,120 --> 00:44:35,180

mathematics and go into the silence we

989

00:44:40,089 --> 00:44:37,130

are approaching facing that reality

990

00:44:41,710 --> 00:44:40,099

without the screen of mathematics or

991

00:44:44,799 --> 00:44:41,720

ideas and so forth and I think that's

992

00:44:47,549 --> 00:44:44,809

very legitimate but in our everyday life

993

00:44:52,049 --> 00:44:47,559

we do talk we're doing it right now and

994

00:44:55,089 --> 00:44:52,059

so my attitude is if we're going to talk

995

00:44:57,670 --> 00:44:55,099

then let's be as precise as we possibly

996

00:44:59,769 --> 00:44:57,680

can let's not BS ourselves let's be as

997

00:45:01,539 --> 00:44:59,779

absolutely because we don't want to spin

998

00:45:03,910 --> 00:45:01,549

around and in silly circles for

999

00:45:05,829 --> 00:45:03,920

thousands of years and and I do believe

1000

00:45:07,390 --> 00:45:05,839

that there are as you point out many

1001

00:45:09,130 --> 00:45:07,400

deep insights from spiritual

1002

00:45:11,230 --> 00:45:09,140

practitioners and spiritual traditions

1003

00:45:13,630 --> 00:45:11,240

over thousands of years but they're not

1004

00:45:15,339 --> 00:45:13,640

infallible and the question is how do we

1005

00:45:17,019 --> 00:45:15,349

find out what are the genuine insights

1006

00:45:18,460 --> 00:45:17,029

and how do we find out what is the

1007

00:45:20,319 --> 00:45:18,470

nonsense and there's always going to be

1008

00:45:22,870 --> 00:45:20,329

nonsense and again I think it's the

1009

00:45:24,370 --> 00:45:22,880

precision so I absolutely agree if

1010

00:45:27,640 --> 00:45:24,380

someone doesn't want to do the

1011

00:45:30,549 --> 00:45:27,650

mathematics at all and just wants to be

1012

00:45:34,319 --> 00:45:30,559

silent I'm I'm on board but if we're

1013

00:45:39,220 --> 00:45:34,329

gonna talk at all that I say be precise

1014

00:45:40,809 --> 00:45:39,230

I love it I love the passion there where

1015

00:45:43,180 --> 00:45:40,819

should we go next I'm gonna suggest one

1016

00:45:46,089 --> 00:45:43,190

or two either ISM where we have a little

1017

00:45:49,150 --> 00:45:46,099

guests present guests question about

1018

00:45:52,089 --> 00:45:49,160

your theory further or we can jump into

1019

00:45:53,620 --> 00:45:52,099

the spiritual path that you were just

1020

00:45:57,730 --> 00:45:53,630

talking I'll let you pick this time

1021

00:45:59,769 --> 00:45:57,740

let's push through to the spiritual path

1022

00:46:02,769 --> 00:45:59,779

since we were just talking about that

1023

00:46:05,349 --> 00:46:02,779

because you know one of the things I did

1024

00:46:08,259 --> 00:46:05,359

when I was preparing for this show is I

1025

00:46:11,259 --> 00:46:08,269

kind of looked up anything I could find

1026
00:46:13,269 --> 00:46:11,269
on your understanding of spirituality

1027
00:46:13,829 --> 00:46:13,279
and I found an interesting article that

1028
00:46:16,140 --> 00:46:13,839
you wrote

1029
00:46:20,009 --> 00:46:16,150
while back I think it was titled

1030
00:46:23,789 --> 00:46:20,019
dismissing God right in which you

1031
00:46:27,690 --> 00:46:23,799
explain how your discoveries don't prove

1032
00:46:31,200 --> 00:46:27,700
God but kind of deal a death blow to

1033
00:46:33,870 --> 00:46:31,210
some of the common explanations for why

1034
00:46:35,339 --> 00:46:33,880
there never could be any God so I

1035
00:46:37,589 --> 00:46:35,349
thought that was really interesting and

1036
00:46:40,170 --> 00:46:37,599
you might talk about that but then more

1037
00:46:44,249 --> 00:46:40,180
importantly I'd like to know more about

1038
00:46:47,299 --> 00:46:44,259

what your spiritual path is of your

1039

00:46:50,190 --> 00:46:47,309

understanding spirituality why you do

1040

00:46:52,319 --> 00:46:50,200

meditate what you think is the you know

1041

00:46:55,529 --> 00:46:52,329

you mentioned the map and the territory

1042

00:46:57,269 --> 00:46:55,539

thing yes maybe what is the territory so

1043

00:46:59,999 --> 00:46:57,279

a bunch of questions bundles are there

1044

00:47:00,989 --> 00:47:00,009

start where you like well it's all just

1045

00:47:05,279 --> 00:47:00,999

a little bit about my own personal

1046

00:47:08,519 --> 00:47:05,289

history my my father was a Christian

1047

00:47:11,609 --> 00:47:08,529

fundamentalist minister and so I was

1048

00:47:14,819 --> 00:47:11,619

raised for for a couple decades you know

1049

00:47:17,309 --> 00:47:14,829

in that and so it's very very narrow

1050

00:47:20,849 --> 00:47:17,319

it's it's my way or the highway kind of

1051
00:47:24,870 --> 00:47:20,859
view if you you turn or burn believe for

1052
00:47:26,430 --> 00:47:24,880
go to hell and and meditation was

1053
00:47:28,799 --> 00:47:26,440
definitely not something that was

1054
00:47:30,690 --> 00:47:28,809
encouraged if you meditated it opened

1055
00:47:34,499 --> 00:47:30,700
you up to the devil and who knows what

1056
00:47:39,329 --> 00:47:34,509
would happen so it was um it was it was

1057
00:47:42,620 --> 00:47:39,339
an interesting experience and I'm in

1058
00:47:47,059 --> 00:47:42,630
recovery from it I mean it it did it was

1059
00:47:50,519 --> 00:47:47,069
it's a kind of spirituality but but it's

1060
00:47:52,410 --> 00:47:50,529
you know when you're saying that I take

1061
00:47:53,489 --> 00:47:52,420
what you just said literally and I'm

1062
00:47:56,519 --> 00:47:53,499
glad that you said that

1063
00:47:59,009 --> 00:47:56,529

I mean it's maybe you want to even go

1064

00:48:00,569 --> 00:47:59,019

there a little bit because you one could

1065

00:48:02,219 --> 00:48:00,579

make the case and I have in the show

1066

00:48:05,219 --> 00:48:02,229

when I got some more guests coming up

1067

00:48:08,039 --> 00:48:05,229

that the cultish practices that go hand

1068

00:48:11,450 --> 00:48:08,049

in hand with Christianity really need to

1069

00:48:14,400 --> 00:48:11,460

be viewed from for their mind control

1070

00:48:15,749 --> 00:48:14,410

aspects and that's not judging it

1071

00:48:17,400 --> 00:48:15,759

anymore that we have a lot of things in

1072

00:48:19,229 --> 00:48:17,410

our society that are based on mind

1073

00:48:21,539 --> 00:48:19,239

control techniques or just stumble into

1074

00:48:24,170 --> 00:48:21,549

it but the the fact that we're doing

1075

00:48:25,590 --> 00:48:24,180

that to kids especially is not exactly

1076

00:48:28,260 --> 00:48:25,600

promoting

1077

00:48:29,730 --> 00:48:28,270

free-thinking and the deep programming

1078

00:48:32,310 --> 00:48:29,740

from that I know from my own experience

1079

00:48:34,410 --> 00:48:32,320

being brought up in the Greek Orthodox

1080

00:48:37,470 --> 00:48:34,420

Church and having to walk up to

1081

00:48:41,310 --> 00:48:37,480

communion and kiss the hand of some old

1082

00:48:43,650 --> 00:48:41,320

man as he dropped bread into my hand to

1083

00:48:45,660 --> 00:48:43,660

feed me I mean there's some deep

1084

00:48:48,750 --> 00:48:45,670

symbology there that I think a lot of

1085

00:48:51,780 --> 00:48:48,760

people can understand that there is for

1086

00:48:53,940 --> 00:48:51,790

a lot of folks genuine deep programming

1087

00:48:56,370 --> 00:48:53,950

there's no other way to say it then to

1088

00:48:59,430 --> 00:48:56,380

discover whatever your real underlying

1089

00:49:00,780 --> 00:48:59,440

true spiritual understanding is for

1090

00:49:03,060 --> 00:49:00,790

yourself I've gone on there for a while

1091

00:49:05,040 --> 00:49:03,070

but I would like you to maybe speak to

1092

00:49:06,900 --> 00:49:05,050

that before we jump off that topic well

1093

00:49:09,420 --> 00:49:06,910

I agree with you completely on that I I

1094

00:49:11,940 --> 00:49:09,430

felt that the the institutions that I

1095

00:49:14,640 --> 00:49:11,950

was subjected to were there not to help

1096

00:49:16,530 --> 00:49:14,650

me to explore and find out who I am they

1097

00:49:18,870 --> 00:49:16,540

had the answers I needed to understand

1098

00:49:21,150 --> 00:49:18,880

their answers and and and believed their

1099

00:49:24,450 --> 00:49:21,160

answers and to question anything that

1100

00:49:26,970 --> 00:49:24,460

they said was to not be a believer and

1101

00:49:29,070 --> 00:49:26,980

therefore be subject to hell and so it

1102

00:49:31,650 --> 00:49:29,080

really is a mind-control thing that goes

1103

00:49:34,290 --> 00:49:31,660

deep into your limbic system and gets

1104

00:49:38,250 --> 00:49:34,300

you at your emotions if I dare question

1105

00:49:41,130 --> 00:49:38,260

and think for myself and and think

1106

00:49:43,410 --> 00:49:41,140

outside of this little box the flames of

1107

00:49:46,350 --> 00:49:43,420

hell are right there and so and when

1108

00:49:48,300 --> 00:49:46,360

you're young you're defenseless against

1109

00:49:49,860 --> 00:49:48,310

that that mean you adults are telling

1110

00:49:52,620 --> 00:49:49,870

you that you believe it so it really

1111

00:49:54,630 --> 00:49:52,630

gets wired into your emotional system so

1112

00:49:56,970 --> 00:49:54,640

it's taken me a long time to deprogram

1113

00:49:59,310 --> 00:49:56,980

myself I mean knowing it intellectually

1114

00:50:02,550 --> 00:49:59,320

of course it didn't take that hard but

1115

00:50:05,070 --> 00:50:02,560

but deprogramming emotionally is a very

1116

00:50:07,230 --> 00:50:05,080

very different thing and so so I've had

1117

00:50:10,740 --> 00:50:07,240

to let let go of that programming and

1118

00:50:12,240 --> 00:50:10,750

one thing that I do is I do meditate and

1119

00:50:14,670 --> 00:50:12,250

part of the meditation is letting go of

1120

00:50:18,420 --> 00:50:14,680

that programming I mean I by being in

1121

00:50:20,250 --> 00:50:18,430

silence I'm facing the all the fears

1122

00:50:22,680 --> 00:50:20,260

that were programmed into me and the

1123

00:50:24,210 --> 00:50:22,690

anxieties and so forth and realizing

1124

00:50:27,660 --> 00:50:24,220

that you know even though intellectually

1125

00:50:30,150 --> 00:50:27,670

understand that that that was wrong it's

1126

00:50:31,860 --> 00:50:30,160

emotionally I have to understand it

1127

00:50:34,500 --> 00:50:31,870

deeper at a deep emotional level and let

1128

00:50:36,300 --> 00:50:34,510

that healing take place and so I do

1129

00:50:37,960 --> 00:50:36,310

spend time every day I have for the last

1130

00:50:40,180 --> 00:50:37,970

17 years I'm

1131

00:50:42,849 --> 00:50:40,190

quite a bit of time in in silent

1132

00:50:46,359 --> 00:50:42,859

meditation where there's no specific

1133

00:50:49,089 --> 00:50:46,369

rules of pose or breathing or anything

1134

00:50:51,460 --> 00:50:49,099

like that is just silence and letting

1135

00:50:53,589 --> 00:50:51,470

whatever comes up come up and then

1136

00:50:55,089 --> 00:50:53,599

letting it go so it's really letting go

1137

00:50:59,500 --> 00:50:55,099

of my models letting go of my math

1138

00:51:02,440 --> 00:50:59,510

letting go of all that stuff being naked

1139

00:51:04,900 --> 00:51:02,450

to reality without my models without my

1140

00:51:06,640 --> 00:51:04,910

math and then during the day I go back

1141

00:51:08,890 --> 00:51:06,650

to my models in my mouth and and so

1142

00:51:11,200 --> 00:51:08,900

being in both worlds it's really quite

1143

00:51:13,330 --> 00:51:11,210

it's it's very interesting being a human

1144

00:51:16,210 --> 00:51:13,340

being because both seem to be an

1145

00:51:19,720 --> 00:51:16,220

essential part of the human experience

1146

00:51:23,020 --> 00:51:19,730

the silence my being myself without any

1147

00:51:25,300 --> 00:51:23,030

models of myself and not knowing going

1148

00:51:29,109 --> 00:51:25,310

as a carto likes to go beyond knowing

1149

00:51:32,470 --> 00:51:29,119

into unknowing that seems to be really

1150

00:51:36,250 --> 00:51:32,480

critical and then going back into the

1151

00:51:38,550 --> 00:51:36,260

knowledge space and and somehow in a way

1152

00:51:40,870 --> 00:51:38,560

that I don't deeply understand yet that

1153

00:51:43,000 --> 00:51:40,880

going back and forth between the two is

1154

00:51:46,240 --> 00:51:43,010

is part of what it means to be human as

1155

00:51:47,290 --> 00:51:46,250

part of our growth experience I also see

1156

00:51:49,420 --> 00:51:47,300

it by the way I'll just mention this

1157

00:51:50,650 --> 00:51:49,430

it's there maybe an analogy with

1158

00:51:53,829 --> 00:51:50,660

something that we see in quantum

1159

00:51:55,960 --> 00:51:53,839

computation in quantum computation on

1160

00:51:58,060 --> 00:51:55,970

one hand you have to be very very

1161

00:51:59,800 --> 00:51:58,070

precise mathematically rigorously

1162

00:52:01,480 --> 00:51:59,810

precise engineering precise to set up

1163

00:52:03,700 --> 00:52:01,490

the quantum bits and quantum gates and

1164

00:52:05,560 --> 00:52:03,710

so forth that says like the most

1165

00:52:07,270 --> 00:52:05,570

advanced science of mathematics but then

1166

00:52:10,660 --> 00:52:07,280

when you start the computation you

1167

00:52:14,440 --> 00:52:10,670

cannot look you if you touch that at all

1168

00:52:16,480 --> 00:52:14,450

you destroy the power and so we have

1169

00:52:18,300 --> 00:52:16,490

this thing in quantum computation words

1170

00:52:20,650 --> 00:52:18,310

again a yin and yang kind of thing we're

1171

00:52:22,120 --> 00:52:20,660

absolute rigor on one hand and then you

1172

00:52:23,829 --> 00:52:22,130

cannot look at all you have to let go

1173

00:52:26,650 --> 00:52:23,839

completely and when you let go

1174

00:52:29,530 --> 00:52:26,660

completely you unleash this incredible

1175

00:52:31,720 --> 00:52:29,540

power that we don't understand and then

1176

00:52:33,550 --> 00:52:31,730

at the end you can go back to the math

1177

00:52:35,859 --> 00:52:33,560

and the registers and so forth and get a

1178

00:52:38,650 --> 00:52:35,869

thimbleful of that that incredible power

1179

00:52:41,310 --> 00:52:38,660

that was unleashed and so the reality is

1180

00:52:44,339 --> 00:52:41,320

telling us something that that don't get

1181

00:52:47,470 --> 00:52:44,349

addicted just to the math and models

1182

00:52:49,540 --> 00:52:47,480

don't be there's no payoff for sloppy

1183

00:52:51,520 --> 00:52:49,550

thinking so just sloppy thinking that

1184

00:52:53,860 --> 00:52:51,530

that's just there's no payoff for that

1185

00:52:55,390 --> 00:52:53,870

we just get into dogmatic disputes and

1186

00:52:57,640 --> 00:52:55,400

hate each other and fight that death

1187

00:52:59,410 --> 00:52:57,650

there's nothing there but absolute

1188

00:53:01,480 --> 00:52:59,420

precision on the one hand trying to be

1189

00:53:03,130 --> 00:53:01,490

as precise as we can and then absolute

1190

00:53:05,560 --> 00:53:03,140

silence on the other hand seem to go

1191

00:53:07,720 --> 00:53:05,570

hand-in-hand as unleashing something

1192

00:53:09,400 --> 00:53:07,730

deeply powerful in us and in the

1193

00:53:13,000 --> 00:53:09,410

universe and so I'm very interested in

1194

00:53:15,820 --> 00:53:13,010

that awesome stuff do you want to talk

1195

00:53:16,840 --> 00:53:15,830

for a minute about dismissing God I

1196

00:53:18,100 --> 00:53:16,850

thought there was some kind of

1197

00:53:20,980 --> 00:53:18,110

interesting points in there that

1198

00:53:26,050 --> 00:53:20,990

especially our atheistic kind of friends

1199

00:53:28,060 --> 00:53:26,060

might be surprised about right so many

1200

00:53:30,130 --> 00:53:28,070

of my colleagues will just say that that

1201

00:53:32,530 --> 00:53:30,140

there is no God because we have a

1202

00:53:34,420 --> 00:53:32,540

completely adequate space-time

1203

00:53:36,250 --> 00:53:34,430

physicalist framework that can answer

1204

00:53:38,440 --> 00:53:36,260

all all of the questions and when we

1205

00:53:40,480 --> 00:53:38,450

when we go out into outer space you know

1206

00:53:41,890 --> 00:53:40,490

look around we don't see God you know

1207

00:53:43,300 --> 00:53:41,900

there was a cosmonaut who went out there

1208

00:53:48,010 --> 00:53:43,310

and I don't know I don't see anything

1209

00:53:50,980 --> 00:53:48,020

out here and so forth and many of my

1210

00:53:55,000 --> 00:53:50,990

colleagues have a view about God is the

1211

00:53:56,830 --> 00:53:55,010

god of the gaps so as so God used to God

1212

00:54:00,370 --> 00:53:56,840

fills in where science doesn't have an

1213

00:54:03,610 --> 00:54:00,380

explanation but you know so you know but

1214

00:54:06,010 --> 00:54:03,620

as science progresses I just interject

1215

00:54:08,710 --> 00:54:06,020

with the related quote that I often hear

1216

00:54:13,720 --> 00:54:08,720

from atheists and that is that I don't

1217

00:54:16,330 --> 00:54:13,730

need God to explain X and for our

1218

00:54:19,840 --> 00:54:16,340

purposes we can say reality you know I

1219

00:54:22,030 --> 00:54:19,850

don't need God to explain reality and I

1220

00:54:24,280 --> 00:54:22,040

think your theory kind of blows that off

1221

00:54:26,020 --> 00:54:24,290

the table right away says both oh you

1222

00:54:29,020 --> 00:54:26,030

have not explained reality in an

1223

00:54:34,540 --> 00:54:29,030

adequate way with your science as we

1224

00:54:36,540 --> 00:54:34,550

know it right the absolutely so they are

1225

00:54:39,540 --> 00:54:36,550

saying that the scientific explanations

1226

00:54:44,290 --> 00:54:39,550

as they advanced there's less room for

1227

00:54:47,950 --> 00:54:44,300

for God and the problem that they've got

1228

00:54:49,660 --> 00:54:47,960

is that as science advances it's only

1229

00:54:52,390 --> 00:54:49,670

become more and more clear that our

1230

00:54:54,250 --> 00:54:52,400

standard explanations cannot deal with

1231

00:54:56,680 --> 00:54:54,260

consciousness the thing that's most

1232

00:54:58,930 --> 00:54:56,690

important to us my feelings of emotions

1233

00:55:00,400 --> 00:54:58,940

the the taste of chocolate a headache

1234

00:55:02,290 --> 00:55:00,410

the feeling of velvet all these things

1235

00:55:03,820 --> 00:55:02,300

without which I wouldn't even really be

1236

00:55:05,080 --> 00:55:03,830

here I didn't have any experiences

1237

00:55:06,760 --> 00:55:05,090

there's not really

1238

00:55:09,490 --> 00:55:06,770

any sense in which I would exist and

1239

00:55:10,960 --> 00:55:09,500

that most central thing about us science

1240

00:55:14,050 --> 00:55:10,970

right now in his current physicalist

1241

00:55:16,360 --> 00:55:14,060

framework is woefully inadequate and

1242

00:55:19,900 --> 00:55:16,370

scientists are beginning to understand

1243

00:55:22,150 --> 00:55:19,910

that their mathematical models don't cut

1244

00:55:23,410 --> 00:55:22,160

the mustard here and that's that's the

1245

00:55:24,910 --> 00:55:23,420

power of the mathematics is there

1246

00:55:26,650 --> 00:55:24,920

they're being forced by their own

1247

00:55:28,840 --> 00:55:26,660

mathematics to say this doesn't work

1248

00:55:30,460 --> 00:55:28,850

this doesn't work and I'm helping them

1249

00:55:33,210 --> 00:55:30,470

you know I come along as a gadfly and

1250

00:55:38,290 --> 00:55:33,220

say see it doesn't work and so there is

1251
00:55:40,750 --> 00:55:38,300
if we're going to have an understanding

1252
00:55:41,740 --> 00:55:40,760
of consciousness we're not going to be

1253
00:55:43,210 --> 00:55:41,750
able to get it starting with a

1254
00:55:44,650 --> 00:55:43,220
physicalist framework it just won't

1255
00:55:47,260 --> 00:55:44,660
happen we're gonna have to let

1256
00:55:50,170 --> 00:55:47,270
consciousness be fundamental in our

1257
00:55:53,860 --> 00:55:50,180
theories and so now the word God itself

1258
00:55:55,870 --> 00:55:53,870
is a loaded word right everybody uses

1259
00:55:59,950 --> 00:55:55,880
the word but if you if you notice it's

1260
00:56:01,210 --> 00:55:59,960
never defined its or defined very very

1261
00:56:03,640 --> 00:56:01,220
loosely it's the infinite consciousness

1262
00:56:05,500 --> 00:56:03,650
or the consciousness that includes all

1263
00:56:08,650 --> 00:56:05,510

other consciousness or whatever it might

1264

00:56:13,270 --> 00:56:08,660

be yeah and and and maybe we're stuck

1265

00:56:15,240 --> 00:56:13,280

with that but as a scientist I've got

1266

00:56:18,580 --> 00:56:15,250

this theory of conscious agents and

1267

00:56:20,920 --> 00:56:18,590

conscious agents can be finite but when

1268

00:56:22,840 --> 00:56:20,930

they interact conscious agents create

1269

00:56:24,990 --> 00:56:22,850

new conscious agents that can be more

1270

00:56:27,700 --> 00:56:25,000

complicated and the mathematics

1271

00:56:29,680 --> 00:56:27,710

indicates to me that this can go on to

1272

00:56:31,180 --> 00:56:29,690

infinity so I can actually have

1273

00:56:34,810 --> 00:56:31,190

conscious agents combining to create

1274

00:56:37,270 --> 00:56:34,820

infinite conscious agents so I'm

1275

00:56:40,180 --> 00:56:37,280

probably wrong of course I'm probably

1276
00:56:42,040 --> 00:56:40,190
wrong but I have and I've proposed a

1277
00:56:44,620 --> 00:56:42,050
mathematically precise definition of God

1278
00:56:46,180 --> 00:56:44,630
it's a conscious agent where I've given

1279
00:56:48,190 --> 00:56:46,190
a definition of a conscious agent that

1280
00:56:51,820 --> 00:56:48,200
has an infinite set of possible

1281
00:56:55,120 --> 00:56:51,830
conscious experiences well so so for the

1282
00:56:58,270 --> 00:56:55,130
first time that I know of we have a

1283
00:57:01,660 --> 00:56:58,280
proposal for a precise definition of God

1284
00:57:04,060 --> 00:57:01,670
and of course I'm probably wrong but the

1285
00:57:06,160 --> 00:57:04,070
point is to be precise so we can now

1286
00:57:09,310 --> 00:57:06,170
start the conversation where is it wrong

1287
00:57:11,140 --> 00:57:09,320
how is it wrong let's fix it and now we

1288
00:57:13,030 --> 00:57:11,150

can actually start to try to develop a

1289

00:57:15,820 --> 00:57:13,040

precise understanding of what we mean by

1290

00:57:18,610 --> 00:57:15,830

the letters g.od so that's what I'm I'm

1291

00:57:18,940 --> 00:57:18,620

very much interested it's also open to

1292

00:57:23,079 --> 00:57:18,950

some

1293

00:57:25,599 --> 00:57:23,089

to say it transcends any science and any

1294

00:57:28,720 --> 00:57:25,609

experience and any any description and

1295

00:57:30,430 --> 00:57:28,730

you can't go there and again if someone

1296

00:57:32,290 --> 00:57:30,440

says that I completely respect it but

1297

00:57:34,450 --> 00:57:32,300

that means then we're not gonna argue

1298

00:57:36,400 --> 00:57:34,460

back and forth about your god versus my

1299

00:57:38,170 --> 00:57:36,410

god and that my god is right and your

1300

00:57:42,520 --> 00:57:38,180

God is is wrong we're not going to do

1301

00:57:45,579 --> 00:57:42,530

that so so if we want to do the game of

1302

00:57:47,560 --> 00:57:45,589

trying to get precise ideas about God we

1303

00:57:49,569 --> 00:57:47,570

need to go mathematical on it and we and

1304

00:57:52,660 --> 00:57:49,579

we we've never done that in human

1305

00:57:54,700 --> 00:57:52,670

history and until now so now for the

1306

00:57:57,490 --> 00:57:54,710

first time I can be wrong I'm the first

1307

00:57:59,020 --> 00:57:57,500

person to be wrong about God because I'm

1308

00:58:01,750 --> 00:57:59,030

being precise and so I'm probably

1309

00:58:03,370 --> 00:58:01,760

precisely wrong but that's how we start

1310

00:58:05,470 --> 00:58:03,380

the conversation the scientific

1311

00:58:08,980 --> 00:58:05,480

conversation and evolve the mathematics

1312

00:58:11,589 --> 00:58:08,990

but if someone says again that whole we

1313

00:58:14,680 --> 00:58:11,599

just need to be in silence I understand

1314

00:58:17,530 --> 00:58:14,690

that and I and I I respect that you

1315

00:58:21,880 --> 00:58:17,540

pronoun to that as they say hey let's

1316

00:58:23,380 --> 00:58:21,890

play our guest question from rich Greg

1317

00:58:26,809 --> 00:58:23,390

oh I think it's a good one we'll have

1318

00:58:31,459 --> 00:58:29,449

hello Alex and Donald Hoffman this is

1319

00:58:33,799 --> 00:58:31,469

rich Gregor philosophy faculty at

1320

00:58:36,499 --> 00:58:33,809

Florida State College and sometimes

1321

00:58:38,719 --> 00:58:36,509

skeptical contributor thanks so much for

1322

00:58:41,659 --> 00:58:38,729

the opportunity to present a quick query

1323

00:58:44,449 --> 00:58:41,669

that as an enthusiastic advocate of his

1324

00:58:46,880 --> 00:58:44,459

work in consciousness studies among

1325

00:58:49,969 --> 00:58:46,890

other things it would be great to hear

1326

00:58:53,229 --> 00:58:49,979

dr. Hoffman address what you think the

1327

00:58:56,630 --> 00:58:53,239

nature of consciousness actually is

1328

00:58:58,699 --> 00:58:56,640

beyond just as function as author of the

1329

00:59:01,549 --> 00:58:58,709

physical world that you've already

1330

00:59:05,569 --> 00:59:01,559

described so well in so many places is

1331

00:59:08,390 --> 00:59:05,579

it in itself realm of pure mathematical

1332

00:59:10,999 --> 00:59:08,400

equations as some current physicists

1333

00:59:12,499 --> 00:59:11,009

like Max tegmark comes to mind and and

1334

00:59:15,529 --> 00:59:12,509

other philosophers in the Platonic

1335

00:59:18,140 --> 00:59:15,539

tradition claim or is it a bunch of

1336

00:59:20,870 --> 00:59:18,150

individual centers of subjective

1337

00:59:23,929 --> 00:59:20,880

first-person personal awareness and

1338

00:59:26,929 --> 00:59:23,939

agency that collectively create the user

1339

00:59:29,599 --> 00:59:26,939

interface of physical realities maybe be

1340

00:59:31,370 --> 00:59:29,609

a mathematics or quantum level state

1341

00:59:34,549 --> 00:59:31,380

vector collapse or something like that

1342

00:59:38,630 --> 00:59:34,559

is some pan cyclists and guys like in

1343

00:59:41,179 --> 00:59:38,640

rows and Hameroff seem to suggest or is

1344

00:59:43,669 --> 00:59:41,189

it is consciousness some combination of

1345

00:59:46,640 --> 00:59:43,679

those two things maybe but under written

1346

00:59:49,489 --> 00:59:46,650

by an all-encompassing universal source

1347

00:59:52,569 --> 00:59:49,499

of consciousness awareness as more

1348

00:59:55,219 --> 00:59:52,579

idealistic philosophers of mind claim

1349

00:59:57,829 --> 00:59:55,229

bernardo cash drop and it tastes Xiaomi

1350

00:59:59,719 --> 00:59:57,839

and mera Albahari come from iemon

1351

01:00:02,299 --> 00:59:59,729

but basically I just like to get a

1352

01:00:04,729 --> 01:00:02,309

better description of consciousness in

1353

01:00:07,069 --> 01:00:04,739

itself beyond just its role in

1354

01:00:10,630 --> 01:00:07,079

generating a user interface thanks again

1355

01:00:13,339 --> 01:00:10,640

guys right great let's go there

1356

01:00:15,049 --> 01:00:13,349

great so first I think that

1357

01:00:16,519 --> 01:00:15,059

consciousness is not just mathematics

1358

01:00:18,799 --> 01:00:16,529

and that mathematics is not

1359

01:00:21,919 --> 01:00:18,809

consciousness so I'm not a reductionist

1360

01:00:25,339 --> 01:00:21,929

at all about about consciousness and in

1361

01:00:27,229 --> 01:00:25,349

fact even in in my the physicalist

1362

01:00:29,359 --> 01:00:27,239

theories the mathematics is just the

1363

01:00:31,339 --> 01:00:29,369

mathematics if your physic listen you

1364

01:00:33,319 --> 01:00:31,349

believe that the space time and matter

1365

01:00:36,140 --> 01:00:33,329

are objective real things the

1366

01:00:38,989 --> 01:00:36,150

mathematics only describes them it isn't

1367

01:00:40,670 --> 01:00:38,999

them now that they're I obviously am

1368

01:00:44,230 --> 01:00:40,680

disagreeing with Max tegmark

1369

01:00:46,940 --> 01:00:44,240

that mathematics is is the whole thing

1370

01:00:50,180 --> 01:00:46,950

now what's interesting is that

1371

01:00:51,770 --> 01:00:50,190

consciousness has been studied our

1372

01:00:55,069 --> 01:00:51,780

conscious experiences have been studied

1373

01:00:57,829 --> 01:00:55,079

by scientists for many many decades in a

1374

01:00:58,970 --> 01:00:57,839

field called psychophysics not a lot of

1375

01:01:00,319 --> 01:00:58,980

people know about the field of psycho

1376

01:01:03,380 --> 01:01:00,329

physics but this one of the fields that

1377

01:01:05,870 --> 01:01:03,390

I that I work in and what we found is

1378

01:01:10,099 --> 01:01:05,880

that we can predict with mathematical

1379

01:01:11,480 --> 01:01:10,109

precision your conscious experiences so

1380

01:01:13,520 --> 01:01:11,490

conscious experiences are not these

1381

01:01:15,349 --> 01:01:13,530

amorphous weird things that are

1382

01:01:18,020 --> 01:01:15,359

unpredictable we can actually write down

1383

01:01:19,910 --> 01:01:18,030

mathematical equations for example I can

1384

01:01:21,559 --> 01:01:19,920

write down an equation that says when

1385

01:01:23,270 --> 01:01:21,569

you see a bunch of moving dots on the

1386

01:01:24,829 --> 01:01:23,280

screen when all of a sudden they will

1387

01:01:27,680 --> 01:01:24,839

pop into 3d and you see them as a

1388

01:01:28,819 --> 01:01:27,690

3-dimensional sphere it turns out I can

1389

01:01:30,620 --> 01:01:28,829

predict that I can write down an

1390

01:01:34,280 --> 01:01:30,630

equation that the motion of the dots

1391

01:01:36,290 --> 01:01:34,290

must satisfy when when you actually see

1392

01:01:38,089 --> 01:01:36,300

the pop out in a new dimension of

1393

01:01:39,290 --> 01:01:38,099

conscious experience and there's there's

1394

01:01:43,010 --> 01:01:39,300

hundreds of things like that in

1395

01:01:46,640 --> 01:01:43,020

psychophysics in fact one reason why we

1396

01:01:48,530 --> 01:01:46,650

can build virtual reality simulations

1397

01:01:50,630 --> 01:01:48,540

that are so powerful is because we

1398

01:01:53,210 --> 01:01:50,640

understand with mathematical precision

1399

01:01:54,950 --> 01:01:53,220

how our consciousness works how our

1400

01:01:57,289 --> 01:01:54,960

conscious experiences of space and time

1401
01:01:59,240 --> 01:01:57,299
and colors and objects work and that's

1402
01:02:01,460 --> 01:01:59,250
why we can actually program virtual

1403
01:02:03,589 --> 01:02:01,470
reality machines to make you see any

1404
01:02:04,579 --> 01:02:03,599
worlds we want it's because of that

1405
01:02:09,109 --> 01:02:04,589
mathematical precision

1406
01:02:12,049 --> 01:02:09,119
but given that so mathematics is not

1407
01:02:13,670 --> 01:02:12,059
divorced from consciousness I think of

1408
01:02:15,049 --> 01:02:13,680
it Moore's like the bones of

1409
01:02:17,089 --> 01:02:15,059
consciousness consciousness is this

1410
01:02:19,370 --> 01:02:17,099
living thing but it has structure it has

1411
01:02:21,260 --> 01:02:19,380
bones and mathematics is sort of like

1412
01:02:22,970 --> 01:02:21,270
the structure of it so when I say the

1413
01:02:25,329 --> 01:02:22,980

consciousness is fundamental in the

1414

01:02:28,520 --> 01:02:25,339

universe I'm also saying I believe

1415

01:02:30,440 --> 01:02:28,530

that mathematics is fundamental not that

1416

01:02:33,589 --> 01:02:30,450

consciousness arises from mathematics

1417

01:02:36,650 --> 01:02:33,599

but that is an integral part but not the

1418

01:02:38,990 --> 01:02:36,660

whole it's a part of consciousness and

1419

01:02:40,970 --> 01:02:39,000

conscious experiences so there really

1420

01:02:43,160 --> 01:02:40,980

wouldn't be any conflict if I'm

1421

01:02:44,839 --> 01:02:43,170

understanding you right between what

1422

01:02:47,839 --> 01:02:44,849

you're saying and let's say what

1423

01:02:50,530 --> 01:02:47,849

Bernardo is saying in terms of we are

1424

01:02:54,230 --> 01:02:50,540

rather than say we are in consciousness

1425

01:02:57,320 --> 01:02:54,240

so those experiences the models here

1426

01:03:00,080 --> 01:02:57,330

about and their predictions are in

1427

01:03:02,630 --> 01:03:00,090

consciousness I think that's part and

1428

01:03:04,730 --> 01:03:02,640

parcel with what you that doesn't really

1429

01:03:08,200 --> 01:03:04,740

conflict with what you're saying you're

1430

01:03:11,150 --> 01:03:08,210

just kind of pushing for more rigor in

1431

01:03:13,420 --> 01:03:11,160

understanding more and more that we can

1432

01:03:15,650 --> 01:03:13,430

about the structure of those bones

1433

01:03:17,270 --> 01:03:15,660

absolutely Bernardo and I are in broad

1434

01:03:20,420 --> 01:03:17,280

agreement and you know we know each

1435

01:03:23,240 --> 01:03:20,430

other and we were friends and I I would

1436

01:03:25,220 --> 01:03:23,250

say his idea that we're whirlpools and

1437

01:03:27,260 --> 01:03:25,230

ripples and in a bigger consciousness is

1438

01:03:29,120 --> 01:03:27,270

is a very very good metaphor for what

1439

01:03:31,010 --> 01:03:29,130

I'm talking about because in my model

1440

01:03:33,140 --> 01:03:31,020

there are all these there's infinitely

1441

01:03:35,270 --> 01:03:33,150

many of these finite conscious agents

1442

01:03:38,140 --> 01:03:35,280

that are interacting but they also form

1443

01:03:41,630 --> 01:03:38,150

various infinite conscious agents and

1444

01:03:43,070 --> 01:03:41,640

it's true both that there's one infinite

1445

01:03:44,990 --> 01:03:43,080

conscious agent and it's also true that

1446

01:03:46,970 --> 01:03:45,000

there's infinitely many finite conscious

1447

01:03:49,400 --> 01:03:46,980

ages and both are true in the

1448

01:03:51,200 --> 01:03:49,410

mathematics and and so I mean I mean

1449

01:03:56,150 --> 01:03:51,210

almost by Drake I mean that's right you

1450

01:03:58,010 --> 01:03:56,160

bet infinite that's right it gets it

1451
01:03:59,510 --> 01:03:58,020
gets pretty hairy but but what's nice is

1452
01:04:01,640 --> 01:03:59,520
that I can talk about the one

1453
01:04:03,770 --> 01:04:01,650
consciousness but then as a scientist

1454
01:04:05,270 --> 01:04:03,780
I've got this analytic framework to

1455
01:04:07,700 --> 01:04:05,280
actually look at the dynamics of the

1456
01:04:09,770 --> 01:04:07,710
internal structure of the one so I can

1457
01:04:12,380 --> 01:04:09,780
talk about the one but I don't then just

1458
01:04:14,030 --> 01:04:12,390
give up I can have a very very rich

1459
01:04:15,859 --> 01:04:14,040
mathematical model of the internal

1460
01:04:18,170 --> 01:04:15,869
dynamics of the one in terms of other

1461
01:04:20,480 --> 01:04:18,180
conscious agents so there's a lot of

1462
01:04:22,460 --> 01:04:20,490
mathematics to explore there and and

1463
01:04:24,170 --> 01:04:22,470

again I'm not reducing consciousness to

1464

01:04:27,050 --> 01:04:24,180
mathematics but I'm saying that

1465

01:04:28,730 --> 01:04:27,060
consciousness and mathematics are

1466

01:04:32,870 --> 01:04:28,740
intimately related almost like the

1467

01:04:35,510 --> 01:04:32,880
living organism to its bones great tell

1468

01:04:39,530 --> 01:04:35,520
you what this has been so awesome and

1469

01:04:42,440 --> 01:04:39,540
exciting for me I have one last category

1470

01:04:46,340 --> 01:04:42,450
for you if you will sure let's talk

1471

01:04:48,980 --> 01:04:46,350
about extended consciousness one of the

1472

01:04:52,250 --> 01:04:48,990
topics we've spent a lot of time

1473

01:04:54,530 --> 01:04:52,260
covering on this show literally hundreds

1474

01:04:56,480 --> 01:04:54,540
of episodes at this point so if we're

1475

01:04:58,849 --> 01:04:56,490
talking about near-death experience

1476

01:05:01,370 --> 01:04:58,859

science which now as you know there's

1477

01:05:05,000 --> 01:05:01,380

hundreds of peer review published papers

1478

01:05:07,030 --> 01:05:05,010

on it consciousness after bodily death

1479

01:05:09,160 --> 01:05:07,040

which we normally don't think of

1480

01:05:10,930 --> 01:05:09,170

in any of our models or any of our

1481

01:05:13,300 --> 01:05:10,940

understandings yet it seems to be a

1482

01:05:16,030 --> 01:05:13,310

reality kind of mentioned remote viewing

1483

01:05:17,170 --> 01:05:16,040

we also have out-of-body experience

1484

01:05:19,300 --> 01:05:17,180

again there's a little god of good

1485

01:05:21,820 --> 01:05:19,310

science there and even after death

1486

01:05:24,370 --> 01:05:21,830

communication I always point to dr.

1487

01:05:27,849 --> 01:05:24,380

Julie by she'll who's done excellent

1488

01:05:31,060 --> 01:05:27,859

peer-reviewed science on the reality

1489

01:05:32,770 --> 01:05:31,070

that after death communication happens

1490

01:05:35,340 --> 01:05:32,780

and then we even have you know our

1491

01:05:38,920 --> 01:05:35,350

friend Dean Radin who's gone from

1492

01:05:41,760 --> 01:05:38,930

rigorous double-slit experiments with

1493

01:05:44,770 --> 01:05:41,770

this little faux time machine and

1494

01:05:46,800 --> 01:05:44,780

meditator to now of the last time users

1495

01:05:50,349 --> 01:05:46,810

on the show talking about spirits and

1496

01:05:54,160 --> 01:05:50,359

how spirits might manifest into our

1497

01:05:56,650 --> 01:05:54,170

physical reality which i think is a very

1498

01:05:59,050 --> 01:05:56,660

challenging notion for all these ideas

1499

01:06:01,030 --> 01:05:59,060

that we're talking about so you get a

1500

01:06:02,349 --> 01:06:01,040

sense where I'm going and I also have et

1501

01:06:03,940 --> 01:06:02,359

in there and I don't want to leave et

1502

01:06:07,210 --> 01:06:03,950

off the table because just because

1503

01:06:09,700 --> 01:06:07,220

people are uncomfortable with it I just

1504

01:06:13,380 --> 01:06:09,710

like I say I only believe what the New

1505

01:06:19,050 --> 01:06:13,390

York Times tells me and since December

1506

01:06:24,070 --> 01:06:19,060

2017 with the release of the DoD

1507

01:06:27,310 --> 01:06:24,080

certified flying saucers UFO driven

1508

01:06:30,099 --> 01:06:27,320

craft I now feel justified in bringing

1509

01:06:32,500 --> 01:06:30,109

data as a serious topic but I don't want

1510

01:06:35,890 --> 01:06:32,510

to go too far down that digression the

1511

01:06:38,710 --> 01:06:35,900

point is there does seem to be a reality

1512

01:06:41,940 --> 01:06:38,720

to these extended consciousness realms

1513

01:06:45,340 --> 01:06:41,950

how do we fit those back into your model

1514

01:06:48,370 --> 01:06:45,350

that's right so there's a lot to say

1515

01:06:51,190 --> 01:06:48,380

here things like the out-of-body

1516

01:06:54,240 --> 01:06:51,200

experiences are interesting because we

1517

01:06:56,770 --> 01:06:54,250

can induce them at will now if I take a

1518

01:06:59,109 --> 01:06:56,780

transcranial magnetic stimulator a TMS

1519

01:07:02,050 --> 01:06:59,119

unit and touch it to the right temporal

1520

01:07:04,599 --> 01:07:02,060

parietal Junction and inhibit you will

1521

01:07:07,200 --> 01:07:04,609

have an out-of-body experience so so we

1522

01:07:13,359 --> 01:07:07,210

now know how to induce those at will

1523

01:07:17,310 --> 01:07:13,369

with with a magnet and so the question

1524

01:07:20,140 --> 01:07:17,320

about these paranormal phenomena and

1525

01:07:22,380 --> 01:07:20,150

psychic experiences if you're a

1526

01:07:24,640 --> 01:07:22,390

physicalist there's no room for it right

1527

01:07:26,140 --> 01:07:24,650

space time and matter are fundamental

1528

01:07:29,460 --> 01:07:26,150

there is no consciousness outside of

1529

01:07:31,780 --> 01:07:29,470

space and time so they're pretty much

1530

01:07:33,460 --> 01:07:31,790

required to reject all this and so most

1531

01:07:37,480 --> 01:07:33,470

of my colleagues reject this stuff out

1532

01:07:39,070 --> 01:07:37,490

of hand now my framework absolutely

1533

01:07:41,980 --> 01:07:39,080

allows it I'm saying that space-time

1534

01:07:43,900 --> 01:07:41,990

that the objective reality is a vast

1535

01:07:46,000 --> 01:07:43,910

social network of interacting conscious

1536

01:07:47,200 --> 01:07:46,010

agents think like the Twitterverse so

1537

01:07:48,609 --> 01:07:47,210

there's all these conscious agents

1538

01:07:50,140 --> 01:07:48,619

interacting they're tweeting and

1539

01:07:52,060 --> 01:07:50,150

following and they're communicating with

1540

01:07:55,090 --> 01:07:52,070

each other and what we call space and

1541

01:07:57,310 --> 01:07:55,100

time is just our visualization tool that

1542

01:07:58,990 --> 01:07:57,320

allows us to understand this vast social

1543

01:08:01,900 --> 01:07:59,000

network that would be too overwhelming

1544

01:08:04,510 --> 01:08:01,910

without the visualization tool so so

1545

01:08:08,650 --> 01:08:04,520

there's lots going on on outside space

1546

01:08:11,070 --> 01:08:08,660

and time that that is not stuck in space

1547

01:08:13,240 --> 01:08:11,080

and time and so these kinds of you know

1548

01:08:16,090 --> 01:08:13,250

paranormal phenomena are absolutely

1549

01:08:22,829 --> 01:08:16,100

allowed but but here's the here's the

1550

01:08:24,670 --> 01:08:22,839

thing most of my friends and I'm again I

1551

01:08:26,320 --> 01:08:24,680

go to the science and non-duality

1552

01:08:28,180 --> 01:08:26,330

conference I'm friends with with many

1553

01:08:29,950 --> 01:08:28,190

people doing this work most of my

1554

01:08:32,410 --> 01:08:29,960

friends who are doing the kinds of

1555

01:08:35,019 --> 01:08:32,420

paranormal experiments have a view like

1556

01:08:37,030 --> 01:08:35,029

this that that the fundamental reality

1557

01:08:39,280 --> 01:08:37,040

does have space and time and physical

1558

01:08:40,620 --> 01:08:39,290

stuff but in addition to this physical

1559

01:08:43,329 --> 01:08:40,630

reality there's a ghost in the machine

1560

01:08:45,160 --> 01:08:43,339

now that's a fairly it's a fairly wimpy

1561

01:08:46,539 --> 01:08:45,170

ghost it doesn't have very very strong

1562

01:08:49,180 --> 01:08:46,549

muscles so you have to do long

1563

01:08:51,070 --> 01:08:49,190

experiments with and and and then you

1564

01:08:52,749 --> 01:08:51,080

find something that's its second or

1565

01:08:54,700 --> 01:08:52,759

third decimal place effect if you do

1566

01:08:57,700 --> 01:08:54,710

hundreds and thousands of trials and so

1567

01:08:59,769 --> 01:08:57,710

forth and and so it's it's a dualist

1568

01:09:01,209 --> 01:08:59,779

kind of framework there's a the physical

1569

01:09:02,800 --> 01:09:01,219

world with this laws is doing most of

1570

01:09:04,660 --> 01:09:02,810

the heavy lifting but there is a ghost

1571

01:09:06,099 --> 01:09:04,670

and it can do you know one tenth of one

1572

01:09:08,620 --> 01:09:06,109

hundredth of a percent or something like

1573

01:09:11,890 --> 01:09:08,630

that in careful experiments my attitude

1574

01:09:14,019 --> 01:09:11,900

is very very different I don't need a

1575

01:09:17,709 --> 01:09:14,029

ghost in the machine consciousness is

1576

01:09:20,099 --> 01:09:17,719

everything and what I what we call space

1577

01:09:23,559 --> 01:09:20,109

and time and the laws of physics is

1578

01:09:25,749 --> 01:09:23,569

exactly how we perceive our interactions

1579

01:09:26,849 --> 01:09:25,759

with other conscious agents I don't need

1580

01:09:29,490 --> 01:09:26,859

any ghosts

1581

01:09:31,230 --> 01:09:29,500

in the machine every all the laws of

1582

01:09:33,870 --> 01:09:31,240

physics I'm going to I want to show that

1583

01:09:37,260 --> 01:09:33,880

all of the laws of physics are in fact a

1584

01:09:39,599 --> 01:09:37,270

projection of the laws of dynamics of

1585

01:09:40,950 --> 01:09:39,609

consciousness so we'll have this theory

1586

01:09:43,980 --> 01:09:40,960

of conscious agents that's the

1587

01:09:46,890 --> 01:09:43,990

fundamental conscious world and the

1588

01:09:49,110 --> 01:09:46,900

fundamental scientific theory when we

1589

01:09:52,230 --> 01:09:49,120

project it back into our interface we

1590

01:09:54,240 --> 01:09:52,240

will get all of general relativity

1591

01:09:56,070 --> 01:09:54,250

quantum field theory evolution by

1592

01:09:58,230 --> 01:09:56,080

natural selection we will realize that

1593

01:10:01,410 --> 01:09:58,240

we've just been seeing consciousness

1594

01:10:04,920 --> 01:10:01,420

through a visualization tool so if it

1595

01:10:07,740 --> 01:10:04,930

turned out that most of these paranormal

1596

01:10:08,430 --> 01:10:07,750

experiments are false that's no problem

1597

01:10:11,100 --> 01:10:08,440

for me

1598

01:10:13,890 --> 01:10:11,110

consciousness is still fundamental and I

1599

01:10:15,720 --> 01:10:13,900

don't need these results to be true to

1600

01:10:17,280 --> 01:10:15,730

have the deeper I'll still have this

1601
01:10:19,650 --> 01:10:17,290
deeper theory of conscious agents and

1602
01:10:21,660 --> 01:10:19,660
have the science that shows that by

1603
01:10:23,880 --> 01:10:21,670
projecting it into space and time we get

1604
01:10:25,500 --> 01:10:23,890
our current scientific theories so

1605
01:10:27,660 --> 01:10:25,510
that's that's where I've had it hold on

1606
01:10:29,580 --> 01:10:27,670
I mean I'm glad you're headed in that

1607
01:10:32,370 --> 01:10:29,590
direction and you make some great points

1608
01:10:35,310 --> 01:10:32,380
if that rigor is needed but I'm not sure

1609
01:10:37,650 --> 01:10:35,320
we're really hitting on all cylinders

1610
01:10:41,670 --> 01:10:37,660
there I mean okay through all science is

1611
01:10:44,280 --> 01:10:41,680
this process of observing and explaining

1612
01:10:46,290 --> 01:10:44,290
so there does need to be some observing

1613
01:10:48,300 --> 01:10:46,300

going on so your death experience

1614

01:10:52,010 --> 01:10:48,310

science if you will is at the beginning

1615

01:10:55,530 --> 01:10:52,020

stages of observing a phenomenon that

1616

01:10:57,360 --> 01:10:55,540

that we can begin describing so that we

1617

01:10:59,340 --> 01:10:57,370

could even start putting it we could

1618

01:11:02,280 --> 01:10:59,350

start testing some of the assumptions or

1619

01:11:05,580 --> 01:11:02,290

start crafting what those conscious

1620

01:11:09,660 --> 01:11:05,590

agents look like so I'm not sure that we

1621

01:11:12,180 --> 01:11:09,670

can really blow past that that quickly

1622

01:11:15,600 --> 01:11:12,190

especially when we look at how miserably

1623

01:11:19,140 --> 01:11:15,610

poor a job science as we know it has

1624

01:11:21,150 --> 01:11:19,150

done in and kind of dealing with some of

1625

01:11:24,780 --> 01:11:21,160

these fundamental meaning questions what

1626

01:11:27,810 --> 01:11:24,790

does it mean to survive bodily death

1627

01:11:29,910 --> 01:11:27,820

what does it mean to encounter these

1628

01:11:33,270 --> 01:11:29,920

other if you want to stick conscious

1629

01:11:36,360 --> 01:11:33,280

agents in it fine but what does it mean

1630

01:11:39,060 --> 01:11:36,370

to encounter the hierarchical nature of

1631

01:11:40,439 --> 01:11:39,070

conscious agents that is conscious

1632

01:11:44,219 --> 01:11:40,449

agents who can't

1633

01:11:46,830 --> 01:11:44,229

you your past your future and what it

1634

01:11:49,080 --> 01:11:46,840

means in a way that that kind of

1635

01:11:52,500 --> 01:11:49,090

transcends any experience you've ever

1636

01:11:54,899 --> 01:11:52,510

had in this existence so there are a lot

1637

01:11:57,239 --> 01:11:54,909

of territory there that we need to map

1638

01:12:02,129 --> 01:11:57,249

out absolutely I completely agree with

1639

01:12:04,469 --> 01:12:02,139

you and and in in my framework death is

1640

01:12:06,959 --> 01:12:04,479

not the end so think about this way

1641

01:12:09,509 --> 01:12:06,969

suppose that you go with some friends to

1642

01:12:11,370 --> 01:12:09,519

a virtual reality arcade to place a

1643

01:12:14,069 --> 01:12:11,380

virtual volleyball and you put on your

1644

01:12:15,479 --> 01:12:14,079

headset and bodysuit and and you you and

1645

01:12:18,419 --> 01:12:15,489

your friends find yourself immersed in a

1646

01:12:21,419 --> 01:12:18,429

virtual you know volleyball at the beach

1647

01:12:23,069 --> 01:12:21,429

so you see sand and net and palm trees

1648

01:12:24,270 --> 01:12:23,079

and you start playing volleyball for a

1649

01:12:26,640 --> 01:12:24,280

while then one of your friends you know

1650

01:12:28,589 --> 01:12:26,650

Joe says excuse me I'm thirsty I need to

1651
01:12:31,549 --> 01:12:28,599
get a drink he takes off his headset and

1652
01:12:34,589 --> 01:12:31,559
body suit and his avatar collapses

1653
01:12:36,029 --> 01:12:34,599
motionless on the sand well from the

1654
01:12:38,399 --> 01:12:36,039
point of view of the interface it looks

1655
01:12:39,660 --> 01:12:38,409
like he's dead but he just stepped out

1656
01:12:42,330 --> 01:12:39,670
of the interface he's he's just fine

1657
01:12:44,189 --> 01:12:42,340
he's getting a drink and by saying that

1658
01:12:46,350 --> 01:12:44,199
space time and what we call the physical

1659
01:12:50,250 --> 01:12:46,360
world is just our interface I'm saying

1660
01:12:52,589 --> 01:12:50,260
that when you die yeah your avatar is is

1661
01:12:54,000 --> 01:12:52,599
motionless from the point of view of the

1662
01:12:56,609 --> 01:12:54,010
interface you're you've unplugged from

1663
01:12:59,040 --> 01:12:56,619

the interface and but but that doesn't

1664

01:13:01,620 --> 01:12:59,050

mean that your consciousness is gone the

1665

01:13:03,689 --> 01:13:01,630

consciousness still survives and so this

1666

01:13:06,689 --> 01:13:03,699

the framework that I'm dealing with does

1667

01:13:08,729 --> 01:13:06,699

absolutely now the issue technical issue

1668

01:13:11,370 --> 01:13:08,739

for me will be what aspect of your

1669

01:13:13,890 --> 01:13:11,380

memories and your self-identity will

1670

01:13:17,069 --> 01:13:13,900

survive death the consciousness itself

1671

01:13:19,680 --> 01:13:17,079

clearly survives death how much of what

1672

01:13:21,449 --> 01:13:19,690

I call me and my history and my memory

1673

01:13:22,799 --> 01:13:21,459

of myself that I'm gonna be very

1674

01:13:25,229 --> 01:13:22,809

interested that's a technical question

1675

01:13:27,089 --> 01:13:25,239

for my model to try to work on but

1676

01:13:29,129 --> 01:13:27,099

that's the nice thing it's actually now

1677

01:13:30,419 --> 01:13:29,139

a scientific question for me to ask that

1678

01:13:32,009 --> 01:13:30,429

question

1679

01:13:33,500 --> 01:13:32,019

whereas in the physicalist framework

1680

01:13:37,649 --> 01:13:33,510

it's just off the table

1681

01:13:40,439 --> 01:13:37,659

well dr. Hoffman that's outstanding the

1682

01:13:43,549 --> 01:13:40,449

whole thing is just so exciting and I

1683

01:13:46,229 --> 01:13:43,559

love the way that you've kind of

1684

01:13:48,180 --> 01:13:46,239

reinvigorated science about these

1685

01:13:49,709 --> 01:13:48,190

important questions who are we why are

1686

01:13:51,719 --> 01:13:49,719

we here that's what science was supposed

1687

01:13:53,360 --> 01:13:51,729

to be about from the beginning anyway I

1688

01:13:56,480 --> 01:13:53,370

agree what

1689

01:13:59,230 --> 01:13:56,490

next where are you going with this new

1690

01:14:02,440 --> 01:13:59,240

books do presentations how do people

1691

01:14:06,410 --> 01:14:02,450

stay on top of what you're discovering

1692

01:14:08,390 --> 01:14:06,420

well I have a Twitter feed and I'm I try

1693

01:14:11,330 --> 01:14:08,400

to be good about putting stuff on the

1694

01:14:13,490 --> 01:14:11,340

Twitter feed I'm an academic and so I'm

1695

01:14:15,260 --> 01:14:13,500

not a social media guru but I do try to

1696

01:14:18,620 --> 01:14:15,270

put stuff on my Twitter feed one when it

1697

01:14:20,030 --> 01:14:18,630

comes up so it's at Donald D Hoffman at

1698

01:14:24,620 --> 01:14:20,040

Donald E Hoffman um

1699

01:14:26,300 --> 01:14:24,630

and where I'm going is I have a small

1700

01:14:29,300 --> 01:14:26,310

team of researchers that are very

1701

01:14:30,980 --> 01:14:29,310

talented and our goal is to really work

1702

01:14:34,690 --> 01:14:30,990

out the mathematics of this conscious

1703

01:14:37,010 --> 01:14:34,700

agent Network I want to understand and

1704

01:14:38,600 --> 01:14:37,020

study the dynamics actually build

1705

01:14:43,640 --> 01:14:38,610

dynamical systems of conscious agents

1706

01:14:45,740 --> 01:14:43,650

and ultimately show how that dynamics

1707

01:14:48,200 --> 01:14:45,750

when it gets projected back into space

1708

01:14:50,060 --> 01:14:48,210

and time gives us back the science that

1709

01:14:51,410 --> 01:14:50,070

we already know and love general

1710

01:14:53,390 --> 01:14:51,420

relativity quantum field theory and

1711

01:14:55,280 --> 01:14:53,400

evolution by natural selection I want to

1712

01:14:58,430 --> 01:14:55,290

show that those that science is a

1713

01:14:59,570 --> 01:14:58,440

projection of a deeper evolution of

1714

01:15:02,240 --> 01:14:59,580

consciousness that we can get

1715

01:15:03,710 --> 01:15:02,250

mathematically precise so that's by the

1716

01:15:05,120 --> 01:15:03,720

way that you know that's not going to be

1717

01:15:08,330 --> 01:15:05,130

just a year or two that mean we're

1718

01:15:09,590 --> 01:15:08,340

talking multi-decade effort here well if

1719

01:15:11,960 --> 01:15:09,600

they're what it's been absolutely

1720

01:15:15,170 --> 01:15:11,970

terrific having you on the show today

1721

01:15:16,880 --> 01:15:15,180

and I can congratulate you and just

1722

01:15:19,100 --> 01:15:16,890

thank you so much for joining me thank

1723

01:15:20,870 --> 01:15:19,110

you alex has been a great pleasure thank

1724

01:15:24,980 --> 01:15:20,880

you for the great questions and the

1725

01:15:27,380 --> 01:15:24,990

great pushback so after the interview I

1726

01:15:29,210 --> 01:15:27,390

called up my buddy Richard Greg Oh got

1727

01:15:32,260 --> 01:15:29,220

his thoughts on some of what we talked

1728

01:15:36,140 --> 01:15:32,270

about maybe you just want to introduce

1729

01:15:40,130 --> 01:15:36,150

yourself okay sure I'm rich Greg Oh a

1730

01:15:42,320 --> 01:15:40,140

faculty at Florida State College and I

1731

01:15:45,020 --> 01:15:42,330

am some time contributor to skeptical

1732

01:15:48,250 --> 01:15:45,030

we've had this kind of ongoing interest

1733

01:15:50,180 --> 01:15:48,260

in dialogue on parapsychology

1734

01:15:52,220 --> 01:15:50,190

consciousness and the crossover with

1735

01:15:55,190 --> 01:15:52,230

philosophy so I always kind of lean on

1736

01:15:58,970 --> 01:15:55,200

you when we get to these questions

1737

01:16:01,160 --> 01:15:58,980

because we just have a they have a lot

1738

01:16:02,990 --> 01:16:01,170

of fun and an interesting dialogue going

1739

01:16:05,150 --> 01:16:03,000

back and forth so when this thing came

1740

01:16:05,730 --> 01:16:05,160

up with Dan Hoffman the possibility

1741

01:16:08,910 --> 01:16:05,740

interview

1742

01:16:10,830 --> 01:16:08,920

you actually helped me reconnect with

1743

01:16:13,470 --> 01:16:10,840

Donna I had interviewed him a while back

1744

01:16:15,840 --> 01:16:13,480

and then set up this interview so that

1745

01:16:18,750 --> 01:16:15,850

that was really cool and I appreciate

1746

01:16:21,690 --> 01:16:18,760

all that help so but I thought we might

1747

01:16:23,550 --> 01:16:21,700

talk about here at the beginning and I'm

1748

01:16:28,020 --> 01:16:23,560

thinking what we this stuff might be

1749

01:16:31,440 --> 01:16:28,030

included in is that who is Donald

1750

01:16:34,020 --> 01:16:31,450

Hoffman because this is a guy who people

1751

01:16:38,250 --> 01:16:34,030

are going to run into on Sam Harris's

1752

01:16:40,250 --> 01:16:38,260

show or on Michael Shermer show but he

1753

01:16:44,340 --> 01:16:40,260

sits in kind of this strange space

1754

01:16:47,790 --> 01:16:44,350

between us if you will and him you know

1755

01:16:50,430 --> 01:16:47,800

yeah yeah definitely and yeah in terms

1756

01:16:52,200 --> 01:16:50,440

of what you asked I think one of the one

1757

01:16:54,500 --> 01:16:52,210

of his great contributions he's doing

1758

01:16:56,520 --> 01:16:54,510

the research in consciousness studies

1759

01:16:58,920 --> 01:16:56,530

and he's one of the leading figures

1760

01:17:01,020 --> 01:16:58,930

there but you see him everywhere right

1761

01:17:04,200 --> 01:17:01,030

yeah he's online he's really got a

1762

01:17:06,480 --> 01:17:04,210

strong media presence as well so so rich

1763

01:17:10,260 --> 01:17:06,490

how would you sum up for people this

1764

01:17:12,420 --> 01:17:10,270

idea that you know I'm like one little

1765

01:17:16,790 --> 01:17:12,430

thing like man he plays up this

1766

01:17:19,410 --> 01:17:16,800

evolution [h__h] absolutely yeah I think I

1767

01:17:21,000 --> 01:17:19,420

probably in his defense you know any

1768

01:17:24,450 --> 01:17:21,010

criticism that you hear from me about

1769

01:17:26,880 --> 01:17:24,460

him I say is in the most constructive

1770

01:17:29,010 --> 01:17:26,890

respectful way possible because I think

1771

01:17:31,500 --> 01:17:29,020

like you I really appreciate what he's

1772

01:17:33,660 --> 01:17:31,510

doing in the field of consciousness

1773

01:17:36,510 --> 01:17:33,670

studies he's certainly one of the

1774

01:17:39,390 --> 01:17:36,520

pioneers in terms of coming a long way

1775

01:17:42,690 --> 01:17:39,400

from really the reductive materialism

1776

01:17:45,420 --> 01:17:42,700

that was all you heard a couple of maybe

1777

01:17:48,060 --> 01:17:45,430

a decade ago even or two decades ago

1778

01:17:51,090 --> 01:17:48,070

certainly I I think what he's trying to

1779

01:17:54,960 --> 01:17:51,100

do is he's trying to make spirituality

1780

01:17:57,270 --> 01:17:54,970

in some sense palatable for an a

1781

01:18:01,820 --> 01:17:57,280

scholarly audience that is still

1782

01:18:04,710 --> 01:18:01,830

enthralled to the the old scientific

1783

01:18:06,930 --> 01:18:04,720

materialistic paradigm that needs to

1784

01:18:10,260 --> 01:18:06,940

have anything you say about spirituality

1785

01:18:13,110 --> 01:18:10,270

couched in those in that jargon that

1786

01:18:17,730 --> 01:18:13,120

traditional materialist jargon how he

1787

01:18:19,120 --> 01:18:17,740

does find a way to fit in with some of

1788

01:18:24,940 --> 01:18:19,130

those folks the

1789

01:18:26,710 --> 01:18:24,950

konna sometimes robust how does it heat

1790

01:18:29,380 --> 01:18:26,720

so maybe you want to kind of stay yeah

1791

01:18:32,350 --> 01:18:29,390

he does that and how he does that yeah I

1792

01:18:34,600 --> 01:18:32,360

think what's great about Donald Hofmann

1793

01:18:39,360 --> 01:18:34,610

is he has found a way to both sort of go

1794

01:18:42,550 --> 01:18:39,370

against the the prevailing grain of

1795

01:18:44,770 --> 01:18:42,560

traditional theories of consciousness

1796

01:18:47,250 --> 01:18:44,780

which tended toward the materialistic

1797

01:18:51,280 --> 01:18:47,260

side of the materialist versus

1798

01:18:56,770 --> 01:18:51,290

consciousness spectrum and he has done

1799

01:19:01,480 --> 01:18:56,780

it in a way that articulates the notion

1800

01:19:04,500 --> 01:19:01,490

that consciousness is what generates

1801

01:19:09,310 --> 01:19:04,510

material reality but he's done it in

1802

01:19:11,620 --> 01:19:09,320

terms of things like evolution and

1803

01:19:14,170 --> 01:19:11,630

mathematical empirically verifiable

1804

01:19:16,240 --> 01:19:14,180

mathematical theories that make it

1805

01:19:19,510 --> 01:19:16,250

palatable or at least somewhat palatable

1806

01:19:21,190 --> 01:19:19,520

at least it enables him to talk to to

1807

01:19:23,680 --> 01:19:21,200

the majority of the scientific community

1808

01:19:25,480 --> 01:19:23,690

that does not agree with that and I

1809

01:19:27,310 --> 01:19:25,490

almost get the sense sometime in

1810

01:19:28,180 --> 01:19:27,320

listening like to his interview with

1811

01:19:30,910 --> 01:19:28,190

Michael Shermer

1812

01:19:34,660 --> 01:19:30,920

or his interview with Sam Harris that

1813

01:19:37,060 --> 01:19:34,670

they don't quite totally know what he's

1814

01:19:40,000 --> 01:19:37,070

saying because he throws out these terms

1815

01:19:43,090 --> 01:19:40,010

like evolution and he throws out these

1816

01:19:45,460 --> 01:19:43,100

terms like provable mathematical models

1817

01:19:49,630 --> 01:19:45,470

and they're like nodding their head and

1818

01:19:51,370 --> 01:19:49,640

then he kind of says of course this is

1819

01:19:54,730 --> 01:19:51,380

fundamental and there is no your

1820

01:19:58,110 --> 01:19:54,740

time-space is doomed and reality isn't

1821

01:20:01,270 --> 01:19:58,120

well so he's kind of very cleverly

1822

01:20:03,690 --> 01:20:01,280

throwing him for a loop there if that's

1823

01:20:06,880 --> 01:20:03,700

yeah if that's his intention I agree

1824

01:20:11,680 --> 01:20:06,890

he's at least yeah he's at least

1825

01:20:15,160 --> 01:20:11,690

articulating very yeah very anti

1826

01:20:18,100 --> 01:20:15,170

materialist ideas in terms that a

1827

01:20:21,520 --> 01:20:18,110

materialist could relate to and if

1828

01:20:24,670 --> 01:20:21,530

they're not particularly subtle thinkers

1829

01:20:27,010 --> 01:20:24,680

or trained well in philosophy of mind

1830

01:20:29,290 --> 01:20:27,020

they might just think that he's one of

1831

01:20:30,730 --> 01:20:29,300

them I don't know if that's the case so

1832

01:20:32,710 --> 01:20:30,740

here's another thing I thought we might

1833

01:20:34,900 --> 01:20:32,720

chat about because again it

1834

01:20:36,730 --> 01:20:34,910

inside baseball and and then when you

1835

01:20:39,730 --> 01:20:36,740

break it down I think it really can be

1836

01:20:42,730 --> 01:20:39,740

very revealing to people I thought his

1837

01:20:44,860 --> 01:20:42,740

story on the TED talk and the origins of

1838

01:20:47,290 --> 01:20:44,870

his TED talk which is kind of a

1839

01:20:48,820 --> 01:20:47,300

breakthrough event for someone of his

1840

01:20:51,940 --> 01:20:48,830

position you know and this kind of

1841

01:20:54,340 --> 01:20:51,950

obscure consciousness studies thing and

1842

01:20:57,850 --> 01:20:54,350

he does this TED talk and he has 2.7

1843

01:20:59,490 --> 01:20:57,860

million views on it but the origin so

1844

01:21:01,990 --> 01:20:59,500

that is interesting because of course

1845

01:21:04,270 --> 01:21:02,000

people who listen to skeptic OU will

1846

01:21:07,180 --> 01:21:04,280

remember you know Rupert Sheldrake's

1847

01:21:10,090 --> 01:21:07,190

famous TED talk that was banned for a

1848

01:21:13,180 --> 01:21:10,100

lot less controversial stuff that Don

1849

01:21:15,700 --> 01:21:13,190

Hoffman said maybe that is somewhat of

1850

01:21:17,830 --> 01:21:15,710

an indication of the times and how

1851
01:21:19,690 --> 01:21:17,840
things have changed a little bit there's

1852
01:21:22,360 --> 01:21:19,700
two ways of looking at it even there's a

1853
01:21:24,610 --> 01:21:22,370
genuine change inside of Ted or as I

1854
01:21:26,680 --> 01:21:24,620
suspect they just can't quite get away

1855
01:21:30,640 --> 01:21:26,690
with it to the extent that they could

1856
01:21:33,520 --> 01:21:30,650
before so now they let him talk but what

1857
01:21:36,100 --> 01:21:33,530
do you make of the backstory of the TED

1858
01:21:38,170 --> 01:21:36,110
talk as he describes it and how he was

1859
01:21:41,320 --> 01:21:38,180
kind of asked to kind of hey maybe shift

1860
01:21:43,270 --> 01:21:41,330
it over and talk about this more and

1861
01:21:46,000 --> 01:21:43,280
just that whole thing what did you make

1862
01:21:49,030 --> 01:21:46,010
of that yeah I really wasn't sure

1863
01:21:52,180 --> 01:21:49,040

exactly how he meant that you you seem

1864

01:21:53,920 --> 01:21:52,190

to understand that on a more subtle

1865

01:21:56,290 --> 01:21:53,930

level than and I did and I was wondering

1866

01:21:58,210 --> 01:21:56,300

if you knew more than I did about the

1867

01:22:01,120 --> 01:21:58,220

backstory to that for that whole

1868

01:22:03,730 --> 01:22:01,130

scenario well I remember when this thing

1869

01:22:06,180 --> 01:22:03,740

happened with dr. Rupert Shelldrake a few

1870

01:22:09,100 --> 01:22:06,190

years ago and I remember talking to

1871

01:22:11,440 --> 01:22:09,110

Sheldrick and he actually said that he

1872

01:22:13,690 --> 01:22:11,450

talked to Chris Anderson who was the

1873

01:22:16,120 --> 01:22:13,700

creator of the TED talk series and still

1874

01:22:18,370 --> 01:22:16,130

is actively involved in it and that he

1875

01:22:20,140 --> 01:22:18,380

this is Rupert saying you know he got a

1876

01:22:22,030 --> 01:22:20,150

pretty good vibe from Chris and he was

1877

01:22:25,720 --> 01:22:22,040

just like hey man you know I do need to

1878

01:22:29,740 --> 01:22:25,730

kind of make sure that we are not

1879

01:22:34,180 --> 01:22:29,750

spreading kind of crazy ideas and I do

1880

01:22:37,300 --> 01:22:34,190

have this secret scientific board it

1881

01:22:40,120 --> 01:22:37,310

anonymously decides and guides me in

1882

01:22:42,670 --> 01:22:40,130

doing that which sounds very very shaky

1883

01:22:44,290 --> 01:22:42,680

but it does sound like you know he's

1884

01:22:46,280 --> 01:22:44,300

somebody he was involved in and I

1885

01:22:48,770 --> 01:22:46,290

couldn't see him kind of shaping

1886

01:22:51,110 --> 01:22:48,780

saying hey we can go here but let's not

1887

01:22:53,000 --> 01:22:51,120

go there kind of thing but I don't want

1888

01:22:55,610 --> 01:22:53,010

to make a bigger deal out of it than it

1889

01:22:58,010 --> 01:22:55,620

is because I do not have any inside

1890

01:23:00,740 --> 01:22:58,020

information I just thought it was kind

1891

01:23:03,950 --> 01:23:00,750

of a curious here's the other thing that

1892

01:23:06,350 --> 01:23:03,960

I wanted to kind of just throw on the

1893

01:23:10,100 --> 01:23:06,360

table and that is this whole idea of

1894

01:23:12,590 --> 01:23:10,110

mathematics and mathematical modeling

1895

01:23:15,760 --> 01:23:12,600

and the first thing I wanted to kind of

1896

01:23:18,830 --> 01:23:15,770

chat about is there's a reality to what

1897

01:23:20,780 --> 01:23:18,840

dr. Hoffman is talking about there and

1898

01:23:23,330 --> 01:23:20,790

that he's so excited about it this great

1899

01:23:25,580 --> 01:23:23,340

that there are you know deep thinkers

1900

01:23:27,860 --> 01:23:25,590

scientists like him were excited about

1901

01:23:29,270 --> 01:23:27,870

math and excited about math models and

1902

01:23:32,450 --> 01:23:29,280

what I wanted to throw on the table is

1903

01:23:36,140 --> 01:23:32,460

in defense of him if anyone has ever

1904

01:23:39,590 --> 01:23:36,150

looked at the math behind quantum

1905

01:23:42,560 --> 01:23:39,600

physics you know you just are kind of

1906

01:23:44,570 --> 01:23:42,570

blown away because to a lot of us

1907

01:23:46,400 --> 01:23:44,580

quantum physics still has this whoo-who

1908

01:23:48,770 --> 01:23:46,410

element the way that it's talked about

1909

01:23:51,020 --> 01:23:48,780

and for people who are in the field

1910

01:23:55,070 --> 01:23:51,030

they're like are you kidding the math

1911

01:23:58,510 --> 01:23:55,080

here folks is like super duper at the

1912

01:24:01,280 --> 01:23:58,520

cutting edge of complexity and it yields

1913

01:24:04,030 --> 01:24:01,290

unbelievably reliable predictable

1914

01:24:06,710 --> 01:24:04,040

results and dr. Hoffman is

1915

01:24:09,170 --> 01:24:06,720

understandably very impressed by the

1916

01:24:13,250 --> 01:24:09,180

results that quantum physics generates

1917

01:24:16,640 --> 01:24:13,260

so I want you to maybe kind of pick it

1918

01:24:20,300 --> 01:24:16,650

up there and tell us how your field

1919

01:24:23,030 --> 01:24:20,310

looks at mathematical models as they may

1920

01:24:27,590 --> 01:24:23,040

relate to consciousness what role do

1921

01:24:30,800 --> 01:24:27,600

they play yeah well you know again I

1922

01:24:33,890 --> 01:24:30,810

think contemporary philosophy of mind

1923

01:24:38,560 --> 01:24:33,900

has been becoming increasingly

1924

01:24:44,630 --> 01:24:40,970

various interpretations of quantum

1925

01:24:46,670 --> 01:24:44,640

physics and oh as everyone knows right

1926

01:24:48,620 --> 01:24:46,680

they say everybody conferences they'll

1927

01:24:51,260 --> 01:24:48,630

just they'll say you know just google it

1928

01:24:53,270 --> 01:24:51,270

look up quantum physics a Wikipedia

1929

01:24:55,190 --> 01:24:53,280

right everybody has their their their

1930

01:24:57,350 --> 01:24:55,200

metaphysical interpretation of the math

1931

01:24:59,200 --> 01:24:57,360

and they have math that backs up their

1932

01:25:02,140 --> 01:24:59,210

interpretation well

1933

01:25:03,640 --> 01:25:02,150

the mask isn't as you pointed out in the

1934

01:25:05,649 --> 01:25:03,650

interview the math isn't the

1935

01:25:07,540 --> 01:25:05,659

interpretation the way I kind of read

1936

01:25:10,689 --> 01:25:07,550

what you're saying is to even be a

1937

01:25:13,689 --> 01:25:10,699

player you have to do the really good

1938

01:25:16,120 --> 01:25:13,699

math and then but everyone is going to

1939

01:25:17,919 --> 01:25:16,130

not only have the math but then they're

1940

01:25:20,740 --> 01:25:17,929

going to have their interpretations of

1941

01:25:23,430 --> 01:25:20,750

the math and that's where the philosophy

1942

01:25:26,919 --> 01:25:23,440

comes in and that's why we have these

1943

01:25:29,500 --> 01:25:26,929

differences but their underlying that is

1944

01:25:32,320 --> 01:25:29,510

the math I think that is it until you

1945

01:25:35,649 --> 01:25:32,330

said it one second ago I did not have

1946

01:25:37,540 --> 01:25:35,659

that insight rich his confidence in the

1947

01:25:39,490 --> 01:25:37,550

mathematics and then the empirical

1948

01:25:42,520 --> 01:25:39,500

justifications based on those

1949

01:25:44,709 --> 01:25:42,530

mathematics I think very close to some

1950

01:25:47,620 --> 01:25:44,719

of the pioneers in the field of quantum

1951

01:25:50,110 --> 01:25:47,630

physics Mahanoy Minh and Wigner and

1952

01:25:51,970 --> 01:25:50,120

those guys who said that the

1953

01:25:54,790 --> 01:25:51,980

implications of quantum physics are such

1954

01:25:57,399 --> 01:25:54,800

that we have to retain a very

1955

01:25:59,970 --> 01:25:57,409

foundational place for consciousness a

1956

01:26:03,550 --> 01:25:59,980

lot of people aren't aware of how

1957

01:26:06,189 --> 01:26:03,560

powerful the mathematical models of

1958

01:26:08,020 --> 01:26:06,199

quantum physics are like one of the

1959

01:26:10,870 --> 01:26:08,030

things you'll hear Hofmann just kind of

1960

01:26:13,330 --> 01:26:10,880

throw out and it takes a while to digest

1961

01:26:15,399 --> 01:26:13,340

it is like over at CERN

1962

01:26:17,260 --> 01:26:15,409

you know when they smash those atoms

1963

01:26:19,360 --> 01:26:17,270

together I forget what the stats are but

1964

01:26:24,550 --> 01:26:19,370

every time they run one of those they

1965

01:26:26,709 --> 01:26:24,560

produce like 10 terabytes of data now so

1966

01:26:29,169 --> 01:26:26,719

somebody is then running that data

1967

01:26:31,660 --> 01:26:29,179

through all these complex mathematical

1968

01:26:33,459 --> 01:26:31,670

models and then they're coming up with

1969

01:26:36,550 --> 01:26:33,469

these results like he says where they go

1970

01:26:38,800 --> 01:26:36,560

up spacetime is doomed you know if like

1971

01:26:41,860 --> 01:26:38,810

someone has crunched the numbers the

1972

01:26:44,169 --> 01:26:41,870

terabyte of numbers and the formula

1973

01:26:48,669 --> 01:26:44,179

works out that way and we can only

1974

01:26:51,450 --> 01:26:48,679

imagine how appealing that is to someone

1975

01:26:54,880 --> 01:26:51,460

who really gets the math at a level that

1976

01:26:56,979 --> 01:26:54,890

99.9% people don't get to say that's

1977

01:27:01,030 --> 01:26:56,989

right there look we just crunch the

1978

01:27:03,850 --> 01:27:01,040

numbers that's it so I that the shut up

1979

01:27:06,430 --> 01:27:03,860

and calculate thing has an appeal that

1980

01:27:09,250 --> 01:27:06,440

most of us just don't get because we

1981

01:27:12,939 --> 01:27:09,260

don't understand the extent to which

1982

01:27:15,669 --> 01:27:12,949

these guys really are calculating so

1983

01:27:17,040 --> 01:27:15,679

you don't need the calculations to do

1984

01:27:19,689 --> 01:27:17,050

the interpretation and that

1985

01:27:22,719 --> 01:27:19,699

philosophical stuff but maybe it helps

1986

01:27:25,959 --> 01:27:22,729

us understand it better if we understand

1987

01:27:28,629 --> 01:27:25,969

that there's some really fantastic math

1988

01:27:32,500 --> 01:27:28,639

going on here and that that has an

1989

01:27:35,680 --> 01:27:32,510

allure yeah certainly and and and again

1990

01:27:39,430 --> 01:27:35,690

as he said if you if in terms of making

1991

01:27:42,640 --> 01:27:39,440

empirical predictions of math and being

1992

01:27:45,790 --> 01:27:42,650

useful for extremely practical and

1993

01:27:47,799 --> 01:27:45,800

important aspects of our lives the

1994

01:27:50,589 --> 01:27:47,809

mathematics of quantum physics is really

1995

01:27:53,140 --> 01:27:50,599

important but then rich I love what you

1996

01:27:55,390 --> 01:27:53,150

kind of shot back to me in an email as

1997

01:27:59,620 --> 01:27:55,400

you immediately picked out this idea

1998

01:28:03,549 --> 01:27:59,630

that okay even if we can agree with dr.

1999

01:28:06,160 --> 01:28:03,559

Hoffman do we have to go all the way do

2000

01:28:08,469 --> 01:28:06,170

we have to say that mathematics is the

2001

01:28:08,830 --> 01:28:08,479

be-all end-all and I love how you bring

2002

01:28:11,049 --> 01:28:08,840

up

2003

01:28:13,149 --> 01:28:11,059

well what about poetry and I love the

2004

01:28:15,669 --> 01:28:13,159

juxtaposition of that I was just helping

2005

01:28:18,399 --> 01:28:15,679

my daughter who's in high school help

2006

01:28:21,549 --> 01:28:18,409

her with her essay on my poetry deserves

2007

01:28:24,310 --> 01:28:21,559

a stronger place in our curriculum and

2008

01:28:27,189 --> 01:28:24,320

in doing that it would replace some of

2009

01:28:29,259 --> 01:28:27,199

this math but are there other ways of

2010

01:28:31,719 --> 01:28:29,269

understanding that's what you were kind

2011

01:28:34,930 --> 01:28:31,729

of pushing back for in is that sometimes

2012

01:28:37,049 --> 01:28:34,940

maybe a limitation of the physics

2013

01:28:44,109 --> 01:28:37,059

centric kind of approach to

2014

01:28:46,089 --> 01:28:44,119

consciousness yeah kind of one of my

2015

01:28:49,199 --> 01:28:46,099

areas of interest search interests

2016

01:28:52,600 --> 01:28:49,209

lately you know is the sort of the

2017

01:28:55,000 --> 01:28:52,610

paradigm shaping hold that science and

2018

01:29:00,040 --> 01:28:55,010

mathematics which are kind of part and

2019

01:29:02,469 --> 01:29:00,050

parcel of the same same thing have had

2020

01:29:04,299 --> 01:29:02,479

in shaping our you know our sort of

2021

01:29:07,569 --> 01:29:04,309

cultural paradigm and I think you know

2022

01:29:09,219 --> 01:29:07,579

that sometimes and I and again I sense

2023

01:29:11,109 --> 01:29:09,229

it in in consciousness studies when you

2024

01:29:13,089 --> 01:29:11,119

go to conferences about it and listen to

2025

01:29:16,029 --> 01:29:13,099

the guys like Donald Hoffman who are

2026
01:29:20,140 --> 01:29:16,039
shaping the parameters of the discussion

2027
01:29:23,799 --> 01:29:20,150
and the dialogue they equate scientific

2028
01:29:26,890 --> 01:29:23,809
and mathematical descriptions of reality

2029
01:29:29,800 --> 01:29:26,900
with reality and frankly besides being a

2030
01:29:32,710 --> 01:29:29,810
cultural bias of modern Western secular

2031
01:29:35,230 --> 01:29:32,720
society I never hear them really give a

2032
01:29:37,810 --> 01:29:35,240
justification let's take that one step

2033
01:29:41,470 --> 01:29:37,820
further you use the word precision and

2034
01:29:42,940 --> 01:29:41,480
we both love the way that dr. Hoffman

2035
01:29:45,250 --> 01:29:42,950
brought that into the conversation

2036
01:29:48,010 --> 01:29:45,260
especially how he connected it to

2037
01:29:50,500 --> 01:29:48,020
spirituality and that if we're going to

2038
01:29:54,460 --> 01:29:50,510

talk as precise as possible

2039

01:29:57,310 --> 01:29:54,470

Bravo but then what you point out is why

2040

01:30:00,550 --> 01:29:57,320

do we assume that poetry isn't a more

2041

01:30:03,970 --> 01:30:00,560

precise way to describe it and that's

2042

01:30:05,950 --> 01:30:03,980

such a head spinner but I loved that I

2043

01:30:08,950 --> 01:30:05,960

did yeah I mean I think that's really

2044

01:30:10,870 --> 01:30:08,960

important especially now and again

2045

01:30:14,620 --> 01:30:10,880

because I think you know we live in such

2046

01:30:16,590 --> 01:30:14,630

a scientific technocratic kind of a

2047

01:30:23,290 --> 01:30:16,600

culture that we have just sort of

2048

01:30:27,220 --> 01:30:23,300

equated science with fact as a pen and

2049

01:30:29,440 --> 01:30:27,230

and other realms of other modes of

2050

01:30:32,500 --> 01:30:29,450

knowing like poetry or literature or

2051

01:30:35,770 --> 01:30:32,510

spirituality or philosophy even with

2052

01:30:38,860 --> 01:30:35,780

sort of myth or sort of fanciful

2053

01:30:40,450 --> 01:30:38,870

thinking that with it without question

2054

01:30:42,820 --> 01:30:40,460

and that's an assumption that I think is

2055

01:30:45,430 --> 01:30:42,830

largely unchallenged in our culture that

2056

01:30:46,780 --> 01:30:45,440

you know we always talk about when we

2057

01:30:48,820 --> 01:30:46,790

well we don't want to talk about real

2058

01:30:51,930 --> 01:30:48,830

facts about the way reality is of course

2059

01:30:53,530 --> 01:30:51,940

you got to be scientific but I just

2060

01:30:55,510 --> 01:30:53,540

especially when it comes to

2061

01:30:57,010 --> 01:30:55,520

consciousness don't see any

2062

01:30:57,520 --> 01:30:57,020

justification for that I mean you can

2063

01:31:00,820 --> 01:30:57,530

see it

2064

01:31:05,650 --> 01:31:00,830

I mean I'm innocent assume it but in

2065

01:31:09,250 --> 01:31:05,660

terms of explaining to me why say

2066

01:31:11,410 --> 01:31:09,260

reading a novel by Camus or reading st.

2067

01:31:13,660 --> 01:31:11,420

Augustine's Confessions isn't a more

2068

01:31:15,520 --> 01:31:13,670

precise description of conscious life

2069

01:31:19,450 --> 01:31:15,530

than a bunch of mathematical equations

2070

01:31:22,720 --> 01:31:19,460

for God's sake Illi don't get let me

2071

01:31:26,740 --> 01:31:22,730

throw on the pile Emily Dickinson quote

2072

01:31:31,860 --> 01:31:26,750

if I can stop one heart from breaking I

2073

01:31:35,140 --> 01:31:31,870

shall not live in vain this is not a

2074

01:31:38,500 --> 01:31:35,150

mathematical equation but it touches our

2075

01:31:40,330 --> 01:31:38,510

heart in a way that is precise it

2076

01:31:42,970 --> 01:31:40,340

precisely opens

2077

01:31:45,250 --> 01:31:42,980

by our heart to this larger field of

2078

01:31:48,430 --> 01:31:45,260

consciousness and maybe I'm stretching

2079

01:31:50,580 --> 01:31:48,440

the use of the word precise but I would

2080

01:31:52,870 --> 01:31:50,590

kind of throw that on the table this is

2081

01:31:55,830 --> 01:31:52,880

absolutely and I and I think it also

2082

01:32:00,130 --> 01:31:55,840

speaks to the notion of besides it

2083

01:32:01,840 --> 01:32:00,140

piranha Klee precision and success they

2084

01:32:07,090 --> 01:32:01,850

talked about the success of science

2085

01:32:09,640 --> 01:32:07,100

being vague terms in terms of so how do

2086

01:32:11,260 --> 01:32:09,650

you define that you know they're also

2087

01:32:13,690 --> 01:32:11,270

circular I mean the reasoning behind

2088

01:32:15,910 --> 01:32:13,700

them are circular why is mathematics

2089

01:32:17,200 --> 01:32:15,920

more more precise than poetry well

2090

01:32:19,780 --> 01:32:17,210

because you can demonstrate it

2091

01:32:22,600 --> 01:32:19,790

mathematically right why has science

2092

01:32:24,100 --> 01:32:22,610

more successful than spirituality well

2093

01:32:26,560 --> 01:32:24,110

because you're using scientific

2094

01:32:28,390 --> 01:32:26,570

standards of success I've never heard

2095

01:32:32,470 --> 01:32:28,400

them make arguments fundamental

2096

01:32:34,630 --> 01:32:32,480

arguments for that and I would accept

2097

01:32:37,540 --> 01:32:34,640

Donald Hofmann or anybody else saying

2098

01:32:39,370 --> 01:32:37,550

that the the mathematics of

2099

01:32:41,230 --> 01:32:39,380

consciousness is going to be a great

2100

01:32:43,210 --> 01:32:41,240

revolutionary breakthrough for a

2101

01:32:46,480 --> 01:32:43,220

scientific understanding of

2102

01:32:48,220 --> 01:32:46,490

consciousness but they speak about

2103

01:32:51,580 --> 01:32:48,230

mathematical descriptions of

2104

01:32:55,650 --> 01:32:51,590

consciousness as sort of an ultimate

2105

01:32:58,800 --> 01:32:55,660

metaphysical ontological absolute of

2106

01:33:01,720 --> 01:32:58,810

superior to other modes of thought

2107

01:33:03,550 --> 01:33:01,730

description of consciousness and that

2108

01:33:06,580 --> 01:33:03,560

they don't I do not think they make an

2109

01:33:09,100 --> 01:33:06,590

adequate case for okay so we're I think

2110

01:33:11,410 --> 01:33:09,110

coming around the bend let's try and see

2111

01:33:14,170 --> 01:33:11,420

if when you tackle this last one I think

2112

01:33:15,940 --> 01:33:14,180

one aspect of what dr. Hoffman brings to

2113

01:33:19,120 --> 01:33:15,950

the table that we both appreciate is

2114

01:33:22,290 --> 01:33:19,130

that he tries to connect what he's

2115

01:33:25,420 --> 01:33:22,300

discovering or his theory with a deeper

2116

01:33:27,610 --> 01:33:25,430

spirituality and maybe that's a way to

2117

01:33:29,350 --> 01:33:27,620

connect it with this broader

2118

01:33:30,990 --> 01:33:29,360

understanding that you and I are kind of

2119

01:33:34,990 --> 01:33:31,000

grappling with of what consciousness

2120

01:33:43,300 --> 01:33:35,000

really is what do you think he makes the

2121

01:33:44,980 --> 01:33:43,310

case influence of Gnosticism it's it's

2122

01:33:46,530 --> 01:33:44,990

influencing the way it's kind of

2123

01:33:48,730 --> 01:33:46,540

influenced the way I thought about this

2124

01:33:50,830 --> 01:33:48,740

interview when I listened to it a couple

2125

01:33:52,030 --> 01:33:50,840

of times on the gnostic tradition and

2126

01:33:53,300 --> 01:33:52,040

philosophy and religion not to digress

2127

01:33:54,320 --> 01:33:53,310

but it's it

2128

01:33:56,750 --> 01:33:54,330

basically one of their fundamental

2129

01:33:58,910 --> 01:33:56,760

premises is that we live in illusional

2130

01:34:00,680 --> 01:33:58,920

world very much the way Donald Hoffman

2131

01:34:03,740 --> 01:34:00,690

says it except this is a spiritual

2132

01:34:05,540 --> 01:34:03,750

tradition and um one of the assertions

2133

01:34:09,470 --> 01:34:05,550

that they make that I think maybe it

2134

01:34:11,300 --> 01:34:09,480

applies to his thinking about about math

2135

01:34:14,240 --> 01:34:11,310

and science in terms of understanding

2136

01:34:17,990 --> 01:34:14,250

and approaching an ultimate sort of

2137

01:34:19,640 --> 01:34:18,000

understanding of of physicalism in the

2138

01:34:23,840 --> 01:34:19,650

physical world and consciousness in

2139

01:34:26,950 --> 01:34:23,850

relation to it is that a physical world

2140

01:34:30,140 --> 01:34:26,960

in his estimation is certainly illusory

2141

01:34:32,150 --> 01:34:30,150

the perceptions and cognitions and

2142

01:34:37,910 --> 01:34:32,160

conceptual constructs that we come up

2143

01:34:42,200 --> 01:34:37,920

with generate disillusion right and that

2144

01:34:46,040 --> 01:34:42,210

would include mathematics and science so

2145

01:34:49,840 --> 01:34:46,050

that essentially doing math or math and

2146

01:34:52,370 --> 01:34:49,850

science it would seem would perpetuate

2147

01:34:58,040 --> 01:34:52,380

the illusion that they're trying to

2148

01:35:01,130 --> 01:34:58,050

transcend more than transcending it if

2149

01:35:03,980 --> 01:35:01,140

that makes sense the way I describe it

2150

01:35:07,340 --> 01:35:03,990

and that's again I don't know that

2151
01:35:10,190 --> 01:35:07,350
that's perfect perfect what I thought

2152
01:35:12,410 --> 01:35:10,200
I'd again kind of ask if you could do

2153
01:35:14,240 --> 01:35:12,420
for the benefit of the audience no no no

2154
01:35:15,560 --> 01:35:14,250
cuz that's such great stuff I love where

2155
01:35:19,030 --> 01:35:15,570
you're going about earlier such a deep

2156
01:35:22,640 --> 01:35:19,040
thinker in this stuff but maybe kind of

2157
01:35:25,190 --> 01:35:22,650
phrase it more as a question you know of

2158
01:35:28,190 --> 01:35:25,200
like do we have to you know that just

2159
01:35:31,040 --> 01:35:28,200
what you said is that are we going

2160
01:35:35,090 --> 01:35:31,050
further down you know or you know you

2161
01:35:37,160 --> 01:35:35,100
get roughly yeah yeah I guess and

2162
01:35:39,440 --> 01:35:37,170
connecting that to however you want to

2163
01:35:41,390 --> 01:35:39,450

connect it with Gnosticism but I think

2164

01:35:44,030 --> 01:35:41,400

it's even beyond Gnosticism I think we

2165

01:35:46,790 --> 01:35:44,040

all have a sense this deep spiritual

2166

01:35:51,490 --> 01:35:46,800

sense that moving further into math and

2167

01:35:55,580 --> 01:35:51,500

knowing maybe moving us away from this

2168

01:35:57,710 --> 01:35:55,590

deeper spiritual part of us and that

2169

01:36:00,500 --> 01:35:57,720

that has been the constant struggle of

2170

01:36:02,410 --> 01:36:00,510

of science and it you know is you get

2171

01:36:05,950 --> 01:36:02,420

what I'm saying yeah absolutely

2172

01:36:07,189 --> 01:36:05,960

yeah and I like you I think like you I

2173

01:36:09,890 --> 01:36:07,199

give

2174

01:36:11,750 --> 01:36:09,900

often a tremendous amount of credit for

2175

01:36:15,199 --> 01:36:11,760

you know not only you know trying to

2176
01:36:17,899 --> 01:36:15,209
overcome a materialist paradigm and to

2177
01:36:22,969 --> 01:36:17,909
do it via science and rigorous science

2178
01:36:29,600 --> 01:36:22,979
empirical science and mathematics but

2179
01:36:34,219 --> 01:36:29,610
also to understand how mathematics and

2180
01:36:37,009 --> 01:36:34,229
science may play a fundamental role in I

2181
01:36:39,410 --> 01:36:37,019
guess and again this is where I'm not

2182
01:36:41,029 --> 01:36:39,420
sure exactly maybe you know maybe you

2183
01:36:42,890 --> 01:36:41,039
get it but this is one of the things I'm

2184
01:36:44,839 --> 01:36:42,900
unclear about what he's saying and my

2185
01:36:48,620 --> 01:36:44,849
question was intended to to try to

2186
01:36:51,439 --> 01:36:48,630
discern he see obviously if everything

2187
01:36:56,209 --> 01:36:51,449
is in consciousness everything in the

2188
01:36:59,689 --> 01:36:56,219

world is part of consciousness but he

2189

01:37:03,049 --> 01:36:59,699

also thinks that math and science

2190

01:37:06,439 --> 01:37:03,059

give us some privileged access with a

2191

01:37:08,209 --> 01:37:06,449

particular kind of precision - what what

2192

01:37:10,850 --> 01:37:08,219

what what it's all about in some

2193

01:37:14,810 --> 01:37:10,860

ultimate sense and how we generate this

2194

01:37:17,149 --> 01:37:14,820

user-interface illusion it seems as

2195

01:37:20,000 --> 01:37:17,159

though he's sim his thinking is sort of

2196

01:37:24,109 --> 01:37:20,010

similar to the Platonic ancient Greek

2197

01:37:26,569 --> 01:37:24,119

philosophers um who felt that we do live

2198

01:37:29,089 --> 01:37:26,579

in this sort of AI idealistic world of

2199

01:37:30,979 --> 01:37:29,099

consciousness but math Matt it's quite

2200

01:37:33,620 --> 01:37:30,989

it's in at some foundational level

2201
01:37:35,949 --> 01:37:33,630
mathematical again I'd love to have him

2202
01:37:39,020 --> 01:37:35,959
here to ask him that and you kind of did

2203
01:37:41,600 --> 01:37:39,030
and I but I wasn't sure what his answer

2204
01:37:43,609 --> 01:37:41,610
meant it sounded as though that's what

2205
01:37:46,100 --> 01:37:43,619
he was saying but I don't know what do

2206
01:37:47,930 --> 01:37:46,110
you think but before I answer that I

2207
01:37:50,239 --> 01:37:47,940
want to bring you back to your point

2208
01:37:52,250 --> 01:37:50,249
that you made earlier about Gnosticism

2209
01:37:55,879 --> 01:37:52,260
and I want to see if you can do it again

2210
01:37:58,790 --> 01:37:55,889
and say it because I love where yup what

2211
01:38:01,339 --> 01:37:58,800
that rich is is it moving us you have to

2212
01:38:05,259 --> 01:38:01,349
wonder if that illusion of moving

2213
01:38:08,750 --> 01:38:05,269

towards knowing is maybe moving us away

2214

01:38:10,189 --> 01:38:08,760

from the deeper spirituality that's what

2215

01:38:13,040 --> 01:38:10,199

I took out of what you're saying about

2216

01:38:15,410 --> 01:38:13,050

the narcissism thing yeah so I think I

2217

01:38:18,229 --> 01:38:15,420

got that I'm the first time around but

2218

01:38:20,930 --> 01:38:18,239

again if you could simplify it for folks

2219

01:38:22,790 --> 01:38:20,940

tighten it up what

2220

01:38:24,950 --> 01:38:22,800

Donald Hofmann is trying to accomplish

2221

01:38:28,090 --> 01:38:24,960

and doing really great job of that on

2222

01:38:31,040 --> 01:38:28,100

many levels is trying to provide a

2223

01:38:33,980 --> 01:38:31,050

mathematically rigorous description of

2224

01:38:37,670 --> 01:38:33,990

both consciousness and how consciousness

2225

01:38:40,280 --> 01:38:37,680

generates this illusional material world

2226

01:38:42,170 --> 01:38:40,290

that we live in illusion in this in

2227

01:38:44,900 --> 01:38:42,180

the sense that a user interface on a

2228

01:38:50,450 --> 01:38:44,910

computer is illusion again my concern

2229

01:38:53,360 --> 01:38:50,460

though is that if the constructs of our

2230

01:38:56,180 --> 01:38:53,370

consciousness are what generate the user

2231

01:38:59,120 --> 01:38:56,190

interface then Matt the math and science

2232

01:39:01,730 --> 01:38:59,130

that he has a lot of faith in instead of

2233

01:39:04,220 --> 01:39:01,740

leading us out of the illusion of

2234

01:39:08,360 --> 01:39:04,230

helping us transcend the illusion they

2235

01:39:10,040 --> 01:39:08,370

maybe bring generating further further

2236

01:39:15,260 --> 01:39:10,050

illusions bringing us further down the

2237

01:39:17,540 --> 01:39:15,270

rabbit hole so to speak so what else

2238

01:39:19,850 --> 01:39:17,550

from this rich do we want to kind of

2239

01:39:22,610 --> 01:39:19,860

throw on the throw on the table for

2240

01:39:25,910 --> 01:39:22,620

people to consider you i've hit on some

2241

01:39:31,040 --> 01:39:25,920

of the high points from your email to me

2242

01:39:32,840 --> 01:39:31,050

is there anything else that jim i don't

2243

01:39:35,110 --> 01:39:32,850

know I I mean I think it's it's pretty

2244

01:39:38,570 --> 01:39:35,120

amazing some of what he's talking about

2245

01:39:42,490 --> 01:39:38,580

for instance I mean maybe even more

2246

01:39:45,830 --> 01:39:42,500

shocking than coming up with a

2247

01:39:48,410 --> 01:39:45,840

measurable objectively mathematically

2248

01:39:52,880 --> 01:39:48,420

confirmable definition and description

2249

01:39:55,070 --> 01:39:52,890

of consciousness is apparently he's

2250

01:39:56,960 --> 01:39:55,080

doing this with the concept of God which

2251

01:39:59,270 --> 01:39:56,970

is fascinating

2252

01:40:01,640 --> 01:39:59,280

you guys didn't dwell on it too much in

2253

01:40:03,350 --> 01:40:01,650

the in your conversation but I would

2254

01:40:05,660 --> 01:40:03,360

imagine that would jump out at a lot of

2255

01:40:07,760 --> 01:40:05,670

people he says he's the first person to

2256

01:40:11,570 --> 01:40:07,770

ever do this but I do know that Kirk

2257

01:40:14,270 --> 01:40:11,580

girdle actually I believe when he was at

2258

01:40:16,670 --> 01:40:14,280

the physics the advanced Advanced

2259

01:40:19,700 --> 01:40:16,680

Studies Institute at Princeton I think

2260

01:40:21,620 --> 01:40:19,710

came up with a mathematical proof of God

2261

01:40:26,620 --> 01:40:21,630

but I I don't know if that that to me

2262

01:40:28,520 --> 01:40:26,630

again it illustrates that sort of the

2263

01:40:33,030 --> 01:40:28,530

problems I think you're going to run

2264

01:40:35,790 --> 01:40:33,040

into if you if you try to route

2265

01:40:38,400 --> 01:40:35,800

Illi can't he won't I can't say he's

2266

01:40:41,010 --> 01:40:38,410

trying to reduce reality to mathematics

2267

01:40:43,890 --> 01:40:41,020

but if you restrict your purview to

2268

01:40:45,960 --> 01:40:43,900

mathematics and empirical science I

2269

01:40:48,090 --> 01:40:45,970

think you know the the notion that

2270

01:40:50,640 --> 01:40:48,100

somehow you're gonna fit God whatever

2271

01:40:52,650 --> 01:40:50,650

that might be into that box sort of

2272

01:40:55,110 --> 01:40:52,660

points really highlights some of the

2273

01:40:57,060 --> 01:40:55,120

problems you're gonna have if you use if

2274

01:41:02,430 --> 01:40:57,070

you limit yourself to his approach

2275

01:41:09,240 --> 01:41:02,440

I guess if that makes sense nice nice

2276

01:41:10,950 --> 01:41:09,250

all great stuff okay so what do you

2277

01:41:12,780 --> 01:41:10,960

think I'm really interested to really

2278

01:41:16,440 --> 01:41:12,790

know what your ah your take on them oh

2279

01:41:19,320 --> 01:41:16,450

I'm a nice terms of all those issues and

2280

01:41:21,930 --> 01:41:19,330

what you where you where where he stands

2281

01:41:24,450 --> 01:41:21,940

it's I mean I guess it you know if I had

2282

01:41:27,030 --> 01:41:24,460

to place myself in terms of the guys

2283

01:41:29,280 --> 01:41:27,040

right now that I like in consciousness

2284

01:41:31,140 --> 01:41:29,290

studies I really like Bernardo Castro

2285

01:41:33,030 --> 01:41:31,150

and you're obviously you're the

2286

01:41:36,180 --> 01:41:33,040

constituency of skeptical know him very

2287

01:41:38,670 --> 01:41:36,190

well and I gathered I I'm always trying

2288

01:41:41,310 --> 01:41:38,680

to place you yeah because there's a good

2289

01:41:46,320 --> 01:41:41,320

good interviewer sometimes it's hard to

2290

01:41:48,810 --> 01:41:46,330

discern but I gather that that's kind of

2291

01:41:53,820 --> 01:41:48,820

where you stand or would like to stand

2292

01:41:55,500 --> 01:41:53,830

if you shion's yeah I think so you know

2293

01:41:59,520 --> 01:41:55,510

you're chatting a minute ago about the

2294

01:42:02,340 --> 01:41:59,530

Gnostic kind of thing and I always kind

2295

01:42:03,720 --> 01:42:02,350

of pull back a little bit on the Gnostic

2296

01:42:06,660 --> 01:42:03,730

idea because it seems to have a little

2297

01:42:22,140 --> 01:42:06,670

bit of the backdoor materialism feel

2298

01:42:25,470 --> 01:42:22,150

that you okay so from up from a kind of

2299

01:42:28,500 --> 01:42:25,480

non-dual kind of yogic philosophy none

2300

01:42:31,680 --> 01:42:28,510

of the things that kind of seems and

2301

01:42:33,960 --> 01:42:31,690

feels right to me is that that's all

2302

01:42:36,810 --> 01:42:33,970

this middle zone and what we're really

2303

01:42:40,470 --> 01:42:36,820

trying to do is transcend it and if we

2304

01:42:45,160 --> 01:42:40,480

have to stop along the river at a rock

2305

01:42:48,550 --> 01:42:45,170

that is pants psychism or idealism

2306

01:42:51,669 --> 01:42:48,560

or even a rock further back which is a

2307

01:42:52,780 --> 01:42:51,679

mathematical model of consciousness and

2308

01:42:56,410 --> 01:42:52,790

that's okay

2309

01:42:58,030 --> 01:42:56,420

but I think you know on a kind of more

2310

01:43:00,270 --> 01:42:58,040

of a faith based thing where we're

2311

01:43:02,770 --> 01:43:00,280

heading is towards something that

2312

01:43:04,570 --> 01:43:02,780

transcends all that and that would be

2313

01:43:07,930 --> 01:43:04,580

the measure of whether were Hritik

2314

01:43:10,090 --> 01:43:07,940

really getting closer it is kind of I

2315

01:43:11,830 --> 01:43:10,100

mean I've kind of said this and this is

2316

01:43:14,020 --> 01:43:11,840

maybe just private between you and I but

2317

01:43:15,340 --> 01:43:14,030

you know the sceptical thing I didn't

2318

01:43:18,130 --> 01:43:15,350

even know what I was getting into but

2319

01:43:20,350 --> 01:43:18,140

it's the inquiry to perpetuate doubt and

2320

01:43:23,770 --> 01:43:20,360

continually doubting continually saying

2321

01:43:26,140 --> 01:43:23,780

we're not there yet which I do respect

2322

01:43:27,850 --> 01:43:26,150

and appreciate about Hoffman this can't

2323

01:43:30,610 --> 01:43:27,860

possibly be right and this will

2324

01:43:32,590 --> 01:43:30,620

undoubtedly be proven wrong that in a

2325

01:43:35,050 --> 01:43:32,600

way is the deepest most profound

2326

01:43:37,479 --> 01:43:35,060

spiritual thing he can say and I'd say

2327

01:43:40,150 --> 01:43:37,489

the same thing you know from it's not

2328

01:43:44,380 --> 01:43:40,160

neti neti neti not this not this not

2329

01:43:48,450 --> 01:43:44,390

this kind of thing and for me there is

2330

01:43:52,060 --> 01:43:48,460

that that is not only an axiom but it is

2331

01:43:55,140 --> 01:43:52,070

maybe closer to an ultimate truth that

2332

01:43:58,090 --> 01:43:55,150

if we ever think we're getting towards

2333

01:44:00,370 --> 01:43:58,100

you know some answer to this then we are

2334

01:44:08,200 --> 01:44:00,380

as you said need to kind of check

2335

01:44:11,050 --> 01:44:08,210

ourselves do you accept his sort of so

2336

01:44:14,470 --> 01:44:11,060

because sometimes he speaks that way do

2337

01:44:17,709 --> 01:44:14,480

you accept a sort of stark contrast

2338

01:44:21,640 --> 01:44:17,719

between its kind of spiritual silence

2339

01:44:24,010 --> 01:44:21,650

that he speaks about and on one hand and

2340

01:44:28,180 --> 01:44:24,020

then but if you're gonna talk about it

2341

01:44:30,010 --> 01:44:28,190

mathematics and Sciences is the most you

2342

01:44:33,340 --> 01:44:30,020

know whatever the most successful and

2343

01:44:35,650 --> 01:44:33,350

precise way to do it how do you feel

2344

01:44:37,870 --> 01:44:35,660

about that I mean well have obviously

2345

01:44:40,110 --> 01:44:37,880

scientists on your show a lot of time

2346

01:44:43,209 --> 01:44:40,120

not a lot of poets or novelists or

2347

01:44:46,300 --> 01:44:43,219

composers but well I know what I thought

2348

01:44:48,430 --> 01:44:46,310

was so awesome is that when the

2349

01:44:51,970 --> 01:44:48,440

interview brought him to that level he

2350

01:44:54,290 --> 01:44:51,980

seems so authentically spiritual and at

2351

01:44:56,810 --> 01:44:54,300

that point I say you know

2352

01:44:58,820 --> 01:44:56,820

I pronoun to you you know that is your

2353

01:45:02,420 --> 01:44:58,830

path and you're being true to your path

2354

01:45:04,910 --> 01:45:02,430

so Bravo you know I think you know you

2355

01:45:07,010 --> 01:45:04,920

know I mean so it's like I see the

2356

01:45:08,510 --> 01:45:07,020

limitations the same energy do and I

2357

01:45:11,360 --> 01:45:08,520

think with a wink and a nod

2358

01:45:14,960 --> 01:45:11,370

he seems the limitations as well but he

2359

01:45:18,110 --> 01:45:14,970

like all of us says this is the man and

2360

01:45:22,130 --> 01:45:18,120

I am obligated to pursue it kind of

2361

01:45:23,990 --> 01:45:22,140

thing yeah yeah I thought really that

2362

01:45:26,270 --> 01:45:24,000

was just such a great I I thought it was

2363

01:45:28,100 --> 01:45:26,280

a fantastic interview because there was

2364

01:45:30,200 --> 01:45:28,110

so much there and he's saying some

2365

01:45:32,300 --> 01:45:30,210

things that are really important and

2366

01:45:36,880 --> 01:45:32,310

revolutionary and pioneering at least in

2367

01:45:40,010 --> 01:45:36,890

a contemporary you know ethos and you

2368

01:45:42,620 --> 01:45:40,020

simultaneously I think affirmed but also

2369

01:45:44,180 --> 01:45:42,630

clarified and sometimes pushed where it

2370

01:45:46,790 --> 01:45:44,190

was necessary and he acknowledged that

2371

01:45:49,100 --> 01:45:46,800

so I I just thought that was a very

2372

01:45:52,490 --> 01:45:49,110

productive interview I knew I wanted

2373

01:45:54,980 --> 01:45:52,500

things clarified about his thinking that

2374

01:45:55,880 --> 01:45:54,990

were clarified in that interview which

2375

01:45:57,590 --> 01:45:55,890

was fantastic

2376

01:45:59,510 --> 01:45:57,600

because I've listened to plenty of

2377

01:46:01,700 --> 01:45:59,520

interviews and read plenty of his essays

2378

01:46:04,070 --> 01:46:01,710

and things like that so I think I really

2379

01:46:06,320 --> 01:46:04,080

accomplished a lot there that's nice you

2380

01:46:09,650 --> 01:46:06,330

to say rich I also appreciate you not

2381

01:46:15,460 --> 01:46:09,660

backing down on the fact that in a way

2382

01:46:21,430 --> 01:46:19,220

yeah I don't know what he would say

2383

01:46:26,780 --> 01:46:21,440

ultimately or what he thinks ultimately

2384

01:46:29,600 --> 01:46:26,790

that in a sense consciousness is such

2385

01:46:32,060 --> 01:46:29,610

that silence whatever you say is going

2386

01:46:34,880 --> 01:46:32,070

to be about it rather than be an

2387

01:46:36,590 --> 01:46:34,890

authentic experience of it right so and

2388

01:46:38,150 --> 01:46:36,600

maybe he may be he realizes that and

2389

01:46:40,610 --> 01:46:38,160

maybe that's why he can't answer the

2390

01:46:42,650 --> 01:46:40,620

question thanks again to dr. Donald

2391

01:46:45,620 --> 01:46:42,660

Hoffman for joining me today on skeptic

2392

01:46:48,680 --> 01:46:45,630

oh and thanks to dr. rich Griego for

2393

01:46:51,500 --> 01:46:48,690

helping me set up this interview I would

2394

01:46:54,440 --> 01:46:51,510

love to have more people help me set up

2395

01:46:56,570 --> 01:46:54,450

interviews the way that rich has done

2396

01:46:59,840 --> 01:46:56,580

here as a matter of fact if you have an

2397

01:47:03,470 --> 01:46:59,850

itch for show producing and would like

2398

01:47:05,360 --> 01:47:03,480

to do something even more extensive I

2399

01:47:07,280 --> 01:47:05,370

would love to have you collaborate with

2400

01:47:08,040 --> 01:47:07,290

me no matter how ambitious your plans

2401

01:47:09,450 --> 01:47:08,050

are let's

2402

01:47:11,819 --> 01:47:09,460

find a way to make that happen I'm

2403

01:47:14,100 --> 01:47:11,829

actually kind of trying to make some of

2404

01:47:15,810 --> 01:47:14,110

those projects happen right now so let

2405

01:47:18,030 --> 01:47:15,820

me know on that let me know if you have

2406

01:47:20,580 --> 01:47:18,040

any questions or comments on this show

2407

01:47:22,379 --> 01:47:20,590

skeptical forum you can go there you can

2408

01:47:23,850 --> 01:47:22,389

email me Facebook

2409

01:47:25,740 --> 01:47:23,860

I don't really stay up on Facebook I'll

2410

01:47:28,859 --> 01:47:25,750

try and do a better job on Facebook but

2411

01:47:33,000 --> 01:47:28,869

let me know what you think share the

2412

01:47:37,459 --> 01:47:33,010

show with only those people who need to