



1
00:00:06,619 --> 00:00:03,760
the reason I use my own computer is that

2
00:00:07,990 --> 00:00:06,629
the symbols mathematical symbols get

3
00:00:10,370 --> 00:00:08,000
changed in other people's machines

4
00:00:11,990 --> 00:00:10,380
either because I'm not saving it

5
00:00:13,580 --> 00:00:12,000
properly or it's an older version or a

6
00:00:16,359 --> 00:00:13,590
newer version or something like that and

7
00:00:18,349 --> 00:00:16,369
so I've had little is showing

8
00:00:24,970 --> 00:00:18,359
entanglement I've had little telephones

9
00:00:32,659 --> 00:00:27,470
so we'll see how many telephones we get

10
00:00:35,420 --> 00:00:32,669
today okay what I want to talk about I

11
00:00:36,979 --> 00:00:35,430
just go on a review quickly some of the

12
00:00:39,799 --> 00:00:36,989
things that other people have said and

13
00:00:42,650 --> 00:00:39,809

done looking at the interface of

14

00:00:45,319 --> 00:00:42,660

consciousness and the physical physical

15

00:00:46,630 --> 00:00:45,329

reality through quantum theory and then

16

00:00:50,180 --> 00:00:46,640

I want to say a little bit about

17

00:00:55,369 --> 00:00:50,190

something I thought about down here

18

00:00:59,060 --> 00:00:55,379

looking at well you'll see first of all

19

00:01:01,010 --> 00:00:59,070

here's what's happened with

20

00:01:03,410 --> 00:01:01,020

computationalism I would have thought

21

00:01:04,880 --> 00:01:03,420

that I that the last 40 or 50 years had

22

00:01:06,399 --> 00:01:04,890

demonstrated pretty clearly that there

23

00:01:08,929 --> 00:01:06,409

are aspects of higher mental processes

24

00:01:10,520 --> 00:01:08,939

into which the current armamentarium of

25

00:01:11,719 --> 00:01:10,530

computational models theories and

26

00:01:14,000 --> 00:01:11,729

experimental techniques offers

27

00:01:15,440 --> 00:01:14,010

vanishingly little insight and this is

28

00:01:16,999 --> 00:01:15,450

by someone who started the whole

29

00:01:19,670 --> 00:01:17,009

computation 'lest movement in the first

30

00:01:22,310 --> 00:01:19,680

place and so it seems that maybe

31

00:01:23,770 --> 00:01:22,320

something's going wrong here we're up

32

00:01:26,270 --> 00:01:23,780

against a hard problem of consciousness

33

00:01:30,319 --> 00:01:26,280

how do you get an experience will stream

34

00:01:32,060 --> 00:01:30,329

out of you know the biological equipment

35

00:01:35,090 --> 00:01:32,070

that you have or a computational system

36

00:01:36,920 --> 00:01:35,100

and computational has not solved that

37

00:01:40,819 --> 00:01:36,930

problem nor does it look like it ever

38

00:01:43,130 --> 00:01:40,829

will and so that's one reason for

39

00:01:45,319 --> 00:01:43,140

starting to look at consciousness and

40

00:01:46,760 --> 00:01:45,329

quantum theory another reason is that we

41

00:01:49,370 --> 00:01:46,770

need to adequately take into account

42

00:01:50,960 --> 00:01:49,380

data concerning anomalous phenomena such

43

00:01:53,179 --> 00:01:50,970

as the sort of things that we've looked

44

00:01:54,590 --> 00:01:53,189

at here and so maybe we're looking at

45

00:01:57,679 --> 00:01:54,600

the wrong level and bernie already

46

00:01:58,760 --> 00:01:57,689

talked about this it's not the neural

47

00:02:00,260 --> 00:01:58,770

activity that gives rise to

48

00:02:02,660 --> 00:02:00,270

consciousness maybe we need to look

49

00:02:04,910 --> 00:02:02,670

somewhere else or consciousness and so

50

00:02:08,719 --> 00:02:04,920

one place to pick is at the subatomic

51
00:02:12,649 --> 00:02:08,729
level and so we're looking at quantum

52
00:02:16,229 --> 00:02:12,659
theory Ian Marshall

53
00:02:18,780 --> 00:02:16,239
psychiatrist his wife is a physicist

54
00:02:22,020 --> 00:02:18,790
actually they do the inverse she writes

55
00:02:26,459 --> 00:02:22,030
about psychiatric things he writes about

56
00:02:27,959 --> 00:02:26,469
physics things and he proposed that the

57
00:02:30,390 --> 00:02:27,969
ground state of a bose-einstein

58
00:02:32,009 --> 00:02:30,400
condensate could be the basis for an

59
00:02:34,110 --> 00:02:32,019
alert content list state of

60
00:02:35,759 --> 00:02:34,120
consciousness and that excitations of

61
00:02:38,509 --> 00:02:35,769
that ground state could be experienced

62
00:02:41,910 --> 00:02:38,519
as conscious phenomenon bose-einstein

63
00:02:45,089 --> 00:02:41,920

condensates typically such as rubidium

64

00:02:49,050 --> 00:02:45,099

gas occur at low temperatures and the

65

00:02:51,149 --> 00:02:49,060

brain is warm but said Herbert Ehrlich

66

00:02:53,729 --> 00:02:51,159

if you apply sufficient energy to an

67

00:02:57,179 --> 00:02:53,739

appropriate biological system then you

68

00:02:59,069 --> 00:02:57,189

can get greater coherence in that system

69

00:03:01,830 --> 00:02:59,079

and so you're seeing quantum effects in

70

00:03:05,729 --> 00:03:01,840

biological organisms and according to

71

00:03:06,959 --> 00:03:05,739

Marshall it could be these furry sort of

72

00:03:08,819 --> 00:03:06,969

version of bones and I sound like

73

00:03:11,190 --> 00:03:08,829

condensates that are going on in the

74

00:03:15,209 --> 00:03:11,200

brain and they give rise to our

75

00:03:17,939 --> 00:03:15,219

experience something similar was

76

00:03:21,240 --> 00:03:17,949

proposed by Mary G Bell and Kunio Yasui

77

00:03:22,979 --> 00:03:21,250

that what you've got is protein

78

00:03:26,610 --> 00:03:22,989

surrounded by water they call these

79

00:03:27,899 --> 00:03:26,620

quarter cones they form a system and of

80

00:03:30,030 --> 00:03:27,909

course we've talked about water here

81

00:03:31,500 --> 00:03:30,040

ordered water there's a lot of water in

82

00:03:34,319 --> 00:03:31,510

the brain it could be ordered that could

83

00:03:35,429 --> 00:03:34,329

be what retains memory and then they've

84

00:03:39,569 --> 00:03:35,439

got these mechanisms for getting

85

00:03:41,610 --> 00:03:39,579

information in and out of it the main

86

00:03:43,559 --> 00:03:41,620

place where consciousness has been

87

00:03:45,869 --> 00:03:43,569

proposed as sort of an active ingredient

88

00:03:49,439 --> 00:03:45,879

in quantum theories is is what Bernie

89

00:03:51,899 --> 00:03:49,449

was talking about and that is that maybe

90

00:03:54,749 --> 00:03:51,909

it's not that consciousness somehow can

91

00:03:57,379 --> 00:03:54,759

be characterized as these fields or

92

00:03:59,849 --> 00:03:57,389

quantum events but maybe maybe it's a

93

00:04:01,439 --> 00:03:59,859

valve on using von neumann's terms the

94

00:04:04,710 --> 00:04:01,449

abstract eagle maybe it's somewhere

95

00:04:06,599 --> 00:04:04,720

beyond the physical realm and this world

96

00:04:07,890 --> 00:04:06,609

is in a state of superposition until we

97

00:04:09,629 --> 00:04:07,900

observe it when we observe it it

98

00:04:10,520 --> 00:04:09,639

collapses into a single experience

99

00:04:15,059 --> 00:04:10,530

reality

100

00:04:16,949 --> 00:04:15,069

here's eugene wigner same Asst quotation

101
00:04:18,270 --> 00:04:16,959
the reduction of the wave packet takes

102
00:04:20,069 --> 00:04:18,280
place whenever the result of an

103
00:04:21,750 --> 00:04:20,079
observation enters the consciousness of

104
00:04:24,089 --> 00:04:21,760
the observer or to be even more

105
00:04:25,690 --> 00:04:24,099
painfully precise my own consciousness

106
00:04:27,580 --> 00:04:25,700
since I am the only of

107
00:04:32,550 --> 00:04:27,590
over all other people being only

108
00:04:35,140 --> 00:04:32,560
subjects of my observations or maybe not

109
00:04:35,590 --> 00:04:35,150
we ignore himself eventually change his

110
00:04:40,470 --> 00:04:35,600
mind

111
00:04:43,870 --> 00:04:40,480
and in the last 5 10 maybe 15 years

112
00:04:45,790 --> 00:04:43,880
decoherence has been proposed as a as an

113
00:04:49,770 --> 00:04:45,800

alternate explanation for having to

114

00:04:53,770 --> 00:04:49,780

resolve the measurement problem and that

115

00:04:55,990 --> 00:04:53,780

argument is actually fairly messy and so

116

00:04:57,670 --> 00:04:56,000

the this idea that consciousness somehow

117

00:05:02,290 --> 00:04:57,680

collapsing a state vector isn't quite as

118

00:05:06,100 --> 00:05:02,300

compelling as it once was however we

119

00:05:08,200 --> 00:05:06,110

have the coke inspector theorem and so

120

00:05:11,110 --> 00:05:08,210

the problem contextuality remains and

121

00:05:13,330 --> 00:05:11,120

what that means is that observables have

122

00:05:14,680 --> 00:05:13,340

no definite values until the set of

123

00:05:17,650 --> 00:05:14,690

observables to be measured has been

124

00:05:19,570 --> 00:05:17,660

chosen so there are no particles out

125

00:05:20,530 --> 00:05:19,580

there they don't have specific values

126

00:05:22,030 --> 00:05:20,540

and so on and so forth

127

00:05:23,380 --> 00:05:22,040

until you actually choose what it is

128

00:05:25,960 --> 00:05:23,390

that you're going to measure and then at

129

00:05:28,540 --> 00:05:25,970

some point following that that can

130

00:05:30,190 --> 00:05:28,550

happen that's actually the name of the

131

00:05:34,480 --> 00:05:30,200

theorem watched pot never boils

132

00:05:36,400 --> 00:05:34,490

and for Henry stop he walked right

133

00:05:37,960 --> 00:05:36,410

through this door and he said well that

134

00:05:41,230 --> 00:05:37,970

that's exactly what's happening he said

135

00:05:43,690 --> 00:05:41,240

that's where that's what we do we select

136

00:05:45,250 --> 00:05:43,700

and then after the selection nature

137

00:05:48,460 --> 00:05:45,260

causes the collapse he thinks there is a

138

00:05:52,990 --> 00:05:48,470

collapse and in fact he he appeals to

139

00:05:54,580 --> 00:05:53,000

the quantum Zeno effect if you looked at

140

00:05:57,340 --> 00:05:54,590

something and then you look at it again

141

00:05:58,870 --> 00:05:57,350

very quickly it's not go like lis to

142

00:06:00,820 --> 00:05:58,880

change it's going to stay in the state

143

00:06:03,010 --> 00:06:00,830

that it was already in he thinks that

144

00:06:05,620 --> 00:06:03,020

mental effort increases the rapidity

145

00:06:09,010 --> 00:06:05,630

with which selections are made and hence

146

00:06:12,160 --> 00:06:09,020

you get this template for action in the

147

00:06:16,030 --> 00:06:12,170

brain and that's how we get to get the

148

00:06:17,710 --> 00:06:16,040

mind to affect the physical system now

149

00:06:19,870 --> 00:06:17,720

it's very important when you start

150

00:06:21,850 --> 00:06:19,880

talking like this to distinguish between

151
00:06:24,010 --> 00:06:21,860
consciousness is the awareness it's the

152
00:06:25,840 --> 00:06:24,020
experiential stream and the volitional

153
00:06:29,920 --> 00:06:25,850
aspects of consciousness like what is it

154
00:06:31,030 --> 00:06:29,930
that makes things happen and and so Evan

155
00:06:33,100 --> 00:06:31,040
Harris Walker has made those

156
00:06:35,340 --> 00:06:33,110
distinctions Amit Goswami and I've

157
00:06:37,390 --> 00:06:35,350
written about that in the past as well

158
00:06:39,370 --> 00:06:37,400
so now that we're okay so we got

159
00:06:41,860 --> 00:06:39,380
volition volition whatever that may be

160
00:06:43,000 --> 00:06:41,870
and wherever that may be as an aspect of

161
00:06:45,880 --> 00:06:43,010
consciousness maybe some deep

162
00:06:48,370 --> 00:06:45,890
consciousness so Jeanne burns is

163
00:06:50,680 --> 00:06:48,380

proposed that you get mental influence

164

00:06:52,990 --> 00:06:50,690

through quantum fluctuations of a

165

00:06:54,730 --> 00:06:53,000

particles momentum so particle will have

166

00:06:57,220 --> 00:06:54,740

quantum fluctuations and its momentum

167

00:06:59,410 --> 00:06:57,230

and she's calculating need for thousand

168

00:07:01,710 --> 00:06:59,420

molecules to be affected in order to

169

00:07:04,210 --> 00:07:01,720

produce a change in the action potential

170

00:07:06,720 --> 00:07:04,220

causing bodily sensation of course she'd

171

00:07:12,240 --> 00:07:06,730

like she also extends that than to

172

00:07:15,310 --> 00:07:12,250

psychokinetic effects what I think see I

173

00:07:17,320 --> 00:07:15,320

think that what I'm looking for here is

174

00:07:18,910 --> 00:07:17,330

I'm looking for a deep connection a deep

175

00:07:21,550 --> 00:07:18,920

connection between consciousness and

176

00:07:24,640 --> 00:07:21,560

physical reality and and looking forward

177

00:07:26,890 --> 00:07:24,650

in the context of quantum theory and so

178

00:07:30,010 --> 00:07:26,900

that's the idea here I think there's

179

00:07:32,580 --> 00:07:30,020

something to this perhaps some aspects

180

00:07:36,870 --> 00:07:32,590

of consciousness are modeled with these

181

00:07:41,110 --> 00:07:36,880

condensates volitional aspects could be

182

00:07:45,750 --> 00:07:41,120

selecting things and they could play a

183

00:07:49,270 --> 00:07:45,760

role in ordering physical reality and so

184

00:07:52,770 --> 00:07:49,280

let me just step up to quantum field

185

00:07:55,600 --> 00:07:52,780

theory which is the basis for the

186

00:07:56,980 --> 00:07:55,610

contemporary standard model but let me

187

00:07:58,450 --> 00:07:56,990

look at the klein-gordon field the

188

00:08:01,120 --> 00:07:58,460

scalar field and i thought there are

189

00:08:03,880 --> 00:08:01,130

four ways that you could possibly get

190

00:08:05,200 --> 00:08:03,890

stick consciousness in here one is they

191

00:08:07,450 --> 00:08:05,210

could modulate the activity of the

192

00:08:08,890 --> 00:08:07,460

conjugate field through parametric

193

00:08:11,080 --> 00:08:08,900

resonance you could change the frequency

194

00:08:12,580 --> 00:08:11,090

and this is Courtney brown alluded to

195

00:08:15,670 --> 00:08:12,590

the idea of changing frequencies last

196

00:08:17,770 --> 00:08:15,680

might it could act as a separate field

197

00:08:19,920 --> 00:08:17,780

interacting with the scalar field or it

198

00:08:22,690 --> 00:08:19,930

could affect the quantum fluctuations of

199

00:08:25,090 --> 00:08:22,700

the field let's look at the last of

200

00:08:26,590 --> 00:08:25,100

those after second quantization the

201

00:08:28,270 --> 00:08:26,600

scalar field the equation looks like

202

00:08:29,920 --> 00:08:28,280

this the klein-gordon equation where the

203

00:08:32,380 --> 00:08:29,930

Dalembert scene is just given by this as

204

00:08:35,640 --> 00:08:32,390

you can see it's just a second

205

00:08:39,820 --> 00:08:35,650

derivative with some junk attached and

206

00:08:44,500 --> 00:08:39,830

there's the there's your conjugate field

207

00:08:45,670 --> 00:08:44,510

PI or again with some fudge factors in

208

00:08:48,190 --> 00:08:45,680

front of the first derivative of the

209

00:08:51,040 --> 00:08:48,200

field itself and here are the solutions

210

00:08:53,230 --> 00:08:51,050

okay what the sort of the form of the

211

00:08:57,670 --> 00:08:53,240

solutions where you get

212

00:08:59,860 --> 00:08:57,680

these mode functions and in addition to

213

00:09:03,280 --> 00:08:59,870

the mode functions you have annihilation

214

00:09:06,190 --> 00:09:03,290

and creation operators as as being part

215

00:09:07,960 --> 00:09:06,200

of the solution and so let's look at the

216

00:09:09,340 --> 00:09:07,970

Freedman robertson-walker space-time as

217

00:09:14,590 --> 00:09:09,350

Bernie said the universe is slowly

218

00:09:20,040 --> 00:09:14,600

expanding right now and if you look at

219

00:09:22,389 --> 00:09:20,050

the if let's choose a fog basis that is

220

00:09:25,990 --> 00:09:22,399

that that will work for us and in

221

00:09:28,570 --> 00:09:26,000

particular you take the annihilation

222

00:09:32,380 --> 00:09:28,580

operator and you define the basis the

223

00:09:36,040 --> 00:09:32,390

lowest energy state of your or the

224

00:09:38,260 --> 00:09:36,050

lowest the zero vector of your fog basis

225

00:09:40,600 --> 00:09:38,270

is defined by annihilating it and

226

00:09:42,790 --> 00:09:40,610

getting a zero vector once you build

227

00:09:44,530 --> 00:09:42,800

that up but build that structure up you

228

00:09:46,389 --> 00:09:44,540

can calculate the fluctuations then this

229

00:09:49,000 --> 00:09:46,399

is just a standard way in which you do

230

00:09:51,100 --> 00:09:49,010

that in quantum theory and when you

231

00:09:55,269 --> 00:09:51,110

after a little bit of arithmetic this is

232

00:09:56,800 --> 00:09:55,279

what you get and basically the point

233

00:09:59,490 --> 00:09:56,810

here is just that it's not zero so

234

00:10:02,230 --> 00:09:59,500

you've got these fluctuations and so

235

00:10:04,480 --> 00:10:02,240

what I what I think could be happening

236

00:10:06,819 --> 00:10:04,490

just as Burns proposed that volition can

237

00:10:08,340 --> 00:10:06,829

affect the momentum fluctuations of a

238

00:10:10,600 --> 00:10:08,350

moving particle let's suppose that

239

00:10:13,510 --> 00:10:10,610

volition effects the fluctuations is a

240

00:10:15,819 --> 00:10:13,520

scalar field and hence if you recall

241

00:10:17,319 --> 00:10:15,829

you're going to be affecting you're

242

00:10:20,050 --> 00:10:17,329

going to be affecting the creation and

243

00:10:22,000 --> 00:10:20,060

annihilation operators those in turn

244

00:10:24,250 --> 00:10:22,010

change the number of particles that are

245

00:10:26,920 --> 00:10:24,260

present and hence among other time other

246

00:10:28,870 --> 00:10:26,930

things space-time curvature so like if

247

00:10:31,120 --> 00:10:28,880

you sort of think about this it's like

248

00:10:34,870 --> 00:10:31,130

as you think and as things are going on

249

00:10:36,370 --> 00:10:34,880

mentally you're affecting the creation

250

00:10:37,810 --> 00:10:36,380

and annihilation operators so particles

251
00:10:39,579 --> 00:10:37,820
are being created and destroyed and so

252
00:10:43,540 --> 00:10:39,589
on and so forth all around you in the

253
00:10:46,510 --> 00:10:43,550
field and and those are changing the

254
00:10:49,120 --> 00:10:46,520
curvature of space-time and all the junk

255
00:10:51,010 --> 00:10:49,130
that's in there like that's related to

256
00:10:52,990 --> 00:10:51,020
all the other fields and so in some

257
00:10:55,600 --> 00:10:53,000
sense you're constantly jiggling

258
00:10:58,269 --> 00:10:55,610
physical reality as you think and as you

259
00:11:00,069 --> 00:10:58,279
as you do things okay now just a small

260
00:11:02,710 --> 00:11:00,079
caveat here of course for the scalar

261
00:11:05,170 --> 00:11:02,720
field the particles are in photons and

262
00:11:08,350 --> 00:11:05,180
they haven't been found but that's the

263
00:11:11,150 --> 00:11:08,360

nature of physics today

264

00:11:13,880 --> 00:11:11,160

following Marshall suppose that alert

265

00:11:15,800 --> 00:11:13,890

consciousness is a klein-gordon vacuum

266

00:11:18,560 --> 00:11:15,810

state with experiential contents being

267

00:11:20,510 --> 00:11:18,570

the state vectors dafaq space in keeping

268

00:11:22,430 --> 00:11:20,520

with this stratification idea proposed

269

00:11:24,590 --> 00:11:22,440

by Walker in parallel with burns

270

00:11:26,330 --> 00:11:24,600

abolitionist exercise on the operators

271

00:11:28,700 --> 00:11:26,340

on that is to say in this case on the

272

00:11:30,590 --> 00:11:28,710

fields within the scope of uncertainty

273

00:11:32,210 --> 00:11:30,600

this could also be the mechanism of

274

00:11:34,880 --> 00:11:32,220

attention for the selection of operators

275

00:11:36,880 --> 00:11:34,890

proposed as proposed by staff so I

276

00:11:39,800 --> 00:11:36,890

managed to get everything into one

277

00:11:41,090 --> 00:11:39,810

synthesis here so in the end I think

278

00:11:43,150 --> 00:11:41,100

there's an intimate connection between

279

00:11:44,840 --> 00:11:43,160

consciousness and physical manifestation

280

00:11:46,910 --> 00:11:44,850

aligning consciousness with the

281

00:11:48,340 --> 00:11:46,920

klein-gordon feels possible way in which

282

00:11:50,420 --> 00:11:48,350

that connection could occur

283

00:11:52,400 --> 00:11:50,430

consciousness needs to be properly taken

284

00:11:53,840 --> 00:11:52,410

into account at any physical Theory if

285

00:11:56,540 --> 00:11:53,850

we are to have a physical theory that

286

00:12:00,710 --> 00:11:56,550

works that theory will take us beyond

287

00:12:02,390 --> 00:12:00,720

quantum theory as we know it today and I

288

00:12:07,880 --> 00:12:02,400

see that I actually have more time than

289

00:12:09,770 --> 00:12:07,890

I expected oh I love this quote just

290

00:12:10,730 --> 00:12:09,780

this is just a reflection on what I've

291

00:12:12,410 --> 00:12:10,740

just been telling you the very

292

00:12:14,320 --> 00:12:12,420

possibility reflecting on a hypothetical

293

00:12:16,790 --> 00:12:14,330

irreducible field of consciousness

294

00:12:18,590 --> 00:12:16,800

uncovers an inspiring temptation to

295

00:12:20,210 --> 00:12:18,600

escape from the rigid chains of physical

296

00:12:22,340 --> 00:12:20,220

postulates an enter into ultimate

297

00:12:23,990 --> 00:12:22,350

creative capacity this may lead to an

298

00:12:25,820 --> 00:12:24,000

inclination toward relaxed mental

299

00:12:28,070 --> 00:12:25,830

discipline and degraded responsibilities

300

00:12:29,750 --> 00:12:28,080

as a result corresponding approaches can

301

00:12:33,710 --> 00:12:29,760

easily degenerate into purely Belet

302

00:12:36,020 --> 00:12:33,720

ristic expression I love that and I hope

303

00:12:37,670 --> 00:12:36,030

I was doing that because just before I

304

00:12:39,020 --> 00:12:37,680

laughed a lot of mere tastic came and

305

00:12:41,150 --> 00:12:39,030

gave a talk at our universities a

306

00:12:44,660 --> 00:12:41,160

mathematician who says that mathematics

307

00:12:47,210 --> 00:12:44,670

is fiction but that's okay and first of

308

00:12:49,220 --> 00:12:47,220

all I would like to acknowledge all the

309

00:12:51,740 --> 00:12:49,230

mathematicians who have have and

310

00:12:53,920 --> 00:12:51,750

continue to spend hours and hours of

311

00:12:56,300 --> 00:12:53,930

their time explaining this stuff to me

312

00:12:58,370 --> 00:12:56,310

they don't know any but they don't know

313

00:13:00,260 --> 00:12:58,380

there's consciousness stuff they I don't

314

00:13:03,380 --> 00:13:00,270

tell them that I that's I mean they know

315

00:13:04,520 --> 00:13:03,390

I do that but you know and then if

316

00:13:06,680 --> 00:13:04,530

you're interested here are some papers

317

00:13:08,690 --> 00:13:06,690

the best way to get hold of them email

318

00:13:11,330 --> 00:13:08,700

me I realize I didn't put my email up

319

00:13:20,710 --> 00:13:11,340

there but you can see me and I will mail

320

00:13:24,470 --> 00:13:23,090

what is the sound of one hand clapping

321

00:13:27,310 --> 00:13:24,480

when you're carrying a microphone we

322

00:13:38,329 --> 00:13:27,320

have a few minutes for questions here so

323

00:13:43,880 --> 00:13:38,339

okay in this presentation you basically

324

00:13:46,100 --> 00:13:43,890

presume an attentional awareness that

325

00:13:50,570 --> 00:13:46,110

exists at the core of consciousness

326

00:13:52,600 --> 00:13:50,580

which it does but you don't you I don't

327

00:13:55,340 --> 00:13:52,610

think there is a way for this

328

00:13:57,470 --> 00:13:55,350

explanatory scheme or this type of

329

00:14:00,970 --> 00:13:57,480

scheme to explain the essence of

330

00:14:04,970 --> 00:14:00,980

consciousness which is the volitional

331

00:14:07,670 --> 00:14:04,980

awareness core that is seems to me that

332

00:14:12,310 --> 00:14:07,680

it's fundamentally beyond such

333

00:14:16,639 --> 00:14:12,320

explanations any comment I agree

334

00:14:19,070 --> 00:14:16,649

no I'm serious I mean I okay okay they

335

00:14:20,840 --> 00:14:19,080

what I'm trying to do here is to try to

336

00:14:22,340 --> 00:14:20,850

see like I'm trying to feel my way into

337

00:14:24,829 --> 00:14:22,350

this okay so I'm trying to see like

338

00:14:25,850 --> 00:14:24,839

where are they were can we connect them

339

00:14:27,740 --> 00:14:25,860

like where are they coming together

340

00:14:29,960 --> 00:14:27,750

without really being able to understand

341

00:14:32,569 --> 00:14:29,970

exactly what that aspect I call that

342

00:14:34,910 --> 00:14:32,579

deep consciousness in other places and

343

00:14:37,610 --> 00:14:34,920

those of you familiar with David Bohm's

344

00:14:40,850 --> 00:14:37,620

idea of an implicit order I don't like

345

00:14:42,319 --> 00:14:40,860

his the the the mechanics of his theory

346

00:14:44,360 --> 00:14:42,329

but I like the idea of the implicit

347

00:14:46,280 --> 00:14:44,370

order that there's this this domain and

348

00:14:47,780 --> 00:14:46,290

this goes along I think with what

349

00:14:49,819 --> 00:14:47,790

Bernie's saying to you like there's this

350

00:14:51,680 --> 00:14:49,829

domain from which things originate and

351

00:14:54,230 --> 00:14:51,690

sort of our experience all awareness

352

00:14:55,730 --> 00:14:54,240

shows up as one sort of version of that

353

00:14:57,620 --> 00:14:55,740

and physical world shows up as another

354

00:14:59,720 --> 00:14:57,630

but somewhere deep inside they're linked

355

00:15:02,690 --> 00:14:59,730

together and so I agree with you I don't

356

00:15:04,639 --> 00:15:02,700

know what that volitional aspect is but

357

00:15:05,900 --> 00:15:04,649

I think it's somewhere in that deep what

358

00:15:09,500 --> 00:15:05,910

I call the deep consciousness or the

359

00:15:11,960 --> 00:15:09,510

implicit order Stephen Hall is the

360

00:15:14,660 --> 00:15:11,970

assumption on your part that only human

361

00:15:16,910 --> 00:15:14,670

consciousness shapes reality or what

362

00:15:19,069 --> 00:15:16,920

about lower levels like a chimpanzee or

363

00:15:20,930 --> 00:15:19,079

even lower than that no I'm a Pan

364

00:15:23,180 --> 00:15:20,940

psychist I think that there's all kinds

365

00:15:24,890 --> 00:15:23,190

of there are all kinds of mental

366

00:15:28,519 --> 00:15:24,900

influences and mental effects that are

367

00:15:29,720 --> 00:15:28,529

in addition to ourselves I'm trying to

368

00:15:31,930 --> 00:15:29,730

bring the mic to people in

369

00:15:37,939 --> 00:15:31,940

order in which they've caught my eye

370

00:15:40,540 --> 00:15:37,949

hello Richard man when people talk about

371

00:15:42,710 --> 00:15:40,550

the intelligence of the universe or

372

00:15:45,590 --> 00:15:42,720

sometimes ask what I think is a nicer

373

00:15:47,050 --> 00:15:45,600

question is the universe benign it seems

374

00:15:49,400 --> 00:15:47,060

that they're implying that there's a

375

00:15:51,710 --> 00:15:49,410

some kind of operator or some kind of

376

00:15:54,170 --> 00:15:51,720

preference there are many possibilities

377

00:15:57,410 --> 00:15:54,180

that could occur but there's a built-in

378

00:15:59,090 --> 00:15:57,420

tilt to the universe as it were so that

379

00:16:01,579 --> 00:15:59,100

you other things being equal which they

380

00:16:04,670 --> 00:16:01,589

never are but lots of things happening

381

00:16:07,009 --> 00:16:04,680

there's a there's a tendency for certain

382

00:16:09,290 --> 00:16:07,019

things to occur more than others and we

383

00:16:11,629 --> 00:16:09,300

could give a quality to that tendency we

384

00:16:14,840 --> 00:16:11,639

could say it looks intelligent or we

385

00:16:16,310 --> 00:16:14,850

could say it looks benign but we

386

00:16:18,740 --> 00:16:16,320

wouldn't necessarily have to say that

387

00:16:20,300 --> 00:16:18,750

there was an intention that certain

388

00:16:22,670 --> 00:16:20,310

things happen or that there that there

389

00:16:25,189 --> 00:16:22,680

be a willpower will of our listen in

390

00:16:27,650 --> 00:16:25,199

this if that built-in tendency of the

391

00:16:29,480 --> 00:16:27,660

universe is of a certain order and we

392

00:16:34,730 --> 00:16:29,490

wouldn't need to wonder how these

393

00:16:37,309 --> 00:16:34,740

intentions more fruit I agree with you I

394

00:16:40,100 --> 00:16:37,319

I think the volition and it is on top of

395

00:16:42,530 --> 00:16:40,110

that and it basically comes to this

396

00:16:45,769 --> 00:16:42,540

question of is there freewill and I

397

00:16:49,040 --> 00:16:45,779

think there I mean again I mean no one

398

00:16:50,990 --> 00:16:49,050

has a definitive answer or people who

399

00:16:53,660 --> 00:16:51,000

think they do I'm not sure they do but I

400

00:16:56,329 --> 00:16:53,670

think there really is freewill and that

401
00:16:58,280 --> 00:16:56,339
that's one way and which volition enters

402
00:16:59,960 --> 00:16:58,290
in now now we have to be a little bit

403
00:17:01,910 --> 00:16:59,970
careful here and this this goes like to

404
00:17:04,309 --> 00:17:01,920
the m5 theory of Bob John and Brenda

405
00:17:06,230 --> 00:17:04,319
done to that that I mean the if you

406
00:17:08,179 --> 00:17:06,240
intend something at this level it has to

407
00:17:09,890 --> 00:17:08,189
back up to another level or go down to a

408
00:17:11,600 --> 00:17:09,900
deeper level for it to actually make

409
00:17:13,569 --> 00:17:11,610
that kind of direct connection into

410
00:17:15,770 --> 00:17:13,579
physical reality

411
00:17:19,309 --> 00:17:15,780
yeah Gary Schwartz wonderful

412
00:17:21,409 --> 00:17:19,319
presentation to a follow-up I guess to

413
00:17:24,770 --> 00:17:21,419

the previous question where in your

414

00:17:27,770 --> 00:17:24,780

current thinking does the concept of

415

00:17:29,390 --> 00:17:27,780

intelligence come in here his

416

00:17:33,890 --> 00:17:29,400

intelligence something that's derived

417

00:17:36,680 --> 00:17:33,900

from consciousness are they two sides of

418

00:17:38,720 --> 00:17:36,690

the same coin his intelligence that

419

00:17:41,790 --> 00:17:38,730

which creates consciousness where does

420

00:17:46,350 --> 00:17:44,190

I think that there's a there's a just as

421

00:17:47,850 --> 00:17:46,360

with consciousness itself and what we

422

00:17:48,990 --> 00:17:47,860

mean by the word conscious there's a

423

00:17:52,110 --> 00:17:49,000

continuum of what we mean by

424

00:17:53,970 --> 00:17:52,120

intelligence so the very basic sort of

425

00:17:56,340 --> 00:17:53,980

computational acts can be regarded as

426
00:17:57,600 --> 00:17:56,350
being intelligent at one level that's

427
00:17:59,160 --> 00:17:57,610
probably not what you're interested

428
00:18:00,240 --> 00:17:59,170
that's not probably the type of

429
00:18:02,040 --> 00:18:00,250
intelligence you're interested in

430
00:18:04,260 --> 00:18:02,050
talking about so I think as you move

431
00:18:09,540 --> 00:18:04,270
away from that to more creative acts and

432
00:18:11,820 --> 00:18:09,550
to more fundamental or more or value

433
00:18:14,040 --> 00:18:11,830
tively deeper more meaningful acts I

434
00:18:15,660 --> 00:18:14,050
think that you're talking about another

435
00:18:16,860 --> 00:18:15,670
type of intelligence and I think that

436
00:18:19,560 --> 00:18:16,870
that's the intelligence who's hiding

437
00:18:22,200 --> 00:18:19,570
underneath underneath these quantum

438
00:18:24,000 --> 00:18:22,210

fields and that's that's that somehow

439

00:18:26,070 --> 00:18:24,010

I'm I'm sort of looking at its

440

00:18:29,100 --> 00:18:26,080

breakthrough point in a way if you if

441

00:18:31,580 --> 00:18:29,110

you want to think of it that way David

442

00:18:33,540 --> 00:18:31,590

Hines I'm not a physicist but

443

00:18:35,900 --> 00:18:33,550

considering that consciousness

444

00:18:42,420 --> 00:18:35,910

apparently is not an epiphenomena brain

445

00:18:44,330 --> 00:18:42,430

going back to the the particle that was

446

00:18:46,830 --> 00:18:44,340

going to be there split or not split

447

00:18:48,150 --> 00:18:46,840

when it was measured in and the wave

448

00:18:50,310 --> 00:18:48,160

function being collapsed when it was

449

00:18:54,180 --> 00:18:50,320

measured is it really any less tenable

450

00:18:55,980 --> 00:18:54,190

to assume that the observation collapse

451

00:18:57,570 --> 00:18:55,990

the wave function and retro actively

452

00:19:00,540 --> 00:18:57,580

determine whether the particle is split

453

00:19:03,060 --> 00:19:00,550

or not than it is to assume that the

454

00:19:07,590 --> 00:19:03,070

particle determined what the operator

455

00:19:15,540 --> 00:19:07,600

was going to choose create previous to

456

00:19:18,120 --> 00:19:15,550

its being split or not split well in a

457

00:19:19,800 --> 00:19:18,130

way that that question like from the

458

00:19:22,050 --> 00:19:19,810

standpoint of quantum theory that

459

00:19:23,580 --> 00:19:22,060

question is meaningless the all the

460

00:19:24,720 --> 00:19:23,590

mathematical application standard

461

00:19:26,370 --> 00:19:24,730

interpretation is that all the

462

00:19:28,290 --> 00:19:26,380

mathematical apparatus doesn't refer to

463

00:19:30,090 --> 00:19:28,300

anything all you've got are the

464

00:19:31,920 --> 00:19:30,100

experiments and what the mathematical

465

00:19:33,180 --> 00:19:31,930

apparatus does it tells you what's going

466

00:19:36,180 --> 00:19:33,190

to happen at the time you'll actually

467

00:19:40,230 --> 00:19:36,190

make an observation so whatever happened

468

00:19:43,650 --> 00:19:40,240

there you know I mean first person was

469

00:19:45,570 --> 00:19:43,660

Bernie said Arnold particles so how is

470

00:19:47,280 --> 00:19:45,580

that particle making that decision so if

471

00:19:52,100 --> 00:19:47,290

the particle is making that decision and

472

00:19:55,080 --> 00:19:52,110

then informs the observer somehow it's

473

00:19:56,790 --> 00:19:55,090

possible I I suppose I mean I have to

474

00:20:05,490 --> 00:19:56,800

but afterwards I have to think about it

475

00:20:07,950 --> 00:20:05,500

but it just doesn't I'm sorry yeah we

476

00:20:09,530 --> 00:20:07,960

are out of time here so much as it would