



1
00:00:06,950 --> 00:00:04,010
okay please forgive the primitive nature

2
00:00:08,900 --> 00:00:06,960
of my presentation technology this is

3
00:00:12,919 --> 00:00:08,910
poor person's powerpoint otherwise known

4
00:00:14,749 --> 00:00:12,929
as word and you see my affiliation and

5
00:00:17,029 --> 00:00:14,759
the title of my talk philosophical

6
00:00:20,029 --> 00:00:17,039
substance-abuse distorting Descartes and

7
00:00:21,470 --> 00:00:20,039
dismissing dualism I'm going to try to

8
00:00:23,929 --> 00:00:21,480
come to the defense of Rene Descartes

9
00:00:25,460 --> 00:00:23,939
and we learned recently that I may be

10
00:00:31,749 --> 00:00:25,470
able to make him feel better in his time

11
00:00:35,420 --> 00:00:31,759
by going backwards myself so

12
00:00:39,920 --> 00:00:35,430
consciousness what is it we don't really

13
00:00:42,530 --> 00:00:39,930

know and yet we all have it the

14

00:00:44,720 --> 00:00:42,540

mind-body problem what is that well

15

00:00:45,979 --> 00:00:44,730

that's deeply related to the question of

16

00:00:47,959 --> 00:00:45,989

what is consciousness and where does

17

00:00:49,910 --> 00:00:47,969

consciousness originate the mind-body

18

00:00:52,010 --> 00:00:49,920

problem is the question of what is the

19

00:00:55,160 --> 00:00:52,020

relationship between mind and body does

20

00:00:57,099 --> 00:00:55,170

body create mind or is there something

21

00:00:59,930 --> 00:00:57,109

else going on and to the major

22

00:01:03,009 --> 00:00:59,940

historical points of view our first

23

00:01:06,260 --> 00:01:03,019

dualism the idea that mind is primary

24

00:01:08,660 --> 00:01:06,270

independent not physical and does not

25

00:01:09,969 --> 00:01:08,670

die with the body and does not depend on

26

00:01:12,679 --> 00:01:09,979

the body for its existence

27

00:01:15,590 --> 00:01:12,689

this was the predominant view of

28

00:01:17,149 --> 00:01:15,600

philosophers and everybody on the planet

29

00:01:21,800 --> 00:01:17,159

for a very long time according to popper

30

00:01:23,420 --> 00:01:21,810

and Eccles but as scientists began to

31

00:01:26,510 --> 00:01:23,430

construct the scientific method and

32

00:01:31,359 --> 00:01:26,520

science advanced over time dualism

33

00:01:34,429 --> 00:01:31,369

started to lose its respect and in fact

34

00:01:36,800 --> 00:01:34,439

ironically it was Rene Descartes that

35

00:01:38,660 --> 00:01:36,810

helped lead to the demise of dualism

36

00:01:42,649 --> 00:01:38,670

even though he was one of its primary

37

00:01:44,840 --> 00:01:42,659

proponents the idea that Rob rose

38

00:01:46,730 --> 00:01:44,850

instead of dualism was materialism which

39

00:01:48,530 --> 00:01:46,740

an earlier speaker called physicalism

40

00:01:50,240 --> 00:01:48,540

and that's really essentially the same

41

00:01:52,580 --> 00:01:50,250

thing the idea that the mind is a

42

00:01:55,359 --> 00:01:52,590

product of the living brain and ceases

43

00:01:57,620 --> 00:01:55,369

to exist when the brain meets its death

44

00:02:00,100 --> 00:01:57,630

dualism in philosophical and

45

00:02:03,410 --> 00:02:00,110

psychological service circles has been

46

00:02:07,069 --> 00:02:03,420

beaten to death and buried it no longer

47

00:02:11,570 --> 00:02:07,079

is viable it is over anyone who believes

48

00:02:16,390 --> 00:02:11,580

in dualism at best is deluded and so

49

00:02:22,280 --> 00:02:19,460

des cartes view of substance from his

50

00:02:23,660 --> 00:02:22,290

meditations on First Philosophy this is

51
00:02:26,420 --> 00:02:23,670
something that I think the physicalist

52
00:02:28,640 --> 00:02:26,430
should read so that they know what it is

53
00:02:31,520 --> 00:02:28,650
they're denying and denouncing before

54
00:02:35,509 --> 00:02:31,530
they do it Rene Descartes had several

55
00:02:38,240 --> 00:02:35,519
ideas had in his idea in his mind trying

56
00:02:41,000 --> 00:02:38,250
to distinguish between mind and body

57
00:02:43,819 --> 00:02:41,010
he said that both mind and body are

58
00:02:45,229 --> 00:02:43,829
substances what is the substance it's a

59
00:02:47,420 --> 00:02:45,239
thing that's capable of existing

60
00:02:49,250 --> 00:02:47,430
independently I found that a rather

61
00:02:52,880 --> 00:02:49,260
oblique definition when I first started

62
00:02:54,259 --> 00:02:52,890
studying this but lately I started to

63
00:02:56,869 --> 00:02:54,269

understand when I heard some ideas about

64

00:02:59,000 --> 00:02:56,879

from Aristotle an example of a non

65

00:03:01,399 --> 00:02:59,010

substance would be a shadow a shadow

66

00:03:03,500 --> 00:03:01,409

requires a source of light and an object

67

00:03:05,660 --> 00:03:03,510

it does not exist independently it

68

00:03:07,339 --> 00:03:05,670

cannot exist without those things but

69

00:03:10,039 --> 00:03:07,349

the source of light and the object can't

70

00:03:11,960 --> 00:03:10,049

exist without the shadow and can exist

71

00:03:15,440 --> 00:03:11,970

independently so they would be made of a

72

00:03:17,930 --> 00:03:15,450

substance third the cart said that the

73

00:03:19,819 --> 00:03:17,940

mind is a thinking and non extended

74

00:03:22,330 --> 00:03:19,829

substance and here's where he started to

75

00:03:25,039 --> 00:03:22,340

get into trouble with his third sentence

76

00:03:27,409 --> 00:03:25,049

whereas the body is non thinking and

77

00:03:29,900 --> 00:03:27,419

extended what did he mean by extension

78

00:03:31,430 --> 00:03:29,910

well it's rather complicated I don't

79

00:03:33,440 --> 00:03:31,440

have the time to stand here and read all

80

00:03:36,020 --> 00:03:33,450

the quotes that I provide I'm hoping

81

00:03:38,360 --> 00:03:36,030

that you're scanning those as I talk but

82

00:03:41,059 --> 00:03:38,370

his idea of extension included the idea

83

00:03:44,330 --> 00:03:41,069

that two things with extension cannot

84

00:03:46,580 --> 00:03:44,340

occupy the same physical space that is

85

00:03:49,280 --> 00:03:46,590

the exclusionary occupation of space by

86

00:03:53,000 --> 00:03:49,290

matter which is a well-known principle

87

00:03:54,589 --> 00:03:53,010

in physics and accordingly he said it is

88

00:03:55,069 --> 00:03:54,599

certain that I am really distinct from

89

00:03:57,530 --> 00:03:55,079

my body

90

00:04:02,059 --> 00:03:57,540

and can exist without it and that's a

91

00:04:04,280 --> 00:04:02,069

point-blank statement of dualism v he

92

00:04:07,129 --> 00:04:04,290

defined an extended such substances

93

00:04:10,159 --> 00:04:07,139

having three dimensions with shape and

94

00:04:11,809 --> 00:04:10,169

motion the body as an extended substance

95

00:04:15,009 --> 00:04:11,819

also has the property of exclusionary

96

00:04:18,379 --> 00:04:15,019

occupation of space as I was just saying

97

00:04:21,740 --> 00:04:18,389

7th mind and body differ further in that

98

00:04:24,440 --> 00:04:21,750

body is divisible physically it can be

99

00:04:26,540 --> 00:04:24,450

cut apart where his mind he says is

100

00:04:28,939 --> 00:04:26,550

utterly indivisible and by

101
00:04:34,730 --> 00:04:28,949
he means with physical means like knives

102
00:04:37,040 --> 00:04:34,740
or whatever and then lastly the human

103
00:04:38,659 --> 00:04:37,050
body is an interactive union of mind and

104
00:04:40,279 --> 00:04:38,669
body and here's another place he got

105
00:04:42,529 --> 00:04:40,289
himself in trouble because he could not

106
00:04:45,800 --> 00:04:42,539
explain how the interaction occurs and

107
00:04:48,290 --> 00:04:45,810
this above all else has been cited as a

108
00:04:54,439 --> 00:04:48,300
reason why it's obvious the dualism is

109
00:04:56,899 --> 00:04:54,449
false so objections there are many I

110
00:04:58,969 --> 00:04:56,909
just picked one because it's the usual

111
00:05:00,980 --> 00:04:58,979
objection and it's what I just stated if

112
00:05:03,170 --> 00:05:00,990
the brain is physical and the mind is

113
00:05:06,200 --> 00:05:03,180

non-physical then how can the brain and

114

00:05:09,170 --> 00:05:06,210

the mind interact this is posed as a

115

00:05:11,659 --> 00:05:09,180

rhetorical question a question would the

116

00:05:14,240 --> 00:05:11,669

answer already incorporated into it by

117

00:05:15,890 --> 00:05:14,250

using the term non-physical this way the

118

00:05:18,320 --> 00:05:15,900

person asking such a question is

119

00:05:21,830 --> 00:05:18,330

implicitly defining a non-physical

120

00:05:22,999 --> 00:05:21,840

entity as not able to interact with a

121

00:05:25,129 --> 00:05:23,009

physical entity that's what makes it

122

00:05:27,230 --> 00:05:25,139

non-physical and so the question

123

00:05:29,480 --> 00:05:27,240

contains the answer and we're supposed

124

00:05:31,519 --> 00:05:29,490

to say oh you're right it's over there

125

00:05:36,279 --> 00:05:31,529

is no interactionism there is no duality

126

00:05:39,529 --> 00:05:36,289

there is no dualism well that's a bit of

127

00:05:42,800 --> 00:05:39,539

taking Descartes too far in my opinion

128

00:05:45,860 --> 00:05:42,810

and materialists have been at this for

129

00:05:48,920 --> 00:05:45,870

centuries picking on foreign aid to cart

130

00:05:50,330 --> 00:05:48,930

and he they have exaggerated and

131

00:05:53,149 --> 00:05:50,340

sharpened the other distinctions that he

132

00:05:54,890 --> 00:05:53,159

made into a description of the

133

00:05:57,019 --> 00:05:54,900

non-physical substance as something

134

00:05:59,119 --> 00:05:57,029

that's really untenable the non-physical

135

00:06:01,700 --> 00:05:59,129

mind has neither mass nor energy is not

136

00:06:03,619 --> 00:06:01,710

localizable in any way in space is not

137

00:06:05,390 --> 00:06:03,629

extended in space does not exist in

138

00:06:07,010 --> 00:06:05,400

space has no physical properties

139

00:06:08,719 --> 00:06:07,020

whatsoever has nothing in common with

140

00:06:10,249 --> 00:06:08,729

physical things and is completely

141

00:06:13,399 --> 00:06:10,259

independent of anything material and

142

00:06:16,040 --> 00:06:13,409

works independently of the brain okay

143

00:06:19,459 --> 00:06:16,050

that's too much they've gone over the

144

00:06:20,959 --> 00:06:19,469

ledge here and to tell an interactionist

145

00:06:23,059 --> 00:06:20,969

that his point of view is that the mind

146

00:06:24,769 --> 00:06:23,069

works independently of the brain is to

147

00:06:27,589 --> 00:06:24,779

not listen when the guy says I'm an

148

00:06:30,279 --> 00:06:27,599

interactionist so no this is not what

149

00:06:35,089 --> 00:06:30,289

they cart thought however it's become

150

00:06:37,010 --> 00:06:35,099

the way he's described my objection if

151

00:06:38,450 --> 00:06:37,020

the body and the mind both fit the

152

00:06:39,870 --> 00:06:38,460

definition of substance according to

153

00:06:42,210 --> 00:06:39,880

Descartes who

154

00:06:45,630 --> 00:06:42,220

the term to describe things that are

155

00:06:47,460 --> 00:06:45,640

substantial in these two examples of

156

00:06:49,200 --> 00:06:47,470

substances must share some common

157

00:06:50,460 --> 00:06:49,210

properties that is the definition of

158

00:06:53,640 --> 00:06:50,470

substance they both have to meet that

159

00:06:55,320 --> 00:06:53,650

definition and this point seems to have

160

00:06:57,630 --> 00:06:55,330

escaped the physicalist materialist

161

00:06:59,820 --> 00:06:57,640

thinkers so how do we gain traction on

162

00:07:02,730 --> 00:06:59,830

such a slippery problem how do we

163

00:07:05,840 --> 00:07:02,740

approach the idea and and generate some

164

00:07:10,410 --> 00:07:05,850

ideas about what exactly could another

165

00:07:12,780 --> 00:07:10,420

subsidies matter B and mean so we need

166

00:07:14,940 --> 00:07:12,790

some empirical data and we also need

167

00:07:17,190 --> 00:07:14,950

some theoretical help and I'm going to

168

00:07:19,620 --> 00:07:17,200

ask Albert Einstein for help today and

169

00:07:22,350 --> 00:07:19,630

I'm going to with apologies ask Brian

170

00:07:24,560 --> 00:07:22,360

Green for some help he was here last

171

00:07:27,660 --> 00:07:24,570

weekend for the I scene conference and

172

00:07:32,310 --> 00:07:27,670

he was shall we say not exactly

173

00:07:34,380 --> 00:07:32,320

intrigued by my ideas and so I apologize

174

00:07:37,020 --> 00:07:34,390

to him here my invoking him in this talk

175

00:07:46,790 --> 00:07:37,030

if he were here he would be outraged and

176

00:07:49,440 --> 00:07:46,800

I'm sorry he's not here what do I call

177

00:07:51,990 --> 00:07:49,450

empirical data here's where I get myself

178

00:07:54,630 --> 00:07:52,000

in even more trouble the near-death

179

00:07:57,660 --> 00:07:54,640

experience most of you have probably

180

00:08:01,350 --> 00:07:57,670

heard of this this occurs usually when a

181

00:08:03,530 --> 00:08:01,360

person comes close to physical death or

182

00:08:06,150 --> 00:08:03,540

actually physically dies and isn't

183

00:08:08,640 --> 00:08:06,160

resuscitated there are many many

184

00:08:09,870 --> 00:08:08,650

thousands bordering well there are

185

00:08:11,400 --> 00:08:09,880

millions of people who have claimed to

186

00:08:13,860 --> 00:08:11,410

have the experience and in many

187

00:08:15,630 --> 00:08:13,870

thousands of published reports and I

188

00:08:18,750 --> 00:08:15,640

could talk to you for seven or eight

189

00:08:20,880 --> 00:08:18,760

hours on the phenomenon alone but I've

190

00:08:23,280 --> 00:08:20,890

picked two reports that illustrate one

191

00:08:24,330 --> 00:08:23,290

principle that's really critical to what

192

00:08:27,300 --> 00:08:24,340

I have to tell you at the end of the

193

00:08:30,570 --> 00:08:27,310

talk these are reports in the operating

194

00:08:32,730 --> 00:08:30,580

room of people who died on the table and

195

00:08:35,010 --> 00:08:32,740

were resuscitated and then told their

196

00:08:37,409 --> 00:08:35,020

stories later on and the first person

197

00:08:40,409 --> 00:08:37,419

says as they that is the doctors and

198

00:08:43,080 --> 00:08:40,419

nurses came by they wouldn't seem to

199

00:08:44,250 --> 00:08:43,090

notice me they would just keep walking

200

00:08:46,380 --> 00:08:44,260

with their eyes straight ahead

201
00:08:48,600 --> 00:08:46,390
and this is the person who's dissociated

202
00:08:50,040 --> 00:08:48,610
from his or her body and observing

203
00:08:52,710 --> 00:08:50,050
what's going on in the operating room as

204
00:08:53,310 --> 00:08:52,720
they came real close I would try to turn

205
00:08:55,380 --> 00:08:53,320
around

206
00:09:00,330 --> 00:08:55,390
to get out of their way but they would

207
00:09:01,770 --> 00:09:00,340
just walk through me hmm okay you're

208
00:09:04,380 --> 00:09:01,780
entitled to say okay these people are

209
00:09:06,240 --> 00:09:04,390
psychotic however I spent my entire

210
00:09:09,060 --> 00:09:06,250
master's thesis showing that they

211
00:09:11,600 --> 00:09:09,070
weren't so I'll mail it to you if you

212
00:09:14,670 --> 00:09:11,610
need a reason the second account I'm

213
00:09:16,800 --> 00:09:14,680

trying to stop them the doctors I really

214

00:09:19,080 --> 00:09:16,810

did try to grab ahold of them and stop

215

00:09:20,880 --> 00:09:19,090

them because I really felt happy where I

216

00:09:25,320 --> 00:09:20,890

was which is dead

217

00:09:27,930 --> 00:09:25,330

I actually remember grabbing the doctor

218

00:09:30,450 --> 00:09:27,940

the interviewer asked what happened the

219

00:09:32,430 --> 00:09:30,460

the experiencer says nothing absolutely

220

00:09:39,330 --> 00:09:32,440

nothing it was almost like he wasn't

221

00:09:40,770 --> 00:09:39,340

there well he was there and so was the

222

00:09:43,020 --> 00:09:40,780

experiencer but they were different

223

00:09:45,030 --> 00:09:43,030

somehow aren't they and in fact there's

224

00:09:47,030 --> 00:09:45,040

a superposition of the experience there

225

00:09:50,280 --> 00:09:47,040

over physical bodies with no interaction

226

00:09:53,340 --> 00:09:50,290

so I'm gonna have to accelerate myself

227

00:09:54,990 --> 00:09:53,350

way beyond my normal range consider

228

00:09:58,230 --> 00:09:55,000

Einstein's famous equation with a whole

229

00:10:00,260 --> 00:09:58,240

bunch of changes e equals s sub l seats

230

00:10:04,170 --> 00:10:00,270

of the l where l is an integer zero to

231

00:10:07,470 --> 00:10:04,180

whatever s_0 would be energy itself

232

00:10:08,790 --> 00:10:07,480

since C to the 0 is 1 s_1 would be what

233

00:10:11,480 --> 00:10:08,800

I'm calling essence the non-material

234

00:10:14,190 --> 00:10:11,490

speaking substance s_2 would be matter

235

00:10:16,730 --> 00:10:14,200

this is just for illustration purposes

236

00:10:18,660 --> 00:10:16,740

you can think of a way to construct a

237

00:10:21,420 --> 00:10:18,670

substance from energy that is not

238

00:10:25,860 --> 00:10:21,430

mattered simply by considering such a

239

00:10:28,770 --> 00:10:25,870

simple relationship so the essence that

240

00:10:30,330 --> 00:10:28,780

I call the non material substance would

241

00:10:31,890 --> 00:10:30,340

be constructed completely differently

242

00:10:33,630 --> 00:10:31,900

from energy it would still be

243

00:10:35,550 --> 00:10:33,640

constructed from energy but differently

244

00:10:38,130 --> 00:10:35,560

so differently that it could overlap

245

00:10:40,550 --> 00:10:38,140

with matter and not even interact with

246

00:10:43,860 --> 00:10:40,560

it except under certain circumstances

247

00:10:46,290 --> 00:10:43,870

Einstein has helped us understand with

248

00:10:48,000 --> 00:10:46,300

his $E=mc^2$ equation that

249

00:10:49,650 --> 00:10:48,010

there could be other forms of substance

250

00:10:53,310 --> 00:10:49,660

but he hasn't given us any kind of

251
00:10:56,880 --> 00:10:53,320
structural advice so let's turn to Brian

252
00:10:58,520 --> 00:10:56,890
Greene and as you see here string theory

253
00:11:00,600 --> 00:10:58,530
comes directly from Newtonian mechanics

254
00:11:03,570 --> 00:11:00,610
because in the upper left-hand corner we

255
00:11:04,770 --> 00:11:03,580
have Newton's apple and Newton didn't

256
00:11:06,650 --> 00:11:04,780
know it at the time because Apple was

257
00:11:09,680 --> 00:11:06,660
composed of many Apple atoms

258
00:11:11,150 --> 00:11:09,690
and each Apple atom has what were once

259
00:11:13,970 --> 00:11:11,160
called elementary particles electrons

260
00:11:16,910 --> 00:11:13,980
protons neutrons those have been shown

261
00:11:19,220 --> 00:11:16,920
to consist of quarks string theory has

262
00:11:21,860 --> 00:11:19,230
told us that the quarks themselves are

263
00:11:24,050 --> 00:11:21,870

composed of strings strings are supposed

264

00:11:25,639 --> 00:11:24,060

to be the fundamental unit of everything

265

00:11:27,170 --> 00:11:25,649

and so string theory is a grand

266

00:11:30,019 --> 00:11:27,180

unification theory in the sense that

267

00:11:32,150 --> 00:11:30,029

Einstein wanted however this is an

268

00:11:34,160 --> 00:11:32,160

artists misconception because material

269

00:11:35,900 --> 00:11:34,170

particles are open-ended strings and

270

00:11:38,949 --> 00:11:35,910

what he's shown here is a closed-ended

271

00:11:42,139 --> 00:11:38,959

string so this is not drawn quite right

272

00:11:45,980 --> 00:11:42,149

however we're going to go ahead what are

273

00:11:47,660 --> 00:11:45,990

things in terms of strings closed loop

274

00:11:49,939 --> 00:11:47,670

strings are one type these are

275

00:11:52,280 --> 00:11:49,949

free-floating tiny vibrating circular

276

00:11:54,139 --> 00:11:52,290

strands of energy the open-ended strings

277

00:11:56,420 --> 00:11:54,149

are the other type these are bound to

278

00:11:58,999 --> 00:11:56,430

our support additional spacetime three

279

00:12:02,569 --> 00:11:59,009

physical space will dimensions one time

280

00:12:03,800 --> 00:12:02,579

dimension at each end so the opening of

281

00:12:07,400 --> 00:12:03,810

strings are actually part of our

282

00:12:10,069 --> 00:12:07,410

universe what string theory claims is

283

00:12:11,480 --> 00:12:10,079

that different amounts of energy are

284

00:12:13,550 --> 00:12:11,490

represented by different vibrational

285

00:12:15,460 --> 00:12:13,560

modes of the strings translating to

286

00:12:18,889 --> 00:12:15,470

different masses of particles

287

00:12:21,379 --> 00:12:18,899

gravitons predicted by relativity are in

288

00:12:24,199 --> 00:12:21,389

string theory closed loop strings that

289

00:12:29,809 --> 00:12:24,209

only temporarily stay in this universe

290

00:12:32,150 --> 00:12:29,819

and then leave it so string theory is

291

00:12:34,160 --> 00:12:32,160

meant to account for the weakness of

292

00:12:36,110 --> 00:12:34,170

gravity by saying that most gravitons

293

00:12:37,790 --> 00:12:36,120

never exert any force on a physical

294

00:12:40,460 --> 00:12:37,800

object they leave the universe first and

295

00:12:42,590 --> 00:12:40,470

that's one of the strengths of string

296

00:12:44,749 --> 00:12:42,600

theory but how do we test it no one's

297

00:12:46,280 --> 00:12:44,759

been able to test it I suggest to you

298

00:12:48,860 --> 00:12:46,290

that the near-death experience

299

00:12:50,329 --> 00:12:48,870

represents the test of this theory that

300

00:12:53,120 --> 00:12:50,339

the what I call the essence the

301
00:12:55,129 --> 00:12:53,130
dissociated non material mind is in fact

302
00:12:57,650 --> 00:12:55,139
a closed loop string or maybe more than

303
00:13:00,439 --> 00:12:57,660
one closed loop string that allows its

304
00:13:01,639 --> 00:13:00,449
overlap with matter because the closed

305
00:13:05,329 --> 00:13:01,649
loop string is not attached to

306
00:13:09,410 --> 00:13:05,339
space-time and secondly to be even more

307
00:13:11,449 --> 00:13:09,420
outrageous consciousness is in the

308
00:13:13,220 --> 00:13:11,459
closed loop string although not

309
00:13:15,980 --> 00:13:13,230
necessarily originating from it and

310
00:13:18,049 --> 00:13:15,990
maybe vice versa I suspect and the

311
00:13:20,090 --> 00:13:18,059
closed loop string that is the essence

312
00:13:23,420 --> 00:13:20,100
as I call it the human mind is cable

313
00:13:25,819 --> 00:13:23,430

of leaving the universe and if that's

314

00:13:30,769 --> 00:13:25,829

not renegade enough for you

315

00:13:33,199 --> 00:13:30,779

my apologies therefore I believe that

316

00:13:36,439 --> 00:13:33,209

the old ideas of Rene Descartes about

317

00:13:38,509 --> 00:13:36,449

substance have been given a new life a

318

00:13:40,460 --> 00:13:38,519

new way of thinking about them at the

319

00:13:43,129 --> 00:13:40,470

very least and a new way of gathering

320

00:13:45,949 --> 00:13:43,139

information by using human experience

321

00:13:48,439 --> 00:13:45,959

subjective experience as scientific data

322

00:13:49,689 --> 00:13:48,449

in the area of consciousness I really

323

00:13:52,059 --> 00:13:49,699

don't see how we can divorce

324

00:13:53,689 --> 00:13:52,069

first-person experience from

325

00:13:58,100 --> 00:13:53,699

consciousness and study consciousness

326

00:14:00,559 --> 00:13:58,110

from solely a third-person account so I

327

00:14:10,340 --> 00:14:00,569

believe that we have evidence to think

328

00:14:13,150 --> 00:14:10,350

that way thank you we have a few minutes

329

00:14:16,910 --> 00:14:13,160

for questions and comments and I will

330

00:14:20,030 --> 00:14:16,920

exert chairs privilege just for just to

331

00:14:21,860 --> 00:14:20,040

comment that relying on string theory to

332

00:14:23,389 --> 00:14:21,870

give us an idea of the true nature of

333

00:14:25,340 --> 00:14:23,399

physics is seems to be getting

334

00:14:28,340 --> 00:14:25,350

increasingly dodgy these days to spend

335

00:14:31,670 --> 00:14:28,350

despite the best propaganda efforts of

336

00:14:35,360 --> 00:14:31,680

folks like Brian Greene let me add one

337

00:14:37,670 --> 00:14:35,370

idea to that Brian Greene taught me

338

00:14:42,350 --> 00:14:37,680

indirectly through television that M

339

00:14:45,290 --> 00:14:42,360

theory summarizes the five subservient

340

00:14:46,910 --> 00:14:45,300

variants of string theory unifies them

341

00:14:49,699 --> 00:14:46,920

and predicts a fourth spatial dimension

342

00:14:52,309 --> 00:14:49,709

so I believe that my ideas are evidence

343

00:14:57,110 --> 00:14:52,319

of his theory but he was not interested

344

00:15:02,639 --> 00:14:57,120

in that kind of evidence ah I see a

345

00:15:08,040 --> 00:15:06,059

hi Bernie Bernie Williams first I want

346

00:15:10,319 --> 00:15:08,050

to agree with York and then I want agree

347

00:15:13,470 --> 00:15:10,329

with you and then I want to note that a

348

00:15:15,889 --> 00:15:13,480

lot of the inner subjective turn that

349

00:15:19,009 --> 00:15:15,899

we're taking has to do with reviving

350

00:15:22,079 --> 00:15:19,019

ancient traditions like Maria does and

351

00:15:25,829 --> 00:15:22,089

to note that I don't think it's ironic

352

00:15:29,369 --> 00:15:25,839

that we have one and only one remaining

353

00:15:31,739 --> 00:15:29,379

fragment from the cheapest now for those

354

00:15:35,009 --> 00:15:31,749

of you who aren't antique Greeks the

355

00:15:38,329 --> 00:15:35,019

cheapest was Democritus teacher the

356

00:15:41,030 --> 00:15:38,339

proposer of atoms all right

357

00:15:44,359 --> 00:15:41,040

what is the one remaining fragment a

358

00:15:52,169 --> 00:15:44,369

description of particles of newest

359

00:15:55,919 --> 00:15:52,179

particles of mind I am assuming I don't

360

00:15:58,439 --> 00:15:55,929

have to answer that comments would be

361

00:16:00,410 --> 00:15:58,449

welcome however I'm not sure I know how

362

00:16:03,290 --> 00:16:00,420

to comment on that

363

00:16:06,150 --> 00:16:03,300

why not Costa I'm a neurophysiologist

364

00:16:08,249 --> 00:16:06,160

does consciousness studies now and I

365

00:16:12,179 --> 00:16:08,259

like exploring altered states and

366

00:16:16,939 --> 00:16:12,189

recording them on the EEG so try this

367

00:16:19,499 --> 00:16:16,949

one on the brain is a quantum mechanical

368

00:16:23,850 --> 00:16:19,509

electrochemical meat machine that

369

00:16:27,360 --> 00:16:23,860

collapses the wavefunction and then if

370

00:16:29,009 --> 00:16:27,370

you want to get even more confused what

371

00:16:30,780 --> 00:16:29,019

we're all doing here is our brains are

372

00:16:32,970 --> 00:16:30,790

studying our brains and our brains are

373

00:16:35,730 --> 00:16:32,980

studying our consciousness so you can

374

00:16:42,689 --> 00:16:35,740

never get out of the problem of the

375

00:16:44,579 --> 00:16:42,699

brain is part of the the mix I started

376

00:16:46,319 --> 00:16:44,589

going to the consciousness the science

377

00:16:49,139 --> 00:16:46,329

of cautions conferences years ago and

378

00:16:53,189 --> 00:16:49,149

all these debates happened every day and

379

00:16:56,489 --> 00:16:53,199

and then different camps were formed the

380

00:16:59,789 --> 00:16:56,499

neuro phenomenologist the nerve net

381

00:17:02,129 --> 00:16:59,799

people the modelers the subjective

382

00:17:05,939 --> 00:17:02,139

experience people you have to look at

383

00:17:07,740 --> 00:17:05,949

the whole gamut so I encourage people to

384

00:17:10,439 --> 00:17:07,750

explore altered states of consciousness

385

00:17:12,370 --> 00:17:10,449

where you can have these experiences of

386

00:17:16,890 --> 00:17:12,380

out-of-body you can have

387

00:17:19,720 --> 00:17:16,900

these experiences of your consciousness

388

00:17:23,730 --> 00:17:19,730

moved to different locations you can

389

00:17:26,520 --> 00:17:23,740

have telepathic well no some of this

390

00:17:30,990 --> 00:17:26,530

thank you for a beautiful presentation

391

00:17:31,000 --> 00:17:38,670

other questions

392

00:17:38,680 --> 00:17:46,970

[Laughter]

393

00:17:52,980 --> 00:17:51,120

unicrone I wonder if you know that in

394

00:17:55,860 --> 00:17:52,990

Kabbalistic science there was already

395

00:17:59,970 --> 00:17:55,870

super string theory in which science

396

00:18:04,290 --> 00:17:59,980

Kabbalistic science no you know you can

397

00:18:08,160 --> 00:18:04,300

read it in read in the book of dr.

398

00:18:11,700 --> 00:18:08,170

pollidori published in 1925 it says that

399

00:18:14,400 --> 00:18:11,710

all universe including physical

400

00:18:18,169 --> 00:18:14,410

substance has created from primal

401

00:18:22,190 --> 00:18:18,179

vibrations of two types one is like

402

00:18:27,320 --> 00:18:22,200

snake swallowing its own tail which is

403

00:18:33,590 --> 00:18:27,330

closed-loop stream right and another

404

00:18:40,549 --> 00:18:37,290

unrestricted in vibrations of these two

405

00:18:44,520 --> 00:18:40,559

or two types of strings make the whole

406

00:18:46,049 --> 00:18:44,530

world so this is pretty interesting that

407

00:18:46,910 --> 00:18:46,059

they knew about it very interesting

408

00:18:50,310 --> 00:18:46,920

thank you