



1
00:00:24,519 --> 00:00:16,080

[Music]

2
00:00:27,999 --> 00:00:24,529

thank you all this is my first time here

3
00:00:31,089 --> 00:00:28,009

so it's really great I really enjoy the

4
00:00:33,459 --> 00:00:31,099

opportunity to be here and so I want to

5
00:00:37,750 --> 00:00:33,469

talk about something I think is very

6
00:00:39,730 --> 00:00:37,760

interesting about you know is is is I

7
00:00:40,870 --> 00:00:39,740

think a lot of you know quantum

8
00:00:44,710 --> 00:00:40,880

mechanics is something that's very

9
00:00:47,350 --> 00:00:44,720

extremely very difficult to understand

10
00:00:49,410 --> 00:00:47,360

it suggests all kinds of paradoxes and

11
00:00:51,580 --> 00:00:49,420

there are many sort of alternative

12
00:00:54,900 --> 00:00:51,590

explanations and no one's really quite

13
00:00:57,819 --> 00:00:54,910

sure or so far there's no consensus and

14

00:01:00,190 --> 00:00:57,829

one of the one of the things that I

15

00:01:01,900 --> 00:01:00,200

think may be a good way to sort of break

16

00:01:05,800 --> 00:01:01,910

through this is to kind of like look at

17

00:01:07,240 --> 00:01:05,810

anomalous data especially data that has

18

00:01:08,889 --> 00:01:07,250

anomalies especially with respect to

19

00:01:11,230 --> 00:01:08,899

consciousness because some of the

20

00:01:13,749 --> 00:01:11,240

theories of because quantum mechanics

21

00:01:17,050 --> 00:01:13,759

does have a kind of link with

22

00:01:19,270 --> 00:01:17,060

consciousness I think so as far as the

23

00:01:22,029 --> 00:01:19,280

puzzle of quantum mechanics if the most

24

00:01:29,550 --> 00:01:22,039

part revolves around a what's called the

25

00:01:34,350 --> 00:01:31,560

and the measurement problem is you're

26

00:01:37,590 --> 00:01:34,360

probably aware in the standard

27

00:01:40,289 --> 00:01:37,600

formulation there's a standard waveform

28

00:01:43,950 --> 00:01:40,299

the Schrodinger equation sort of governs

29

00:01:46,440 --> 00:01:43,960

the the evolution of the system and then

30

00:01:49,620 --> 00:01:46,450

this changes when a measurement occurs

31

00:01:52,830 --> 00:01:49,630

to reveal the results of whatever the

32

00:01:54,929 --> 00:01:52,840

the results of the experiment but nobody

33

00:01:58,740 --> 00:01:54,939

really has a good idea about how to kind

34

00:02:01,590 --> 00:01:58,750

of formally describe exactly what how a

35

00:02:03,690 --> 00:02:01,600

measurement of some kind changes or

36

00:02:09,240 --> 00:02:03,700

causes the transition from the waveform

37

00:02:12,030 --> 00:02:09,250

to the experimental results so all the

38

00:02:15,750 --> 00:02:12,040

all the theoretical explanations that

39

00:02:18,839 --> 00:02:15,760

have been offered seem to or at least

40

00:02:22,020 --> 00:02:18,849

many of them seem to conflict with sort

41

00:02:25,670 --> 00:02:22,030

of our common sense reality and so far

42

00:02:28,410 --> 00:02:25,680

there's no consensus on on the answer so

43

00:02:31,259 --> 00:02:28,420

as you're probably aware the

44

00:02:33,990 --> 00:02:31,269

conventional interpretation suggest a

45

00:02:36,449 --> 00:02:34,000

kind of quantum superposition even at

46

00:02:39,479 --> 00:02:36,459

macro States Schroedinger sort of

47

00:02:42,300 --> 00:02:39,489

formulated his thought experiment where

48

00:02:45,780 --> 00:02:42,310

a cat might be simultaneously alive and

49

00:02:49,319 --> 00:02:45,790

dead to suggest that there was something

50

00:02:51,240 --> 00:02:49,329

about the standard formulation that was

51
00:02:55,460 --> 00:02:51,250
kind of problematic and sort of clash

52
00:02:58,740 --> 00:02:55,470
with our sense of reality another

53
00:03:01,410 --> 00:02:58,750
another interpretation is the sort of

54
00:03:02,729 --> 00:03:01,420
the many-worlds this comes from the idea

55
00:03:04,740 --> 00:03:02,739
that if we don't really worry about the

56
00:03:08,220 --> 00:03:04,750
measurement problem we can just say that

57
00:03:10,710 --> 00:03:08,230
the Schrodinger equation captures all

58
00:03:15,569 --> 00:03:10,720
the information of all possible quantum

59
00:03:17,550 --> 00:03:15,579
states that that therefore every time

60
00:03:20,879 --> 00:03:17,560
there's a quantum event of some kind of

61
00:03:23,400 --> 00:03:20,889
the universe splits into different

62
00:03:26,580 --> 00:03:23,410
possible worlds or possible universes so

63
00:03:28,470 --> 00:03:26,590

we might actually have a be a multiverse

64

00:03:34,440 --> 00:03:28,480

where you know they're made up of

65

00:03:37,199 --> 00:03:34,450

infinity a number of universes so given

66

00:03:39,990 --> 00:03:37,209

these kinds of maybe rather unpalatable

67

00:03:42,800 --> 00:03:40,000

kinds of visions I'd like to suggest

68

00:03:45,500 --> 00:03:42,810

that we sort of return to this role of

69

00:03:48,410 --> 00:03:45,510

consciousness now as you all probably

70

00:03:51,070 --> 00:03:48,420

know some of the founders early founders

71

00:03:54,559 --> 00:03:51,080

of quantum mechanics did suspect that

72

00:03:57,110 --> 00:03:54,569

consciousness played a role and it's not

73

00:03:59,990 --> 00:03:57,120

exactly something that in the COPE that

74

00:04:02,780 --> 00:04:00,000

the Copenhagen interpretation is von

75

00:04:04,640 --> 00:04:02,790

Neumann Illustrated does kind of suggest

76
00:04:06,740 --> 00:04:04,650
the possibility that consciousness might

77
00:04:09,559 --> 00:04:06,750
be involved in some way and while it's

78
00:04:11,960 --> 00:04:09,569
it's it's generally dismissed or not

79
00:04:16,190 --> 00:04:11,970
given too much weight among physicists

80
00:04:21,259 --> 00:04:16,200
some such as Henry Stapp still advocated

81
00:04:23,810 --> 00:04:21,269
today so a lot of what's missing I think

82
00:04:26,030 --> 00:04:23,820
from this discussion is what's been

83
00:04:29,120 --> 00:04:26,040
happening in the among philosophers of

84
00:04:31,100 --> 00:04:29,130
mind talking about you know asking what

85
00:04:34,310 --> 00:04:31,110
is consciousness how do we experience

86
00:04:37,370 --> 00:04:34,320
anything the problem is is that first of

87
00:04:42,560 --> 00:04:37,380
all there's no real consensus theory on

88
00:04:44,150 --> 00:04:42,570

how consciousness happens second we when

89

00:04:45,560 --> 00:04:44,160

we look closely at the laws of physics

90

00:04:47,719 --> 00:04:45,570

there's nothing in the laws of physics

91

00:04:50,270 --> 00:04:47,729

that suggest or even hints how an

92

00:04:54,219 --> 00:04:50,280

unconscious particles such as electrons

93

00:04:57,890 --> 00:04:54,229

and atoms and so forth become conscious

94

00:05:01,190 --> 00:04:57,900

okay so therefore the only thing really

95

00:05:02,750 --> 00:05:01,200

that might in physics so far that

96

00:05:05,240 --> 00:05:02,760

suggests a link between mind and matter

97

00:05:06,500 --> 00:05:05,250

is actually this kind of some

98

00:05:08,150 --> 00:05:06,510

interpretations in quantum mechanics

99

00:05:11,090 --> 00:05:08,160

that suggests that there's the

100

00:05:13,279 --> 00:05:11,100

consciousness has a role in maybe

101

00:05:15,529 --> 00:05:13,289

collapsing in the wave form so if we

102

00:05:17,330 --> 00:05:15,539

exclude this from the discussion it

103

00:05:20,090 --> 00:05:17,340

seems like we're making the hard problem

104

00:05:22,600 --> 00:05:20,100

even harder the only thing in physics

105

00:05:25,550 --> 00:05:22,610

that has a suggestion we're sort of like

106

00:05:28,400 --> 00:05:25,560

kind of like maybe not examining perhaps

107

00:05:32,050 --> 00:05:28,410

as much as we should another important

108

00:05:36,340 --> 00:05:32,060

point to is that these alternative

109

00:05:39,050 --> 00:05:36,350

explanations they're kind of theoretical

110

00:05:40,640 --> 00:05:39,060

constructions that kind of clash with

111

00:05:42,529 --> 00:05:40,650

our reality but consciousness is

112

00:05:44,150 --> 00:05:42,539

something we experience directly so we

113

00:05:44,840 --> 00:05:44,160

don't have to worry about whether it

114

00:05:46,760 --> 00:05:44,850

exists or not

115

00:05:49,250 --> 00:05:46,770

so I think that that for a number of

116

00:05:53,060 --> 00:05:49,260

reasons that's something that we should

117

00:05:56,490 --> 00:05:53,070

um consider also is as Dean and Roger

118

00:05:58,050 --> 00:05:56,500

and many others have

119

00:06:01,410 --> 00:05:58,060

I'm elated a lot of very interesting

120

00:06:05,400 --> 00:06:01,420

evidence that does suggest some sort of

121

00:06:07,890 --> 00:06:05,410

mind matter interaction significant

122

00:06:10,770 --> 00:06:07,900

effects there's a very robust

123

00:06:13,260 --> 00:06:10,780

meta-analysis for a number of categories

124

00:06:17,730 --> 00:06:13,270

of Sian cleaning Peppa the clairvoyance

125

00:06:20,460 --> 00:06:17,740

and precognition presentiment and there

126
00:06:23,150 --> 00:06:20,470
may be some debate about some of the

127
00:06:26,010 --> 00:06:23,160
mind matter interaction but I think that

128
00:06:28,200 --> 00:06:26,020
the replication issues can be probably

129
00:06:29,820 --> 00:06:28,210
most likely explained by amusing

130
00:06:32,040 --> 00:06:29,830
explanations that are very actually very

131
00:06:34,830 --> 00:06:32,050
consistent with my matter interactions

132
00:06:36,240 --> 00:06:34,840
such as the experimenter effect so I

133
00:06:38,310 --> 00:06:36,250
don't want to say too much more about

134
00:06:40,560 --> 00:06:38,320
this but do the limitations of time I

135
00:06:42,630 --> 00:06:40,570
assume many of you are already aware of

136
00:06:43,980 --> 00:06:42,640
this literature and if not you know just

137
00:06:47,640 --> 00:06:43,990
simply allow me to assume that there is

138
00:06:49,020 --> 00:06:47,650

this literature that exists so also I'm

139

00:06:52,740 --> 00:06:49,030

not going to say a whole lot about the

140

00:06:54,240 --> 00:06:52,750

the different possible explanation of

141

00:06:58,590 --> 00:06:54,250

quantum mechanics I'd like to focus on

142

00:07:02,250 --> 00:06:58,600

three that I think are mostly that there

143

00:07:05,159 --> 00:07:02,260

is some link with consciousness and main

144

00:07:08,580 --> 00:07:05,169

quantum mechanics these are these are

145

00:07:11,690 --> 00:07:08,590

not ad hoc sorts of explanations that to

146

00:07:14,760 --> 00:07:11,700

explain side these are actually

147

00:07:16,830 --> 00:07:14,770

explanations that have been used to sort

148

00:07:19,710 --> 00:07:16,840

of explain the experimental data in

149

00:07:22,290 --> 00:07:19,720

quantum mechanics but also happen to be

150

00:07:24,540 --> 00:07:22,300

very interesting have and have been

151

00:07:29,909 --> 00:07:24,550

cited in in in the site literature as

152

00:07:32,219 --> 00:07:29,919

well so I'll so there's actually this

153

00:07:33,600 --> 00:07:32,229

actually the wave collapse approaches

154

00:07:37,800 --> 00:07:33,610

there's actually in a sort of an

155

00:07:40,159 --> 00:07:37,810

observer emphasized originally Wigner is

156

00:07:42,630 --> 00:07:40,169

associated with it but recently stopped

157

00:07:45,600 --> 00:07:42,640

objective reduction doesn't involve Oh

158

00:07:47,850 --> 00:07:45,610

doesn't involve a observer so it's a

159

00:07:51,450 --> 00:07:47,860

sort of a more sort of an objective

160

00:07:53,820 --> 00:07:51,460

collapse and then there's a there's what

161

00:07:55,350 --> 00:07:53,830

Bohm in highly and also I think staff

162

00:07:59,250 --> 00:07:55,360

has sort of contributed a little bit in

163

00:08:02,400 --> 00:07:59,260

this area to is sort of a way that maybe

164

00:08:03,870 --> 00:08:02,410

you have a way of explaining quantum

165

00:08:06,020 --> 00:08:03,880

mechanics without the collapse maybe

166

00:08:09,510 --> 00:08:06,030

with a more realistic ontology but using

167

00:08:10,200 --> 00:08:09,520

sort of sort of like implicit orders or

168

00:08:14,010 --> 00:08:10,210

hidden order

169

00:08:19,830 --> 00:08:14,020

or non-local and holistic features okay

170

00:08:23,670 --> 00:08:19,840

so so with the subjective waveform

171

00:08:26,070 --> 00:08:23,680

collapse in this case we have sort of

172

00:08:27,740 --> 00:08:26,080

it's it's pretty much very similar to

173

00:08:31,890 --> 00:08:27,750

the standard Copenhagen interpretation

174

00:08:33,600 --> 00:08:31,900

but it's basically just basically we

175

00:08:35,279 --> 00:08:33,610

just sort of like posit that there is an

176

00:08:38,519 --> 00:08:35,289

observer that is sort of causing the

177

00:08:40,769 --> 00:08:38,529

collapse okay so that means that reality

178

00:08:44,370 --> 00:08:40,779

isn't some kind of quantum superposition

179

00:08:48,000 --> 00:08:44,380

until an observation occurs now this of

180

00:08:49,260 --> 00:08:48,010

course raises as you're probably aware

181

00:08:51,630 --> 00:08:49,270

this raises a lot of ontological

182

00:08:52,920 --> 00:08:51,640

questions about what happens to reality

183

00:08:54,720 --> 00:08:52,930

when there's not an observer what

184

00:08:57,750 --> 00:08:54,730

happens on the other side of the in a

185

00:09:00,810 --> 00:08:57,760

far distant galaxy or when in the

186

00:09:03,780 --> 00:09:00,820

universe before humans existed okay um

187

00:09:07,050 --> 00:09:03,790

also this has been sort of invoked to

188

00:09:08,790 --> 00:09:07,060

sort of defend a sort of a dualism or

189

00:09:11,370 --> 00:09:08,800

dualistic version of reality because

190

00:09:13,019 --> 00:09:11,380

often dualism is hard to explain if you

191

00:09:15,600 --> 00:09:13,029

posit there's two fundamentally

192

00:09:18,360 --> 00:09:15,610

different sort of versions of reality

193

00:09:20,310 --> 00:09:18,370

matter in mind the this this kind of

194

00:09:23,940 --> 00:09:20,320

interpretation does lend itself at least

195

00:09:27,600 --> 00:09:23,950

to a possible dualistic point of view

196

00:09:30,420 --> 00:09:27,610

okay so how do we kind of like maybe

197

00:09:31,740 --> 00:09:30,430

tell this story you know make use this

198

00:09:34,019 --> 00:09:31,750

story to make sense of the side data

199

00:09:37,019 --> 00:09:34,029

well Homer might be in a quantum

200

00:09:40,079 --> 00:09:37,029

superposition he might be he might have

201

00:09:43,160 --> 00:09:40,089

an alternative reality or a possibility

202

00:09:46,550 --> 00:09:43,170

where he moonlights as Batman Lisa

203

00:09:49,260 --> 00:09:46,560

observes Homer perhaps she has an

204

00:09:51,600 --> 00:09:49,270

intention that Homer sort of like stays

205

00:09:54,449 --> 00:09:51,610

at home and therefore this sort of

206

00:09:56,850 --> 00:09:54,459

intention might bias the probabilities

207

00:09:59,250 --> 00:09:56,860

in a way that sort of collapses Homer

208

00:10:01,980 --> 00:09:59,260

into the the Homer that she's more

209

00:10:04,800 --> 00:10:01,990

familiar with and if we also suggest

210

00:10:06,210 --> 00:10:04,810

that mind is maybe has some non-local

211

00:10:09,540 --> 00:10:06,220

attributes in this kind of more

212

00:10:11,310 --> 00:10:09,550

dualistic version of mind is not

213

00:10:16,199 --> 00:10:11,320

necessarily just a material thing

214

00:10:20,160 --> 00:10:16,209

perhaps Lisa and Ann and Milhouse share

215

00:10:22,980 --> 00:10:20,170

a sort of telepathic link okay so so

216

00:10:23,610 --> 00:10:22,990

therefore we have we might be able to

217

00:10:25,829 --> 00:10:23,620

account

218

00:10:28,350 --> 00:10:25,839

using this kind of idea you know mind

219

00:10:29,940 --> 00:10:28,360

matter interactions as conscious

220

00:10:33,329 --> 00:10:29,950

intention might influence the direction

221

00:10:35,640 --> 00:10:33,339

of the collapse of the probabilities

222

00:10:37,320 --> 00:10:35,650

within the standard waveform and it may

223

00:10:38,670 --> 00:10:37,330

be consistent with telepathy too if

224

00:10:41,550 --> 00:10:38,680

consciousness is non-local

225

00:10:44,730 --> 00:10:41,560

however in my view it seems to be an

226

00:10:47,910 --> 00:10:44,740

awkward fit with clairvoyance for

227

00:10:50,550 --> 00:10:47,920

example what happens in remote viewing

228

00:10:54,600 --> 00:10:50,560

experiments does that count as an

229

00:10:56,940 --> 00:10:54,610

observation if so it may be that if

230

00:10:58,950 --> 00:10:56,950

especially if clairvoyance is associated

231

00:11:00,800 --> 00:10:58,960

with a lot of unconscious parts of the

232

00:11:05,370 --> 00:11:00,810

mind it may be that we're sort of like

233

00:11:08,640 --> 00:11:05,380

unconsciously causing sort of sort of

234

00:11:10,560 --> 00:11:08,650

these collapses of the wave form okay

235

00:11:12,269 --> 00:11:10,570

and therefore the idea of what's what

236

00:11:15,870 --> 00:11:12,279

what's observation might be kind of

237

00:11:18,360 --> 00:11:15,880

ambiguous also it seems to be kind of an

238

00:11:20,940 --> 00:11:18,370

awkward fit with the pre-sentence and

239

00:11:22,769 --> 00:11:20,950

precognition if we're let's say

240

00:11:26,040 --> 00:11:22,779

observing some future event does that

241

00:11:29,519 --> 00:11:26,050

mean that we're causing a collapse of

242

00:11:31,620 --> 00:11:29,529

that future event but of course the way

243

00:11:34,079 --> 00:11:31,630

the the theory works is that the

244

00:11:36,269 --> 00:11:34,089

collapse is instantaneous so it seems

245

00:11:39,530 --> 00:11:36,279

like it would require us to make maybe a

246

00:11:43,980 --> 00:11:39,540

deviation from our from from the current

247

00:11:46,800 --> 00:11:43,990

from the current theory also I'm not

248

00:11:50,519 --> 00:11:46,810

sure that it can account for the global

249

00:11:52,500 --> 00:11:50,529

coherent project the that data suggest

250

00:11:54,840 --> 00:11:52,510

that participants influencing random

251
00:11:56,610 --> 00:11:54,850
number generator devices through shared

252
00:11:58,019 --> 00:11:56,620
emotions are not aware of those devices

253
00:12:01,110 --> 00:11:58,029
so they're actually having effect

254
00:12:02,730 --> 00:12:01,120
perhaps collapsing you know the the

255
00:12:04,500 --> 00:12:02,740
quantum mechanical probabilities into

256
00:12:06,360 --> 00:12:04,510
ones and zeros

257
00:12:08,880 --> 00:12:06,370
you know shifting the probability

258
00:12:10,470 --> 00:12:08,890
distributions but not being aware of it

259
00:12:12,690 --> 00:12:10,480
suggests that that's also another

260
00:12:16,740 --> 00:12:12,700
deviation from the effect okay so I'd

261
00:12:19,380 --> 00:12:16,750
like to talk about the next one another

262
00:12:21,570 --> 00:12:19,390
category possibility is I don't really

263
00:12:23,460 --> 00:12:21,580

know how to what the best term is but

264

00:12:25,440 --> 00:12:23,470

they're kind of like we have more

265

00:12:27,870 --> 00:12:25,450

realistic ontological explanations

266

00:12:31,860 --> 00:12:27,880

involving some sort of deeper hidden

267

00:12:34,590 --> 00:12:31,870

order okay so bowman highly posit a kind

268

00:12:37,170 --> 00:12:34,600

of implicit order of of active

269

00:12:39,900 --> 00:12:37,180

information which guides

270

00:12:42,180 --> 00:12:39,910

subatomic particles in ways that conform

271

00:12:45,560 --> 00:12:42,190

with the experimental evidence but

272

00:12:48,420 --> 00:12:45,570

without requiring a collapse and so this

273

00:12:51,810 --> 00:12:48,430

might be a version of neutral monism

274

00:12:55,200 --> 00:12:51,820

where mind and matter are aspects of an

275

00:12:57,380 --> 00:12:55,210

underlying neutral substance okay and so

276

00:13:00,530 --> 00:12:57,390

this gives a more realistic ontology

277

00:13:03,660 --> 00:13:00,540

rather than a collapse or sort of

278

00:13:05,730 --> 00:13:03,670

mini-worlds story this this more

279

00:13:08,760 --> 00:13:05,740

realistic ontology is achieved through a

280

00:13:10,860 --> 00:13:08,770

sort of non reductionist a holistic

281

00:13:16,380 --> 00:13:10,870

order that has a lot of non-local

282

00:13:18,660 --> 00:13:16,390

features and step also has a so draws on

283

00:13:21,060 --> 00:13:18,670

whiteheads process ontology and develops

284

00:13:24,330 --> 00:13:21,070

a sort of a framework that sort of

285

00:13:25,920 --> 00:13:24,340

posits a potentia that is a foundation

286

00:13:27,330 --> 00:13:25,930

for reality which i think is a similar

287

00:13:32,010 --> 00:13:27,340

kind of story

288

00:13:33,660 --> 00:13:32,020

okay so I'd like to sort of like express

289

00:13:36,540 --> 00:13:33,670

the story in the following way okay

290

00:13:39,720 --> 00:13:36,550

suppose that we have a kind of

291

00:13:44,000 --> 00:13:39,730

underlying deeper order a foundational

292

00:13:48,300 --> 00:13:44,010

neutral order with with sort of like a

293

00:13:50,730 --> 00:13:48,310

sort of uh pure potentia we're sort of a

294

00:13:52,800 --> 00:13:50,740

precursors of both mind and matter in

295

00:13:57,390 --> 00:13:52,810

this case there's no collapse homer and

296

00:13:59,670 --> 00:13:57,400

Lisa are orbit there's sort of a there

297

00:14:04,020 --> 00:13:59,680

may be some sort of like ways that Lisa

298

00:14:07,500 --> 00:14:04,030

and and and and Nelson share their share

299

00:14:09,600 --> 00:14:07,510

there I'm sorry Milhouse share some of

300

00:14:14,820 --> 00:14:09,610

their thoughts without requiring a kind

301
00:14:17,220 --> 00:14:14,830
of any kind of wave form collapse so III

302
00:14:22,560 --> 00:14:17,230
believe that this story does sort of

303
00:14:24,090 --> 00:14:22,570
like give a kind of give a kind of give

304
00:14:26,280 --> 00:14:24,100
a story that's consistent with all the

305
00:14:27,570 --> 00:14:26,290
various kinds of psych categories that

306
00:14:27,990 --> 00:14:27,580
have suggested that I've described

307
00:14:29,400 --> 00:14:28,000
earlier

308
00:14:30,840 --> 00:14:29,410
for example khalipa the--and

309
00:14:32,210 --> 00:14:30,850
clairvoyance can be understood as

310
00:14:34,230 --> 00:14:32,220
perceptions that underlie the

311
00:14:37,050 --> 00:14:34,240
information and probabilities of events

312
00:14:38,970 --> 00:14:37,060
and experiments presentiments and pre

313
00:14:41,070 --> 00:14:38,980

pre sentience and precognition can be

314

00:14:42,990 --> 00:14:41,080

understood as perhaps unconscious

315

00:14:45,480 --> 00:14:43,000

perceptions of current probabilities of

316

00:14:47,520 --> 00:14:45,490

future events mind matter interaction

317

00:14:49,650 --> 00:14:47,530

can be understood as mental intentions

318

00:14:50,360 --> 00:14:49,660

influencing the probabilities of

319

00:14:52,699 --> 00:14:50,370

standard wave

320

00:14:54,980 --> 00:14:52,709

and the global coherence project can be

321

00:14:57,710 --> 00:14:54,990

understood as shared emotions affecting

322

00:15:02,299 --> 00:14:57,720

the underlying probabilities of quantum

323

00:15:06,350 --> 00:15:02,309

mechanical processes so the next the

324

00:15:08,420 --> 00:15:06,360

next category is Hameroff and Penrose is

325

00:15:10,150 --> 00:15:08,430

a theory of quantum computing in the

326

00:15:12,319 --> 00:15:10,160

brain and this has received a lot of

327

00:15:14,840 --> 00:15:12,329

attention because they have a lot of

328

00:15:17,629 --> 00:15:14,850

ways that in their theory are is

329

00:15:20,299 --> 00:15:17,639

integrating with the with the

330

00:15:22,160 --> 00:15:20,309

neurophysiology I can only sort of

331

00:15:24,350 --> 00:15:22,170

briefly describe some of the sort of

332

00:15:26,660 --> 00:15:24,360

bare-bones aspects of the theory the

333

00:15:29,329 --> 00:15:26,670

Penrose suggests that quantum gravity

334

00:15:32,239 --> 00:15:29,339

interacts with the quantum superposition

335

00:15:33,679 --> 00:15:32,249

to create an objective reduction of the

336

00:15:36,860 --> 00:15:33,689

wave form so conscious a conscious

337

00:15:39,199 --> 00:15:36,870

observer is not required and this

338

00:15:41,689 --> 00:15:39,209

objective reduction in this process

339

00:15:44,480 --> 00:15:41,699

leads to a rudimentary level of

340

00:15:46,100 --> 00:15:44,490

consciousness even you know among rocks

341

00:15:48,410 --> 00:15:46,110

or anywhere out in the physical world

342

00:15:51,049 --> 00:15:48,420

where this objective reduction is

343

00:15:54,429 --> 00:15:51,059

occurring which is a Bic wa tiss now

344

00:15:57,230 --> 00:15:54,439

within the brain conscious experience

345

00:15:59,749 --> 00:15:57,240

there are these they describe the

346

00:16:03,189 --> 00:15:59,759

processes a lot more structured and

347

00:16:07,970 --> 00:16:03,199

organized within the microtubule ohs

348

00:16:09,860 --> 00:16:07,980

tubules within the neurons so we have

349

00:16:13,910 --> 00:16:09,870

the microtubule over these very

350

00:16:17,629 --> 00:16:13,920

microscopic cylinders which are actually

351

00:16:22,329 --> 00:16:17,639

within the neurons which in turn create

352

00:16:25,489 --> 00:16:22,339

this sort of very rich network of

353

00:16:27,259 --> 00:16:25,499

sustained quantum superposition and what

354

00:16:29,720 --> 00:16:27,269

they argue is when the collapse occurs

355

00:16:32,230 --> 00:16:29,730

in a recurrent way that we experience

356

00:16:37,189 --> 00:16:32,240

conscious we experience conscious

357

00:16:39,110 --> 00:16:37,199

experience so in this case we may be

358

00:16:42,379 --> 00:16:39,120

able to account for telepathy and

359

00:16:45,019 --> 00:16:42,389

clairvoyance if the objective reduction

360

00:16:48,319 --> 00:16:45,029

process incorporates non-local

361

00:16:49,519 --> 00:16:48,329

information so it may be that the in the

362

00:16:50,150 --> 00:16:49,529

sort of the precursor sort of

363

00:16:52,009 --> 00:16:50,160

consciousness

364

00:16:55,910 --> 00:16:52,019

there's quantum entanglements with the

365

00:16:57,860 --> 00:16:55,920

environments and therefore we can sort

366

00:16:59,990 --> 00:16:57,870

of like that then then when we're

367

00:17:03,250 --> 00:17:00,000

conscious we sort of like have some

368

00:17:05,500 --> 00:17:03,260

awareness of that non-local information

369

00:17:07,060 --> 00:17:05,510

and Hameroff and Penrose also speculate

370

00:17:10,030 --> 00:17:07,070

that their framework can account for

371

00:17:11,860 --> 00:17:10,040

some of the temporal anomalies such as

372

00:17:14,380 --> 00:17:11,870

pre sentience and precognitive

373

00:17:16,840 --> 00:17:14,390

experimental results I'm not clear

374

00:17:19,930 --> 00:17:16,850

whether this this gives us an easy story

375

00:17:22,210 --> 00:17:19,940

to support telekinesis the direction of

376

00:17:24,550 --> 00:17:22,220

causation of the objective reduction

377

00:17:27,400 --> 00:17:24,560

suggest that physical processes create

378

00:17:28,870 --> 00:17:27,410

consciousness now to be fair to them

379

00:17:30,910 --> 00:17:28,880

they do argue that their objective

380

00:17:32,410 --> 00:17:30,920

reduction or their the orchestrated

381

00:17:35,290 --> 00:17:32,420

objective reduction in the mind does

382

00:17:39,610 --> 00:17:35,300

create a kind of free will or creates or

383

00:17:41,290 --> 00:17:39,620

supports free will but it seems to me

384

00:17:43,540 --> 00:17:41,300

that when we're conscious we're not sort

385

00:17:45,580 --> 00:17:43,550

of in that quantum entanglement that

386

00:17:47,850 --> 00:17:45,590

seems to support that would maybe

387

00:17:50,760 --> 00:17:47,860

support a sort of you know

388

00:17:53,860 --> 00:17:50,770

mind over matter over over distances

389

00:17:56,080 --> 00:17:53,870

also it may not be able to account very

390

00:17:58,390 --> 00:17:56,090

well for the global coherence project

391

00:18:00,700 --> 00:17:58,400

results where participants influence

392

00:18:05,830 --> 00:18:00,710

random devices without being aware of

393

00:18:09,130 --> 00:18:05,840

them okay so so as a conclusion I would

394

00:18:11,290 --> 00:18:09,140

say that examining the side data can be

395

00:18:13,630 --> 00:18:11,300

very useful in making progress toward

396

00:18:16,150 --> 00:18:13,640

understanding quantum mechanics and also

397

00:18:17,980 --> 00:18:16,160

I think in terms of helping us

398

00:18:23,050 --> 00:18:17,990

understand the hard problem of

399

00:18:25,990 --> 00:18:23,060

consciousness now well the framework so

400

00:18:28,540 --> 00:18:26,000

that Bohm in highly and step have

401
00:18:30,880 --> 00:18:28,550
offered it often been marginalized and

402
00:18:33,430 --> 00:18:30,890
ignored and and currently not as

403
00:18:35,140 --> 00:18:33,440
integrated with the neurophysiology I

404
00:18:38,920 --> 00:18:35,150
think the it is a very interesting

405
00:18:41,110 --> 00:18:38,930
framework that seems to be consistent

406
00:18:43,510 --> 00:18:41,120
with all the all the side data at least

407
00:18:45,960 --> 00:18:43,520
the laboratory data that I did I

408
00:18:49,990 --> 00:18:45,970
mentioned earlier hmm

409
00:18:53,170 --> 00:18:50,000
also I think that the side data does

410
00:18:55,750 --> 00:18:53,180
suggest seems to suggest non-local

411
00:18:57,910 --> 00:18:55,760
transfers of information are routed not

412
00:19:00,760 --> 00:18:57,920
just in the the consciousness but also

413
00:19:03,720 --> 00:19:00,770

in the subconscious or the boundary of

414

00:19:06,790 --> 00:19:03,730

the two and this may be problematic for

415

00:19:10,240 --> 00:19:06,800

theories of quantum mechanics that rely

416

00:19:13,390 --> 00:19:10,250

on sort of a conscious observation so

417

00:19:20,260 --> 00:19:13,400

anyway that's kind of my my presentation

418

00:19:20,270 --> 00:19:27,010

we have the little time for questions

419

00:19:32,000 --> 00:19:29,600

thank you very much my name is Leslie

420

00:19:34,160 --> 00:19:32,010

Heyman and I appreciated the overview

421

00:19:36,920 --> 00:19:34,170

that you provided and the questions the

422

00:19:41,440 --> 00:19:36,930

observations you've brought up on the

423

00:19:47,440 --> 00:19:41,450

last point about the interpretation of

424

00:19:53,990 --> 00:19:52,010

theories and recent findings in and

425

00:19:56,180 --> 00:19:54,000

around their work would suggest that

426
00:19:57,770 --> 00:19:56,190
maybe we should be rethinking

427
00:20:01,280 --> 00:19:57,780
consciousness and maybe this has

428
00:20:06,410 --> 00:20:01,290
implications for interpretation of

429
00:20:08,480 --> 00:20:06,420
quantum mechanics they they end up at

430
00:20:11,770 --> 00:20:08,490
the last towards the science of

431
00:20:15,560 --> 00:20:11,780
consciousness conference ended up having

432
00:20:17,540 --> 00:20:15,570
presentations of recent research

433
00:20:20,060 --> 00:20:17,550
findings which would indicate that the

434
00:20:24,500 --> 00:20:20,070
microtubules somewhat consistent with

435
00:20:29,710 --> 00:20:24,510
their theories are basically vibrating

436
00:20:32,420 --> 00:20:29,720
and so in fact the the whole brain and

437
00:20:35,870 --> 00:20:32,430
inside the nerve cells we've got what

438
00:20:36,470 --> 00:20:35,880

they talk about as clocks clocks within

439

00:20:42,460 --> 00:20:36,480

clocks

440

00:20:47,270 --> 00:20:42,470

the whole brain our entire body is

441

00:20:50,390 --> 00:20:47,280

vibrating and as one scientist explained

442

00:20:52,880 --> 00:20:50,400

a beautifully harmonic instrument that

443

00:20:56,300 --> 00:20:52,890

is exquisitely sensitive not only within

444

00:20:59,330 --> 00:20:56,310

itself to itself but to the environment

445

00:21:02,360 --> 00:20:59,340

so that at a subconscious level it's

446

00:21:06,440 --> 00:21:02,370

perfectly possible to pick up

447

00:21:08,240 --> 00:21:06,450

information there's all sorts of

448

00:21:10,790 --> 00:21:08,250

questions about how we do that in a

449

00:21:13,580 --> 00:21:10,800

logical or a coherent differentiating

450

00:21:16,550 --> 00:21:13,590

form and the microtubules may help with

451
00:21:20,780 --> 00:21:16,560
that but I think that your observations

452
00:21:23,150 --> 00:21:20,790
about the inconsistency between their

453
00:21:27,110 --> 00:21:23,160
theories for example in the global

454
00:21:32,270 --> 00:21:27,120
consciousness project I would question

455
00:21:32,860 --> 00:21:32,280
that because a lot of this we're talking

456
00:21:34,180 --> 00:21:32,870
about

457
00:21:36,580 --> 00:21:34,190
consciousness as if it's a specific

458
00:21:38,380 --> 00:21:36,590
thing a set of ideas which i think is

459
00:21:41,820 --> 00:21:38,390
representative of the cognitive function

460
00:21:47,340 --> 00:21:41,830
whereas in fact consciousness may be a

461
00:21:51,610 --> 00:21:47,350
vibrational harmonic effect that is less

462
00:21:53,290 --> 00:21:51,620
about specific words in cognition so I

463
00:21:54,910 --> 00:21:53,300

just wanted to make that observation

464

00:21:57,460 --> 00:21:54,920

because I think you're opening up doors

465

00:22:00,790 --> 00:21:57,470

to conversations where there are more

466

00:22:04,390 --> 00:22:00,800

answers actually then you're allowing

467

00:22:06,240 --> 00:22:04,400

yourself and and us to sort of see but

468

00:22:09,010 --> 00:22:06,250

thank you for the presentation

469

00:22:11,380 --> 00:22:09,020

yeah thank you I was I was at the

470

00:22:13,210 --> 00:22:11,390

conference also and it's very very very

471

00:22:15,940 --> 00:22:13,220

good presentations and I think also

472

00:22:17,799 --> 00:22:15,950

Hameroff might you know argue with

473

00:22:20,620 --> 00:22:17,809

because I know he's very open-minded to

474

00:22:23,800 --> 00:22:20,630

a lot of possible interpretations thank

475

00:22:26,250 --> 00:22:23,810

you thank you very much

476

00:22:29,750 --> 00:22:26,260

[Applause]