

Dr. Mario Beauregard, Brain Wars
skeptiko.com

1
00:00:12,320 --> 00:00:10,100
on this episode of skeptic Oh Alex talks

2
00:00:15,560 --> 00:00:12,330
with a neuroscientist dr. Mario

3
00:00:18,950 --> 00:00:15,570
Beauregard about his new book brain Wars

4
00:00:21,769 --> 00:00:18,960
there eventually will be another river a

5
00:00:25,429 --> 00:00:21,779
big revolution in science and this will

6
00:00:28,480 --> 00:00:25,439
be about mind and consciousness and the

7
00:00:31,490 --> 00:00:28,490
same kind of revolution that they've had

8
00:00:34,040 --> 00:00:31,500
about 100 years ago in physics from

9
00:00:36,500 --> 00:00:34,050
classical physics to quantum physics at

10
00:00:37,610 --> 00:00:36,510
the same time in parallel of course like

11
00:00:41,299 --> 00:00:37,620
you said at the beginning of the

12
00:00:42,799 --> 00:00:41,309
interview if you talk to lay people to

13
00:00:45,139 --> 00:00:42,809

most people did you not believe that

14

00:00:47,869 --> 00:00:45,149

they are strictly biological robots that

15

00:00:50,060 --> 00:00:47,879

they don't have any influence over their

16

00:00:53,139 --> 00:00:50,070

brain activity or what's happening in

17

00:00:58,400 --> 00:00:53,149

the body and so on and so forth and so

18

00:01:02,270 --> 00:00:58,410

it won't be difficult if there's the

19

00:01:07,570 --> 00:01:02,280

start of really a transition in science

20

00:01:10,789 --> 00:01:07,580

within science it will go quickly

21

00:01:14,240 --> 00:01:10,799

because the rest of the world you know

22

00:01:17,630 --> 00:01:14,250

is very sympathetic regarding and non

23

00:01:32,530 --> 00:01:17,640

materialist view of consciousness and a

24

00:01:36,380 --> 00:01:34,789

welcome to skeptic aware we explore

25

00:01:38,840 --> 00:01:36,390

controversial science with leading

26

00:01:40,880 --> 00:01:38,850

researchers thinkers and their critics

27

00:01:42,920 --> 00:01:40,890

i'm your host alex a garrison on this

28

00:01:45,800 --> 00:01:42,930

episode of skeptic oh we're going to

29

00:01:48,020 --> 00:01:45,810

talk to dr. Mario Beauregard about his

30

00:01:50,749 --> 00:01:48,030

fascinating work in his very compelling

31

00:01:52,190 --> 00:01:50,759

book brain Wars so on this show we've

32

00:01:54,080 --> 00:01:52,200

talked quite a bit about the end of

33

00:01:55,969 --> 00:01:54,090

materialism and the evidence for that

34

00:01:57,950 --> 00:01:55,979

which has been mounting and is pretty

35

00:01:59,660 --> 00:01:57,960

overwhelming at this point well here's a

36

00:02:01,399 --> 00:01:59,670

guy who's really pulled all that

37

00:02:03,980 --> 00:02:01,409

together in a way that really creates

38

00:02:07,070 --> 00:02:03,990

quite an overwhelmingly convincing case

39

00:02:09,910 --> 00:02:07,080

for anyone who dares to look here's my

40

00:02:13,490 --> 00:02:09,920

interview with dr. Mario Beauregard

41

00:02:16,309 --> 00:02:13,500

today we welcome dr. Mario Beauregard to

42

00:02:18,620 --> 00:02:16,319

skeptic Oh dr. bogard is an associate

43

00:02:20,300 --> 00:02:18,630

research professor at the neuroscience

44

00:02:22,729 --> 00:02:20,310

research center at the university of

45

00:02:25,130 --> 00:02:22,739

montreal he has a PhD in neuroscience

46

00:02:27,259 --> 00:02:25,140

also from the University of Montreal and

47

00:02:29,240 --> 00:02:27,269

he also has two post doctorate

48

00:02:31,610 --> 00:02:29,250

fellowships in experimental

49

00:02:33,920 --> 00:02:31,620

neuropsychology he's the author of over

50

00:02:37,039 --> 00:02:33,930

a hundred publications in neuroscience

51
00:02:39,250 --> 00:02:37,049
psychology and psychiatry and he's here

52
00:02:43,370 --> 00:02:39,260
today to talk about his latest book

53
00:02:46,699 --> 00:02:43,380
brain Wars the scientific battle over

54
00:02:49,900 --> 00:02:46,709
the existence of the mind and proof that

55
00:02:52,550 --> 00:02:49,910
will change the way we live our lives

56
00:02:55,759 --> 00:02:52,560
Mario thank you very much for joining me

57
00:03:01,160 --> 00:02:55,769
today on skeptic oh and welcome thank

58
00:03:03,620 --> 00:03:01,170
you so your book brain Wars and this

59
00:03:06,650 --> 00:03:03,630
battle over over whether we are really

60
00:03:09,710 --> 00:03:06,660
just biological robots as our friend

61
00:03:12,140 --> 00:03:09,720
Stephen Hawking likes to say is a

62
00:03:14,060 --> 00:03:12,150
frequent topic on this show so I think

63
00:03:17,479 --> 00:03:14,070

you're going to find an audience who is

64

00:03:19,550 --> 00:03:17,489

well aware of a lot of the issues but

65

00:03:21,470 --> 00:03:19,560

you really do a great job of kind of

66

00:03:23,660 --> 00:03:21,480

presenting it in your book and pulling

67

00:03:26,270 --> 00:03:23,670

it all together can you tell us a little

68

00:03:31,849 --> 00:03:26,280

bit briefly about what your book is

69

00:03:34,479 --> 00:03:31,859

about well the starting point is the

70

00:03:37,880 --> 00:03:34,489

what we call the the modern scientific

71

00:03:41,140 --> 00:03:37,890

worldview so it's the the world view

72

00:03:44,300 --> 00:03:41,150

that is based on classical physics and

73

00:03:47,000 --> 00:03:44,310

this this view

74

00:03:51,280 --> 00:03:47,010

is based on a number of fundamental

75

00:03:55,760 --> 00:03:51,290

assumptions like materialism determinism

76

00:04:00,380 --> 00:03:55,770

reductionism also so applied to mine and

77

00:04:03,770 --> 00:04:00,390

brain means that for instance everything

78

00:04:07,040 --> 00:04:03,780

in the universe is only matter and

79

00:04:11,000 --> 00:04:07,050

energy therefore the brain is a physical

80

00:04:13,100 --> 00:04:11,010

object to and the mind can be reduced

81

00:04:17,000 --> 00:04:13,110

strictly to electrical and chemical

82

00:04:20,240 --> 00:04:17,010

processes in the brain it means also

83

00:04:23,840 --> 00:04:20,250

that everything is determined from a

84

00:04:28,120 --> 00:04:23,850

material or physical point of view so we

85

00:04:31,400 --> 00:04:28,130

don't have any freedom we're like

86

00:04:34,790 --> 00:04:31,410

biological robots totally determined by

87

00:04:39,070 --> 00:04:34,800

our neurons and our genes and so on and

88

00:04:43,370 --> 00:04:39,080

so forth and so we are reduced to

89

00:04:46,730 --> 00:04:43,380

material objects and we are determined

90

00:04:49,880 --> 00:04:46,740

by material processes so that's the what

91

00:04:52,580 --> 00:04:49,890

we call the modern scientific worldview

92

00:04:55,730 --> 00:04:52,590

but right the doctor dr. Beauregard is

93

00:04:57,620 --> 00:04:55,740

that really where science is at because

94

00:04:59,810 --> 00:04:57,630

I think that one of the problems that

95

00:05:01,640 --> 00:04:59,820

kind of the people on the street if you

96

00:05:04,159 --> 00:05:01,650

will folks that I talked to who are not

97

00:05:06,500 --> 00:05:04,169

engaged in this debate they kind of take

98

00:05:09,200 --> 00:05:06,510

a view of it kind of the way that a lot

99

00:05:13,250 --> 00:05:09,210

of folks in American and North America

100

00:05:15,469 --> 00:05:13,260

treat Catholicism or even Christianity

101

00:05:18,350 --> 00:05:15,479

it's like yeah yeah yeah kinda but I

102

00:05:21,409 --> 00:05:18,360

don't really hold to all that I do do

103

00:05:24,800 --> 00:05:21,419

most people really believe any of that

104

00:05:28,100 --> 00:05:24,810

and to what extent is that really the

105

00:05:30,950 --> 00:05:28,110

mainstream view within science well it

106

00:05:34,719 --> 00:05:30,960

it's the main string of you would see

107

00:05:38,210 --> 00:05:34,729

still in the biomedical field it is also

108

00:05:40,820 --> 00:05:38,220

in philosophy however in physics

109

00:05:43,640 --> 00:05:40,830

everything changed past hundred years

110

00:05:46,040 --> 00:05:43,650

ago so they've had their own revolution

111

00:05:49,210 --> 00:05:46,050

from classical physics to quantum

112

00:05:51,680 --> 00:05:49,220

physics and the D materialized the world

113

00:05:54,430 --> 00:05:51,690

so the quantum physics is the founding

114

00:05:57,350 --> 00:05:54,440

fathers of quantum physics realized that

115

00:05:58,020 --> 00:05:57,360

you know the world the universe is not

116

00:06:05,220 --> 00:05:58,030

conceived

117

00:06:08,280 --> 00:06:05,230

of tiny physical particles like billiard

118

00:06:11,880 --> 00:06:08,290

balls for instance but the do you

119

00:06:15,510 --> 00:06:11,890

realize that there's a very important

120

00:06:18,140 --> 00:06:15,520

mental component in the universe and

121

00:06:20,490 --> 00:06:18,150

this relates to the the so-called

122

00:06:24,110 --> 00:06:20,500

measurement problem or the observer

123

00:06:28,170 --> 00:06:24,120

effect so the the physicist and is

124

00:06:30,270 --> 00:06:28,180

instrument they are influencing to

125

00:06:33,530 --> 00:06:30,280

certain extent the outcome of the

126

00:06:36,450 --> 00:06:33,540

experiment at a micro physical level

127

00:06:41,070 --> 00:06:36,460

whether they are measuring either

128

00:06:44,760 --> 00:06:41,080

particles or waves and so the the now

129

00:06:48,170 --> 00:06:44,770

it's recognized in quantum physics that

130

00:06:51,150 --> 00:06:48,180

you cannot explain the universe or

131

00:06:52,980 --> 00:06:51,160

understand the universe without making

132

00:06:56,580 --> 00:06:52,990

reference to what we call mind in

133

00:07:00,090 --> 00:06:56,590

consciousness but in bio in the

134

00:07:02,970 --> 00:07:00,100

biomedical field including neuroscience

135

00:07:05,760 --> 00:07:02,980

it's a different ballgame most

136

00:07:08,610 --> 00:07:05,770

scientists in my field research for

137

00:07:11,010 --> 00:07:08,620

instance are not aware of these they

138

00:07:13,530 --> 00:07:11,020

don't know very well quantum physics and

139

00:07:15,930 --> 00:07:13,540

they are not aware that that there's

140

00:07:19,140 --> 00:07:15,940

been a revolution hundred years ago

141

00:07:21,450 --> 00:07:19,150

regarding these fundamental issues and

142

00:07:25,530 --> 00:07:21,460

it's it's the same thing pretty much

143

00:07:27,870 --> 00:07:25,540

also in other fields like psychiatry for

144

00:07:32,030 --> 00:07:27,880

instance so it's a week we shine a lot

145

00:07:35,370 --> 00:07:32,040

of biological reductionism in psychiatry

146

00:07:38,310 --> 00:07:35,380

especially with regard to the use of

147

00:07:41,790 --> 00:07:38,320

drugs for instance and so on and so

148

00:07:45,690 --> 00:07:41,800

forth and so in philosophy it's the same

149

00:07:48,510 --> 00:07:45,700

thing still so even though physicist

150

00:07:52,170 --> 00:07:48,520

have shown that the universe cannot be

151
00:07:56,910 --> 00:07:52,180
reduced to a physical machine nearly 100

152
00:08:00,000 --> 00:07:56,920
years ago the most scientists and

153
00:08:03,300 --> 00:08:00,010
philosophers are either not aware of

154
00:08:05,190 --> 00:08:03,310
that or they don't want to you know they

155
00:08:07,050 --> 00:08:05,200
don't want to accept that but don't we

156
00:08:09,900 --> 00:08:07,060
have to be a little bit careful when we

157
00:08:11,860 --> 00:08:09,910
tread into the physicist territory and

158
00:08:13,090 --> 00:08:11,870
quantum physics in particular

159
00:08:16,330 --> 00:08:13,100
because there's a lot of pushback

160
00:08:19,420 --> 00:08:16,340
there's a whole tsunami of pushback on

161
00:08:21,370 --> 00:08:19,430
the the way that quantum physics has

162
00:08:23,260 --> 00:08:21,380
been kind of weaved into a lot of New

163
00:08:25,150 --> 00:08:23,270

Age thought and i'm not saying at all

164

00:08:27,640 --> 00:08:25,160

that that's what you're doing but i

165

00:08:30,100 --> 00:08:27,650

think there's a lot of fuzziness there I

166

00:08:33,250 --> 00:08:30,110

think what we can say at the very least

167

00:08:36,130 --> 00:08:33,260

is that it's clearly an unsettled issue

168

00:08:38,320 --> 00:08:36,140

and we have to take seriously the

169

00:08:40,230 --> 00:08:38,330

thought that that quantum physics

170

00:08:43,000 --> 00:08:40,240

suggests that consciousness may be

171

00:08:45,880 --> 00:08:43,010

fundamental in the way that we generally

172

00:08:48,220 --> 00:08:45,890

think of matter as being fundamental so

173

00:08:50,470 --> 00:08:48,230

I'm with you on all that yeah yeah that

174

00:08:52,720 --> 00:08:50,480

that's exactly my point yes yeah I just

175

00:08:55,300 --> 00:08:52,730

don't want to get into that whole battle

176
00:08:58,240 --> 00:08:55,310
of you know whether the observer effect

177
00:09:00,250 --> 00:08:58,250
really is and whether shut up and

178
00:09:01,960 --> 00:09:00,260
calculated all that kind of stuff I just

179
00:09:03,370 --> 00:09:01,970
think but I do think we can't shy away

180
00:09:05,140 --> 00:09:03,380
from it and that's one of the things I

181
00:09:07,060 --> 00:09:05,150
really appreciate about your book is you

182
00:09:08,680 --> 00:09:07,070
don't shy away from anything but we

183
00:09:12,430 --> 00:09:08,690
can't shy away from the fact that

184
00:09:15,910 --> 00:09:12,440
quantum physics may very well be best

185
00:09:18,340 --> 00:09:15,920
interpreted as being supportive of these

186
00:09:19,600 --> 00:09:18,350
ideas that you're talking about but let

187
00:09:21,400 --> 00:09:19,610
me switch gears for a minute because

188
00:09:23,190 --> 00:09:21,410

what I really one of things I want to

189

00:09:26,350 --> 00:09:23,200

focus on and I just mentioned it I

190

00:09:28,690 --> 00:09:26,360

really appreciate that you're clear

191

00:09:31,300 --> 00:09:28,700

right from the start about talking in

192

00:09:34,300 --> 00:09:31,310

these kind of military terms it's a

193

00:09:36,370 --> 00:09:34,310

brain war it's a battle over silence so

194

00:09:37,630 --> 00:09:36,380

I want to spend a good deal of time

195

00:09:40,180 --> 00:09:37,640

talking about the book and the

196

00:09:42,430 --> 00:09:40,190

particular issues that you bring up

197

00:09:44,460 --> 00:09:42,440

because I think as you just said one

198

00:09:47,110 --> 00:09:44,470

thing it does is it how easily

199

00:09:49,870 --> 00:09:47,120

falsifiable some of the materialist

200

00:09:52,350 --> 00:09:49,880

positions are but at the same time I

201
00:09:56,590 --> 00:09:52,360
want to understand I want you to tell us

202
00:09:58,690 --> 00:09:56,600
why we are in this war at the end of the

203
00:10:00,790 --> 00:09:58,700
day why there is this battle because I

204
00:10:03,580 --> 00:10:00,800
think a lot of folks tuned into the fact

205
00:10:06,340 --> 00:10:03,590
that there's a war that there is a

206
00:10:08,290 --> 00:10:06,350
battle but they don't get it I mean so

207
00:10:10,600 --> 00:10:08,300
you've done these experiments that find

208
00:10:12,550 --> 00:10:10,610
that people can control their brain so

209
00:10:16,660 --> 00:10:12,560
what why is there a war why is there a

210
00:10:20,250 --> 00:10:16,670
battle well because there's a commitment

211
00:10:23,380 --> 00:10:20,260
to a certain form of ideology in

212
00:10:25,090 --> 00:10:23,390
mainstream science why was there such a

213
00:10:27,460 --> 00:10:25,100

good life because the at

214

00:10:31,720 --> 00:10:27,470

the beginning of at the birth of modern

215

00:10:33,520 --> 00:10:31,730

science the scientists decided to keep a

216

00:10:36,160 --> 00:10:33,530

certain distance from the church the

217

00:10:40,410 --> 00:10:36,170

power of the church understandably and

218

00:10:43,000 --> 00:10:40,420

that has helps you know science to

219

00:10:47,380 --> 00:10:43,010

evolve new way to make great progress

220

00:10:51,820 --> 00:10:47,390

but at the same time the the founding

221

00:10:54,820 --> 00:10:51,830

fathers of modern science rejected in a

222

00:10:58,060 --> 00:10:54,830

certain sense the domain of subjectivity

223

00:11:00,400 --> 00:10:58,070

the first person perspective mental

224

00:11:04,510 --> 00:11:00,410

experiences these things were considered

225

00:11:08,320 --> 00:11:04,520

to be only secondary care qualities and

226

00:11:09,850 --> 00:11:08,330

the at the beginning data that these

227

00:11:12,540 --> 00:11:09,860

things were not that important they

228

00:11:16,240 --> 00:11:12,550

decided to focus more on the physical

229

00:11:20,050 --> 00:11:16,250

you know the physical world matter as we

230

00:11:24,360 --> 00:11:20,060

called them and so this this point of

231

00:11:26,620 --> 00:11:24,370

view became dominant made progress

232

00:11:30,700 --> 00:11:26,630

during the following centuries during

233

00:11:34,540 --> 00:11:30,710

the 17th 18th century and in the 19th

234

00:11:37,570 --> 00:11:34,550

century this materialists and

235

00:11:42,550 --> 00:11:37,580

reductionist point of view became

236

00:11:44,590 --> 00:11:42,560

synonymous with science and in the 20th

237

00:11:47,460 --> 00:11:44,600

century it was it started to be

238

00:11:52,810 --> 00:11:47,470

challenged first by quantum physics but

239

00:11:54,760 --> 00:11:52,820

also in other domains but we're now at

240

00:11:57,690 --> 00:11:54,770

the beginning of the 21st century and

241

00:12:00,970 --> 00:11:57,700

this view is still considered to be the

242

00:12:05,080 --> 00:12:00,980

you know the norm the standard it's the

243

00:12:07,450 --> 00:12:05,090

mainstream view because it's based on a

244

00:12:11,550 --> 00:12:07,460

number of beliefs assumptions like we

245

00:12:15,510 --> 00:12:11,560

said before but for a long time these

246

00:12:19,030 --> 00:12:15,520

assumptions seemed to explain very well

247

00:12:22,210 --> 00:12:19,040

the phenomena that were under

248

00:12:25,540 --> 00:12:22,220

investigations however now there's

249

00:12:29,820 --> 00:12:25,550

increasing evidence showing that number

250

00:12:32,650 --> 00:12:29,830

of phenomena do not fit within this

251
00:12:35,080 --> 00:12:32,660
conventional materialist physical it's

252
00:12:38,310 --> 00:12:35,090
the framework it cannot be explained

253
00:12:40,380 --> 00:12:38,320
very well by this framework and this

254
00:12:42,630 --> 00:12:40,390
is exactly what I'm discussing in my

255
00:12:44,580 --> 00:12:42,640
book brain Wars and I think you do a

256
00:12:46,950 --> 00:12:44,590
wonderful job of it I want to get to

257
00:12:49,140 --> 00:12:46,960
that data I just want to drill into this

258
00:12:52,230 --> 00:12:49,150
point a little bit further because I

259
00:12:54,450 --> 00:12:52,240
think having covered this with a lot of

260
00:12:56,880 --> 00:12:54,460
different people I think there's

261
00:12:59,100 --> 00:12:56,890
something a little bit deeper going on

262
00:13:03,180 --> 00:12:59,110
and that's there's a comfort level that

263
00:13:05,790 --> 00:13:03,190

we all have with our consumerism or

264

00:13:08,490 --> 00:13:05,800

materialism our society that we've built

265

00:13:09,480 --> 00:13:08,500

and it's a wonderful wonderful society

266

00:13:11,820 --> 00:13:09,490

especially when we look back

267

00:13:14,430 --> 00:13:11,830

historically at how much people have

268

00:13:16,140 --> 00:13:14,440

struggled just to barely survived and we

269

00:13:17,400 --> 00:13:16,150

look at all the things that we have in

270

00:13:20,730 --> 00:13:17,410

the cars and the airplanes and the

271

00:13:24,290 --> 00:13:20,740

iphones and all that and we are so amesh

272

00:13:27,630 --> 00:13:24,300

in this materialism that is both

273

00:13:30,920 --> 00:13:27,640

consumer materialism but also scientific

274

00:13:33,810 --> 00:13:30,930

materialism that I think it's very very

275

00:13:36,750 --> 00:13:33,820

scary is the only word I can think of

276

00:13:39,540 --> 00:13:36,760

for folks to contemplate anything else

277

00:13:43,380 --> 00:13:39,550

how could we could we really maintain

278

00:13:45,330 --> 00:13:43,390

our way of life that we've all become so

279

00:13:47,550 --> 00:13:45,340

comfortable with that were better than

280

00:13:51,030 --> 00:13:47,560

this other country that we have a right

281

00:13:54,660 --> 00:13:51,040

to to kind of starve that other country

282

00:13:58,470 --> 00:13:54,670

deprive them of money of oil of food

283

00:14:01,500 --> 00:13:58,480

whatever it is it can we really maintain

284

00:14:04,950 --> 00:14:01,510

that if we take the long term larger

285

00:14:08,760 --> 00:14:04,960

picture view of what it would mean to be

286

00:14:10,470 --> 00:14:08,770

post materialistic both from a consumer

287

00:14:13,320 --> 00:14:10,480

standpoint but also from a scientific

288

00:14:16,920 --> 00:14:13,330

standpoint don't the issues get really

289

00:14:19,860 --> 00:14:16,930

big really quick when you think this

290

00:14:21,780 --> 00:14:19,870

thing through yes that's that's a very

291

00:14:25,440 --> 00:14:21,790

good point i agree with your analysis

292

00:14:27,330 --> 00:14:25,450

and but there's something else also you

293

00:14:29,520 --> 00:14:27,340

scientists are humans and humans have

294

00:14:32,250 --> 00:14:29,530

their own belief systems and they become

295

00:14:36,300 --> 00:14:32,260

attached in the long term with their

296

00:14:38,520 --> 00:14:36,310

belief systems so scientists a number of

297

00:14:42,420 --> 00:14:38,530

scientists have been you know have

298

00:14:48,510 --> 00:14:42,430

believed very much in this materialist

299

00:14:51,360 --> 00:14:48,520

view for centuries and so it's like it

300

00:14:51,929 --> 00:14:51,370

has become a central dogma in various

301
00:14:56,549 --> 00:14:51,939
fields

302
00:14:58,710 --> 00:14:56,559
including your science so it's it's very

303
00:15:00,479 --> 00:14:58,720
dangerous it's scary for a number of

304
00:15:04,169 --> 00:15:00,489
people if you're starting to challenge

305
00:15:06,210 --> 00:15:04,179
this mainstream Dogma the central dogma

306
00:15:09,139 --> 00:15:06,220
you know it's it's a little bit like in

307
00:15:13,379 --> 00:15:09,149
any other domains of society including

308
00:15:16,619 --> 00:15:13,389
religion if you threaten the beliefs are

309
00:15:17,939 --> 00:15:16,629
specific you know religious groups then

310
00:15:20,839 --> 00:15:17,949
you might be in trouble and that's

311
00:15:23,819 --> 00:15:20,849
exactly what we see also in in science

312
00:15:27,029 --> 00:15:23,829
but at a certain point when the

313
00:15:30,719 --> 00:15:27,039

so-called anomalous data accumulates

314

00:15:33,749 --> 00:15:30,729

that comes a point where the old

315

00:15:35,579 --> 00:15:33,759

paradigm cannot resist anymore and I

316

00:15:38,789 --> 00:15:35,589

believe that now we are in a sort of

317

00:15:41,189 --> 00:15:38,799

transition period Howard a new paradigm

318

00:15:43,199 --> 00:15:41,199

so there there the next Scientific

319

00:15:45,479 --> 00:15:43,209

Revolution should be about one in

320

00:15:48,419 --> 00:15:45,489

consciousness in night you very good

321

00:15:50,729 --> 00:15:48,429

well I think you do a nice job in the

322

00:15:53,729 --> 00:15:50,739

book of kind of pointing out how

323

00:15:56,549 --> 00:15:53,739

dramatic the parent the existing

324

00:15:58,349 --> 00:15:56,559

paradigm is frayed at the edges and I

325

00:16:01,829 --> 00:15:58,359

like the way you start and tie together

326

00:16:04,019 --> 00:16:01,839

a lot of science that we all think we're

327

00:16:06,869 --> 00:16:04,029

very familiar with and we're comfortable

328

00:16:09,779 --> 00:16:06,879

with and you show us how that really

329

00:16:12,839 --> 00:16:09,789

violates this scientific materialism

330

00:16:14,249 --> 00:16:12,849

that we've all come become so accepting

331

00:16:16,829 --> 00:16:14,259

up so maybe you want to talk a little

332

00:16:20,159 --> 00:16:16,839

bit about for example the placebo effect

333

00:16:22,710 --> 00:16:20,169

and also hypnosis and how these two

334

00:16:24,479 --> 00:16:22,720

areas and chap there are chapters in

335

00:16:27,719 --> 00:16:24,489

your book where you do a very nice job

336

00:16:30,599 --> 00:16:27,729

of breaking bringing people through some

337

00:16:33,079 --> 00:16:30,609

of the research in a very accessible way

338

00:16:36,629 --> 00:16:33,089

but tell us the placebo effect in

339

00:16:39,359 --> 00:16:36,639

hypnosis how those violate the very

340

00:16:43,649 --> 00:16:39,369

strict understanding of reductionist

341

00:16:46,789 --> 00:16:43,659

materialism yeah well for for a number

342

00:16:49,859 --> 00:16:46,799

of materialist sinkers and scientists

343

00:16:52,259 --> 00:16:49,869

the mind is totally powerless doesn't

344

00:16:54,689 --> 00:16:52,269

have any kinetic search or any power on

345

00:16:56,699 --> 00:16:54,699

what's going on at the brain level and

346

00:16:59,279 --> 00:16:56,709

also in the body can you break that down

347

00:17:01,969 --> 00:16:59,289

and explain why that would have to be

348

00:17:04,529 --> 00:17:01,979

true if you were a strict scientific

349

00:17:05,240 --> 00:17:04,539

materialist they are a number of

350

00:17:08,240 --> 00:17:05,250

material

351

00:17:10,819 --> 00:17:08,250

this position so this is a position that

352

00:17:15,650 --> 00:17:10,829

is called ATC nominalism so it means

353

00:17:19,100 --> 00:17:15,660

that the these are these proponents

354

00:17:21,230 --> 00:17:19,110

recognize that my mental processes do

355

00:17:23,750 --> 00:17:21,240

exist but they are perilous did not have

356

00:17:26,030 --> 00:17:23,760

anemia it cannot exert any influence so

357

00:17:29,360 --> 00:17:26,040

that's one position but you have a dear

358

00:17:32,630 --> 00:17:29,370

position like eliminative reductionism

359

00:17:35,090 --> 00:17:32,640

sorry so you're trying to eliminate all

360

00:17:37,640 --> 00:17:35,100

mental processes like philosopher Daniel

361

00:17:39,580 --> 00:17:37,650

Dennett or the the church stands for

362

00:17:41,840 --> 00:17:39,590

instance so they will say that

363

00:17:44,840 --> 00:17:41,850

consciousness and all the other mental

364

00:17:46,840 --> 00:17:44,850

processes are simply illusion that the

365

00:17:49,630 --> 00:17:46,850

only thing that exists is

366

00:17:52,490 --> 00:17:49,640

electrochemical activity in the brain

367

00:17:55,310 --> 00:17:52,500

and so if this is true then of course

368

00:17:57,230 --> 00:17:55,320

you cannot influence the activity of

369

00:17:59,990 --> 00:17:57,240

your brain by your beliefs your

370

00:18:03,710 --> 00:18:00,000

expectations you see but that is exactly

371

00:18:06,680 --> 00:18:03,720

what the placebo demonstrates that you

372

00:18:10,720 --> 00:18:06,690

believes and expectations about false

373

00:18:13,190 --> 00:18:10,730

fake treatment can significantly alter

374

00:18:15,230 --> 00:18:13,200

what's happening in the brain and also

375

00:18:18,680 --> 00:18:15,240

in the physiological systems connected

376

00:18:21,830 --> 00:18:18,690

to the brain so for instance during the

377

00:18:24,740 --> 00:18:21,840

last decade there have been several

378

00:18:27,650 --> 00:18:24,750

brain imaging studies about the placebo

379

00:18:29,750 --> 00:18:27,660

effect and in some cases for instance

380

00:18:32,960 --> 00:18:29,760

there was a very interesting study done

381

00:18:35,270 --> 00:18:32,970

at University of British Columbia they

382

00:18:37,790 --> 00:18:35,280

did the study to measure the impact of a

383

00:18:40,330 --> 00:18:37,800

possible treatment on the people

384

00:18:43,460 --> 00:18:40,340

suffering from severe form of

385

00:18:45,710 --> 00:18:43,470

Parkinson's disease in Parkinson's

386

00:18:48,260 --> 00:18:45,720

disease there is a great level of

387

00:18:50,390 --> 00:18:48,270

destruction of the nerve cells the

388

00:18:53,420 --> 00:18:50,400

Merlin producing a chemical messenger

389

00:18:56,690 --> 00:18:53,430

that we call dopamine dopamine is the

390

00:18:59,290 --> 00:18:56,700

key chemical messenger in motor function

391

00:19:04,420 --> 00:18:59,300

but it's also involved in many other

392

00:19:07,880 --> 00:19:04,430

activities but in that specific case the

393

00:19:11,390 --> 00:19:07,890

patient's add a level of destruction of

394

00:19:14,240 --> 00:19:11,400

about seventy to eighty percent so that

395

00:19:16,900 --> 00:19:14,250

the level of destruction of the nurse

396

00:19:19,160 --> 00:19:16,910

cells producing dopamine was quite I and

397

00:19:21,350 --> 00:19:19,170

of course they were severely

398

00:19:23,510 --> 00:19:21,360

pared from a clinical point of view they

399

00:19:26,570 --> 00:19:23,520

had trouble to move they were

400

00:19:28,700 --> 00:19:26,580

experiencing a lot of tremors and so the

401
00:19:31,880 --> 00:19:28,710
the neurologist doing the the study

402
00:19:34,910 --> 00:19:31,890
presented them a fake treatment it was

403
00:19:37,040 --> 00:19:34,920
only distilled water but they beat all

404
00:19:39,890 --> 00:19:37,050
the patients that this was potentially

405
00:19:44,450 --> 00:19:39,900
revolutionary treatment a new treatment

406
00:19:46,640 --> 00:19:44,460
for Parkinson's disease and following

407
00:19:49,940 --> 00:19:46,650
the injection after a few minutes the

408
00:19:51,500 --> 00:19:49,950
disc and them with technology that would

409
00:19:57,020 --> 00:19:51,510
call functional magnetic resonance

410
00:19:58,570 --> 00:19:57,030
imaging or fMRI I mean that specific

411
00:20:01,310 --> 00:19:58,580
case it was positron emission tomography

412
00:20:04,610 --> 00:20:01,320
so they were interested in measuring the

413
00:20:07,190 --> 00:20:04,620

activity of dopamine in the brain and so

414

00:20:09,890 --> 00:20:07,200

very rapidly those patients who most

415

00:20:12,350 --> 00:20:09,900

believed in the the fake treatment which

416

00:20:15,110 --> 00:20:12,360

was distilled water they started to

417

00:20:17,960 --> 00:20:15,120

produce dopamine and to release dopamine

418

00:20:21,710 --> 00:20:17,970

in their brains in amount comparable to

419

00:20:24,710 --> 00:20:21,720

that seen in young healthy people and in

420

00:20:26,840 --> 00:20:24,720

parallel they started to get much better

421

00:20:30,820 --> 00:20:26,850

from a clinical point of view so the add

422

00:20:35,270 --> 00:20:30,830

less tremors they have more strength and

423

00:20:37,760 --> 00:20:35,280

so and they were more optimistic at

424

00:20:40,670 --> 00:20:37,770

least for a certain period of time so

425

00:20:43,340 --> 00:20:40,680

this this is a very nice illustration of

426
00:20:45,410 --> 00:20:43,350
the power of what we call mind and by

427
00:20:48,670 --> 00:20:45,420
mine I mean all the mental activity

428
00:20:52,270 --> 00:20:48,680
mental events and in that specific case

429
00:20:55,460 --> 00:20:52,280
this effect is related simply to the

430
00:20:59,030 --> 00:20:55,470
beliefs and also the expectations that

431
00:21:00,920 --> 00:20:59,040
the patients ad regarding the fake

432
00:21:04,130 --> 00:21:00,930
treatment so it's a very nice

433
00:21:08,690 --> 00:21:04,140
illustration another interesting cases

434
00:21:12,770 --> 00:21:08,700
that have acknowledged it knows this is

435
00:21:16,310 --> 00:21:12,780
based on the suggestions coming from a

436
00:21:20,660 --> 00:21:16,320
nip noticed and the the subject of the

437
00:21:23,060 --> 00:21:20,670
experiment accept the suggestions now

438
00:21:25,850 --> 00:21:23,070

they the experts in this field of

439

00:21:29,290 --> 00:21:25,860

research consider that all forms of

440

00:21:32,180 --> 00:21:29,300

hypnosis are in reality self-hypnosis

441

00:21:32,960 --> 00:21:32,190

that means that if the subject does not

442

00:21:36,799 --> 00:21:32,970

want to

443

00:21:41,510 --> 00:21:36,809

the suggestions from the hypnotists it

444

00:21:43,580 --> 00:21:41,520

won't work so the again during the last

445

00:21:46,970 --> 00:21:43,590

decade there's been a number of brain

446

00:21:48,680 --> 00:21:46,980

imaging studies have been done simply to

447

00:21:51,159 --> 00:21:48,690

measure whether really there's something

448

00:21:54,529 --> 00:21:51,169

happening at the brain level because

449

00:21:57,380 --> 00:21:54,539

skeptics have been arguing for a long

450

00:22:01,070 --> 00:21:57,390

time that it knows this is simply

451
00:22:04,130 --> 00:22:01,080
wishful thinking there it's only based

452
00:22:06,620 --> 00:22:04,140
on social compliance from the end the

453
00:22:09,669 --> 00:22:06,630
subjects the only one please the

454
00:22:13,190 --> 00:22:09,679
hypnotist but there's nothing else so

455
00:22:15,049 --> 00:22:13,200
several research teams have attempted to

456
00:22:17,419 --> 00:22:15,059
research this question using brain

457
00:22:19,490 --> 00:22:17,429
imaging and for instance there was a

458
00:22:22,700 --> 00:22:19,500
very interesting study that done at

459
00:22:26,330 --> 00:22:22,710
Harvard they were interested researchers

460
00:22:31,390 --> 00:22:26,340
were looking for the neural correlates

461
00:22:34,220 --> 00:22:31,400
of color vision so you're Carly's are

462
00:22:37,130 --> 00:22:34,230
physical processes in the brain whether

463
00:22:40,159 --> 00:22:37,140

electrical or chemical that are related

464

00:22:42,620 --> 00:22:40,169

to a specific mental activity for

465

00:22:46,820 --> 00:22:42,630

instance it can be perception perception

466

00:22:50,299 --> 00:22:46,830

of God so in that case the disk and

467

00:22:52,520 --> 00:22:50,309

subjects highly acknowledged both

468

00:22:57,039 --> 00:22:52,530

subjects which means that these people

469

00:23:03,110 --> 00:22:57,049

add the capacity to enter quite easily

470

00:23:07,549 --> 00:23:03,120

into a trance state deep enough and so

471

00:23:11,799 --> 00:23:07,559

the these subjects were able to to

472

00:23:14,990 --> 00:23:11,809

imagine that they were looking or seeing

473

00:23:17,270 --> 00:23:15,000

different types of patterned colors in

474

00:23:20,990 --> 00:23:17,280

accordance with the suggestions of the

475

00:23:24,260 --> 00:23:21,000

the researchers during the study and so

476
00:23:27,500 --> 00:23:24,270
it was very interesting because the when

477
00:23:29,990 --> 00:23:27,510
they were presenting stimuli that were

478
00:23:33,230 --> 00:23:30,000
colored but the researchers were

479
00:23:38,830 --> 00:23:33,240
trailing the the subjects that distantly

480
00:23:41,240 --> 00:23:38,840
were only great the the brain regions

481
00:23:43,039 --> 00:23:41,250
associated with the treatment the

482
00:23:46,039 --> 00:23:43,049
processing of color in the brain were

483
00:23:46,730 --> 00:23:46,049
not actuated even though the simile were

484
00:23:50,390 --> 00:23:46,740
colored

485
00:23:53,750 --> 00:23:50,400
and and the reverse effect was also

486
00:23:58,060 --> 00:23:53,760
measured was also observed in this study

487
00:24:00,830 --> 00:23:58,070
that is when there was no color industry

488
00:24:03,820 --> 00:24:00,840

there were still activation in the

489

00:24:06,770 --> 00:24:03,830

regions of the brain processing colors

490

00:24:09,440 --> 00:24:06,780

so again this is a very nice

491

00:24:12,740 --> 00:24:09,450

illustration that what's going on at the

492

00:24:15,200 --> 00:24:12,750

minor level can exert a great influence

493

00:24:18,080 --> 00:24:15,210

over what's happening in terms of brain

494

00:24:19,730 --> 00:24:18,090

activity right exactly like I said you

495

00:24:21,440 --> 00:24:19,740

do a very nice job in the book and I

496

00:24:22,940 --> 00:24:21,450

really encourage folks to get up get the

497

00:24:25,520 --> 00:24:22,950

book whether you're a skeptic or

498

00:24:26,870 --> 00:24:25,530

proponent of whatever just a person

499

00:24:30,680 --> 00:24:26,880

interested in science I think you'll

500

00:24:32,630 --> 00:24:30,690

enjoy the way that you bring forth this

501
00:24:34,280 --> 00:24:32,640
research and you're really document a

502
00:24:37,340 --> 00:24:34,290
way that's easy accessible you do have

503
00:24:39,049 --> 00:24:37,350
nice annotations references to the

504
00:24:41,299 --> 00:24:39,059
research if people want to go look it up

505
00:24:44,960 --> 00:24:41,309
but that's all there so the question

506
00:24:48,410 --> 00:24:44,970
then remains so why are we still having

507
00:24:50,660 --> 00:24:48,420
a war you've just now linked up for us

508
00:24:52,790 --> 00:24:50,670
to things that we already were pretty

509
00:24:55,880 --> 00:24:52,800
accepting of a we all have heard of

510
00:24:58,040 --> 00:24:55,890
la-z-boy effect we know that every study

511
00:25:00,549 --> 00:24:58,050
every pharmaceutical study every

512
00:25:03,410 --> 00:25:00,559
scientific study has to allow for a

513
00:25:04,940 --> 00:25:03,420

placebo effect so they must recognize

514

00:25:07,280 --> 00:25:04,950

that there's some reality to it and

515

00:25:09,620 --> 00:25:07,290

hypnosis has become so common that I

516

00:25:12,080 --> 00:25:09,630

think at least one out of three people

517

00:25:14,780 --> 00:25:12,090

have had some kind of hypnosis while at

518

00:25:18,620 --> 00:25:14,790

the dentist or someplace else so given

519

00:25:20,860 --> 00:25:18,630

that we accept these modalities these

520

00:25:23,630 --> 00:25:20,870

treatments these understandings that

521

00:25:25,310 --> 00:25:23,640

violate strict materialism why are we

522

00:25:29,960 --> 00:25:25,320

still in the battle why do we still have

523

00:25:31,850 --> 00:25:29,970

the bore well because a number of

524

00:25:35,299 --> 00:25:31,860

scientists considered that you can

525

00:25:37,730 --> 00:25:35,309

interpret these phenomena using a

526

00:25:40,430 --> 00:25:37,740

strictly materialist framework how do

527

00:25:43,610 --> 00:25:40,440

they do that what would be the well they

528

00:25:46,640 --> 00:25:43,620

will say that for instance you can

529

00:25:48,980 --> 00:25:46,650

reduce the believes and the expectations

530

00:25:52,280 --> 00:25:48,990

of a patients regarding the fake

531

00:25:54,260 --> 00:25:52,290

treatment to electrical and chemical

532

00:25:56,240 --> 00:25:54,270

activity in specific portions of the

533

00:25:58,549 --> 00:25:56,250

brain so what they are saying

534

00:26:00,259 --> 00:25:58,559

essentially is that it's the brain

535

00:26:04,759 --> 00:26:00,269

acting upon the

536

00:26:08,869 --> 00:26:04,769

rain there's no you don't need mental

537

00:26:10,909 --> 00:26:08,879

you know functions apart from the brain

538

00:26:13,669 --> 00:26:10,919

to explain this kind of phenomenon

539

00:26:17,599 --> 00:26:13,679

that's what they say but doesn't that

540

00:26:20,779 --> 00:26:17,609

kind of result in some kind of recursive

541

00:26:22,609 --> 00:26:20,789

logic that at the end of the day gets

542

00:26:25,329 --> 00:26:22,619

into all sorts of other problems made

543

00:26:28,159 --> 00:26:25,339

what what is the starting point in their

544

00:26:29,930 --> 00:26:28,169

explanation for such an activity it gets

545

00:26:32,599 --> 00:26:29,940

into the whole neuroplasticity argument

546

00:26:34,369 --> 00:26:32,609

yeah I mean like if we show that neural

547

00:26:36,739 --> 00:26:34,379

plasticity is real and that we can

548

00:26:39,349 --> 00:26:36,749

rewire our brain and you've done some

549

00:26:41,749 --> 00:26:39,359

research on this as well and yet work on

550

00:26:44,060 --> 00:26:41,759

this yeah then doesn't it ultimately

551
00:26:45,859 --> 00:26:44,070
lead to the questionable then what was

552
00:26:48,979 --> 00:26:45,869
the beginning point and wasn't there

553
00:26:51,799 --> 00:26:48,989
some observer some consciousness that

554
00:26:54,499 --> 00:26:51,809
might have started this process yeah but

555
00:26:58,669 --> 00:26:54,509
for them the neuroplasticity is simply

556
00:27:01,940 --> 00:26:58,679
the brain rewiring itself again the

557
00:27:04,310 --> 00:27:01,950
water they don't need you know

558
00:27:07,129 --> 00:27:04,320
consciousness and other mental functions

559
00:27:11,449 --> 00:27:07,139
to explain that that's what he's saying

560
00:27:14,299 --> 00:27:11,459
but I don't think it's it's good

561
00:27:17,479 --> 00:27:14,309
explanation because you know the brain

562
00:27:22,190 --> 00:27:17,489
doesn't the brain to me will respond to

563
00:27:26,659 --> 00:27:22,200

the D expectations or the beliefs and so

564

00:27:29,509 --> 00:27:26,669

if your beliefs are negative about fake

565

00:27:30,919 --> 00:27:29,519

treatments bogus treatment then you will

566

00:27:34,909 --> 00:27:30,929

experience something totally different

567

00:27:36,859 --> 00:27:34,919

so in terms of the chemical messengers

568

00:27:39,889 --> 00:27:36,869

involved in the response and so it's

569

00:27:44,479 --> 00:27:39,899

called in this naseebo effect it's

570

00:27:47,629 --> 00:27:44,489

exactly the reverse so you need a person

571

00:27:49,789 --> 00:27:47,639

and the consciousness in order to

572

00:27:52,099 --> 00:27:49,799

produce phenomenon like that otherwise

573

00:27:55,279 --> 00:27:52,109

doesn't make any sense at all because

574

00:27:58,999 --> 00:27:55,289

the brain itself is quite neutral so you

575

00:28:00,919 --> 00:27:59,009

can influence it in a way or another for

576

00:28:03,739 --> 00:28:00,929

instance we've done another brain

577

00:28:06,829 --> 00:28:03,749

imaging studies positron emission

578

00:28:11,810 --> 00:28:06,839

tomography study and in that case we

579

00:28:14,090 --> 00:28:11,820

measured the activity of serotonin which

580

00:28:17,419 --> 00:28:14,100

isn't very much involved

581

00:28:21,529 --> 00:28:17,429

in mood regulation and also in the

582

00:28:25,970 --> 00:28:21,539

emotions lot of emotions and so we have

583

00:28:29,390 --> 00:28:25,980

our subjects to simply remember and try

584

00:28:32,659 --> 00:28:29,400

to reenact the saddest episode of their

585

00:28:34,159 --> 00:28:32,669

lives and we add another condition in

586

00:28:38,360 --> 00:28:34,169

which we ask the same thing but this

587

00:28:41,659 --> 00:28:38,370

time we had to reenact the happiest

588

00:28:46,149 --> 00:28:41,669

moment of their lives and in a matter of

589

00:28:48,680 --> 00:28:46,159

only a few minutes we measured either

590

00:28:52,399 --> 00:28:48,690

increases in terms of serotonin

591

00:28:55,149 --> 00:28:52,409

production or decrease increases in the

592

00:28:58,190 --> 00:28:55,159

positive that the active state and

593

00:29:02,120 --> 00:28:58,200

decreases in the negative state the sad

594

00:29:05,000 --> 00:29:02,130

state within a few minutes in regions of

595

00:29:09,649 --> 00:29:05,010

the brain related to emotions and mood

596

00:29:12,740 --> 00:29:09,659

regulation you see so this shows really

597

00:29:15,830 --> 00:29:12,750

that the content itself of the the

598

00:29:19,370 --> 00:29:15,840

mental processes their nature will

599

00:29:22,640 --> 00:29:19,380

influence the direction that the brain

600

00:29:24,380 --> 00:29:22,650

activity will take so that's why I am

601
00:29:27,100 --> 00:29:24,390
claiming that it's not possible to

602
00:29:31,010 --> 00:29:27,110
interpret this this kind of phenomenon

603
00:29:34,549 --> 00:29:31,020
without you know recognizing the

604
00:29:37,490 --> 00:29:34,559
existence of mental processes it

605
00:29:39,409 --> 00:29:37,500
certainly seems a lot cleaner but it

606
00:29:41,060 --> 00:29:39,419
seems rather obvious what about this

607
00:29:43,669 --> 00:29:41,070
argument and you'll hear this sometimes

608
00:29:45,860 --> 00:29:43,679
too what about folks who say okay just

609
00:29:48,320 --> 00:29:45,870
because you've shown that maybe this

610
00:29:51,770 --> 00:29:48,330
strict materialism as you've defined it

611
00:29:53,480 --> 00:29:51,780
doesn't work in this situation maybe

612
00:29:56,060 --> 00:29:53,490
there's something else down the road

613
00:29:58,340 --> 00:29:56,070

that quote unquote science will discover

614

00:30:02,240 --> 00:29:58,350

that will explain this we don't need to

615

00:30:03,710 --> 00:30:02,250

jump to this idea of there being a you

616

00:30:05,659 --> 00:30:03,720

inside your head there being

617

00:30:06,950 --> 00:30:05,669

consciousness there being dualism no

618

00:30:09,230 --> 00:30:06,960

matter what word you want to throw at it

619

00:30:11,690 --> 00:30:09,240

we don't need to jump off of the ship

620

00:30:13,039 --> 00:30:11,700

that we're on just yet just because we

621

00:30:15,440 --> 00:30:13,049

have this finding well how do you

622

00:30:19,190 --> 00:30:15,450

respond to that well if yeah this is

623

00:30:23,330 --> 00:30:19,200

called promissory materialism and this

624

00:30:26,100 --> 00:30:23,340

concept was proposed by a famous

625

00:30:30,210 --> 00:30:26,110

philosopher science karl popper

626

00:30:32,930 --> 00:30:30,220

in the 20th century and but popper

627

00:30:36,450 --> 00:30:32,940

analyzed the text of the materialists

628

00:30:38,039 --> 00:30:36,460

across a number of centuries and the

629

00:30:40,470 --> 00:30:38,049

funny thing is that you realize that

630

00:30:43,860 --> 00:30:40,480

they were exactly saying the same thing

631

00:30:46,430 --> 00:30:43,870

300 200 years ago or 200 years ago or

632

00:30:50,520 --> 00:30:46,440

100 years ago so they've always been

633

00:30:52,110 --> 00:30:50,530

arguing this and so that that's one

634

00:30:57,180 --> 00:30:52,120

aspect of the thing but now we have

635

00:31:01,320 --> 00:30:57,190

evidence showing in my view that this

636

00:31:05,909 --> 00:31:01,330

this material is outlook is simply wrong

637

00:31:08,210 --> 00:31:05,919

it's false and I'm referring here to the

638

00:31:10,380 --> 00:31:08,220

studies about the so-called near-death

639

00:31:13,110 --> 00:31:10,390

phenomenon yeah def experienced

640

00:31:16,140 --> 00:31:13,120

phenomenon especially during cardiac

641

00:31:19,289 --> 00:31:16,150

arrests why is this is important because

642

00:31:23,159 --> 00:31:19,299

during cardiac arrest there's the blood

643

00:31:25,080 --> 00:31:23,169

flow to the brain we'll see following a

644

00:31:28,020 --> 00:31:25,090

number of seconds usually quite rapidly

645

00:31:30,299 --> 00:31:28,030

and if you're measuring electrical

646

00:31:33,840 --> 00:31:30,309

activity in the brain using an EEG or

647

00:31:37,289 --> 00:31:33,850

electroencephalogram the EG will become

648

00:31:39,570 --> 00:31:37,299

flat within 10 to 20 seconds usually so

649

00:31:41,789 --> 00:31:39,580

in that kind of states according to

650

00:31:45,870 --> 00:31:41,799

mainstream neuroscience higher mental

651
00:31:49,320 --> 00:31:45,880
functions are not possible yep during

652
00:31:51,500 --> 00:31:49,330
the last 10 years I think there's been

653
00:31:54,480 --> 00:31:51,510
four or five different studies

654
00:31:58,409 --> 00:31:54,490
documenting over a hundred cases of

655
00:32:01,200 --> 00:31:58,419
patients who were reported conscious

656
00:32:03,960 --> 00:32:01,210
mental activity during a state of

657
00:32:07,950 --> 00:32:03,970
cardiac arrests so this is quite an

658
00:32:10,230 --> 00:32:07,960
interesting and it's very hard for

659
00:32:15,150 --> 00:32:10,240
materialist scientists or philosophers

660
00:32:17,419 --> 00:32:15,160
to interpret this kind of phenomenon yes

661
00:32:19,980 --> 00:32:17,429
indeed you know we've covered that topic

662
00:32:22,320 --> 00:32:19,990
extensively on this show yeah but I do

663
00:32:23,580 --> 00:32:22,330

like the way that you summed it up there

664

00:32:27,090 --> 00:32:23,590

and the way that you sum it up in your

665

00:32:31,049 --> 00:32:27,100

book is quite nice so let's get on to

666

00:32:33,000 --> 00:32:31,059

the other elephant in the room here dr.

667

00:32:35,760 --> 00:32:33,010

Beauregard one of the criticisms of your

668

00:32:39,810 --> 00:32:35,770

work and it's sometimes made explicitly

669

00:32:42,330 --> 00:32:39,820

and sometimes just subtly implied

670

00:32:44,760 --> 00:32:42,340

is that you're pushing some kind of your

671

00:32:47,580 --> 00:32:44,770

pedaling some kind of Christian agenda

672

00:32:50,490 --> 00:32:47,590

you really are trying to convert people

673

00:32:53,010 --> 00:32:50,500

to some kind of religion how do you

674

00:32:55,020 --> 00:32:53,020

respond to that well I would say that

675

00:32:56,880 --> 00:32:55,030

this is not true at all because I'm not

676

00:33:01,830 --> 00:32:56,890

I'm not religious at all I don't have

677

00:33:05,310 --> 00:33:01,840

any religious affiliation so this is

678

00:33:07,440 --> 00:33:05,320

funny to me to hear however I would I

679

00:33:10,650 --> 00:33:07,450

consider myself to be a spiritual person

680

00:33:13,530 --> 00:33:10,660

but I'm not pushing any religious an

681

00:33:16,470 --> 00:33:13,540

agenda here I don't have any ties with

682

00:33:18,240 --> 00:33:16,480

religious organizations great and I'm

683

00:33:20,250 --> 00:33:18,250

glad you had a chance to get that out

684

00:33:22,590 --> 00:33:20,260

there because i think it's off and

685

00:33:24,630 --> 00:33:22,600

subtly implied and sometimes not even so

686

00:33:27,000 --> 00:33:24,640

subtly implied that that's what's really

687

00:33:30,630 --> 00:33:27,010

going on here and at the same talk about

688

00:33:33,420 --> 00:33:30,640

your good only fall because at the same

689

00:33:37,320 --> 00:33:33,430

time though I think there's we can be

690

00:33:39,360 --> 00:33:37,330

too reactionary the other way because we

691

00:33:41,100 --> 00:33:39,370

have to I think and I'd loved it i'm

692

00:33:43,470 --> 00:33:41,110

just throwing up my opinion i really

693

00:33:46,110 --> 00:33:43,480

want to get your opinion but i don't

694

00:33:50,040 --> 00:33:46,120

think we can play down the spiritual

695

00:33:51,810 --> 00:33:50,050

implications of some of this work for

696

00:33:54,320 --> 00:33:51,820

example the near-death experience

697

00:33:56,400 --> 00:33:54,330

science we can look at it purely

698

00:33:58,170 --> 00:33:56,410

analytically from the science standpoint

699

00:34:00,450 --> 00:33:58,180

and we can say wow this looks like

700

00:34:02,910 --> 00:34:00,460

there's something there and we would be

701
00:34:05,700 --> 00:34:02,920
very inclined than to take the next step

702
00:34:08,850 --> 00:34:05,710
in terms of what there's telling us

703
00:34:11,310 --> 00:34:08,860
about spirituality and how it does link

704
00:34:13,320 --> 00:34:11,320
back at least in some general way to

705
00:34:15,360 --> 00:34:13,330
some of the wisdom traditions and

706
00:34:18,240 --> 00:34:15,370
religions that we've had over time so

707
00:34:21,540 --> 00:34:18,250
what is your thought on that do we need

708
00:34:23,100 --> 00:34:21,550
to go there do we need to say hey there

709
00:34:25,770 --> 00:34:23,110
are some spiritual implications here

710
00:34:29,160 --> 00:34:25,780
that may have to be dealt with once we

711
00:34:31,380 --> 00:34:29,170
cross this chasm to a post materialistic

712
00:34:34,020 --> 00:34:31,390
world or do we just kind of keep our

713
00:34:37,050 --> 00:34:34,030

nose to the grindstone and ignore all

714

00:34:42,030 --> 00:34:37,060

that and just pretend like it's all just

715

00:34:46,380 --> 00:34:42,040

about materialism no no I can i agree

716

00:34:49,560 --> 00:34:46,390

with you because if of course when we

717

00:34:53,010 --> 00:34:49,570

speak of so-called near-death experience

718

00:34:54,089 --> 00:34:53,020

during a cardiac arrest for instance the

719

00:34:57,119 --> 00:34:54,099

people usually are

720

00:34:59,460 --> 00:34:57,129

reanimated within a few minutes usually

721

00:35:01,739 --> 00:34:59,470

two three four minutes because we cannot

722

00:35:05,370 --> 00:35:01,749

stay in that kind of state for a long

723

00:35:10,049 --> 00:35:05,380

long time without you know severe

724

00:35:12,650 --> 00:35:10,059

cerebral damage and so and when they

725

00:35:15,450 --> 00:35:12,660

report something about their

726

00:35:18,870 --> 00:35:15,460

transcendental component of their

727

00:35:21,719 --> 00:35:18,880

experience whether it be a meeting with

728

00:35:23,910 --> 00:35:21,729

a beautiful being a flight or meeting

729

00:35:26,370 --> 00:35:23,920

with the Seas friends or relatives and

730

00:35:27,569 --> 00:35:26,380

so on and so forth that from a

731

00:35:31,559 --> 00:35:27,579

scientific point of view we cannot

732

00:35:34,109 --> 00:35:31,569

validate it or not we can only attempt

733

00:35:37,769 --> 00:35:34,119

to validate what the report from a

734

00:35:40,200 --> 00:35:37,779

perceptual point of view so the the out

735

00:35:43,829 --> 00:35:40,210

of body component of this experience

736

00:35:46,849 --> 00:35:43,839

that can be corroborated by external

737

00:35:51,569 --> 00:35:46,859

source and it's been done in a few cases

738

00:35:55,109 --> 00:35:51,579

by members of the medical staff so but

739

00:35:57,329 --> 00:35:55,119

of course like you said what they are

740

00:36:01,979 --> 00:35:57,339

reporting from a subjective point of

741

00:36:05,549 --> 00:36:01,989

view seems to you know validate some

742

00:36:09,739 --> 00:36:05,559

spiritual traditions seems to provide

743

00:36:15,209 --> 00:36:09,749

certain evidence that there might be

744

00:36:17,489 --> 00:36:15,219

spiritual realms out there and I thought

745

00:36:19,620 --> 00:36:17,499

and I'm open-minded to this kind of

746

00:36:23,880 --> 00:36:19,630

suggestion and like I said I'm as a

747

00:36:26,069 --> 00:36:23,890

spiritual person and and this would not

748

00:36:28,380 --> 00:36:26,079

surprise me at all if there's a there

749

00:36:31,529 --> 00:36:28,390

are a multitude of spiritual realms that

750

00:36:34,469 --> 00:36:31,539

we don't know yet and I don't think it's

751

00:36:39,029 --> 00:36:34,479

it's not scientific to have that kind of

752

00:36:41,539 --> 00:36:39,039

point of view you know it's uh it's

753

00:36:43,880 --> 00:36:41,549

human isn't it I mean that's the part of

754

00:36:47,099 --> 00:36:43,890

acknowledge that these are fundamental

755

00:36:49,440 --> 00:36:47,109

human questions that the whole endeavor

756

00:36:51,690 --> 00:36:49,450

of science that's why it came about was

757

00:36:53,459 --> 00:36:51,700

to understand when we are what place we

758

00:36:55,469 --> 00:36:53,469

are what place we have in the universe

759

00:36:57,390 --> 00:36:55,479

what happens to us when we die these are

760

00:37:00,180 --> 00:36:57,400

the ultimate questions so I think that

761

00:37:01,950 --> 00:37:00,190

does couldn't be more fairly put that

762

00:37:04,609 --> 00:37:01,960

these are real concerns that we all have

763

00:37:07,830 --> 00:37:04,619

we have to acknowledge yes and also

764

00:37:13,110 --> 00:37:07,840

spiritual experiences have been report

765

00:37:16,340 --> 00:37:13,120

across all traditions cultures and since

766

00:37:19,170 --> 00:37:16,350

the beginning of time you know so you

767

00:37:22,200 --> 00:37:19,180

really do exist from a subjective point

768

00:37:23,220 --> 00:37:22,210

of view now we don't have the of course

769

00:37:25,650 --> 00:37:23,230

we ought to have a scientific

770

00:37:28,830 --> 00:37:25,660

explanation for the these experiences

771

00:37:31,410 --> 00:37:28,840

yet but what I'm saying is that we we

772

00:37:34,530 --> 00:37:31,420

need to remain open-minded regarding

773

00:37:37,620 --> 00:37:34,540

this aspect very good near the end of

774

00:37:41,400 --> 00:37:37,630

your book brain Wars you talk about a

775

00:37:42,930 --> 00:37:41,410

shift in consciousness and I'd like you

776

00:37:45,870 --> 00:37:42,940

to talk about that and whether you

777

00:37:48,720 --> 00:37:45,880

really think number one that is likely

778

00:37:51,060 --> 00:37:48,730

that can come about we are so a meshed

779

00:37:54,480 --> 00:37:51,070

we are so married to this materialism

780

00:37:56,850 --> 00:37:54,490

can we really get beyond it and question

781

00:37:58,740 --> 00:37:56,860

two related to that is how might that

782

00:38:01,160 --> 00:37:58,750

come about is it going to be an

783

00:38:06,690 --> 00:38:01,170

evolutionary change or does it require a

784

00:38:09,600 --> 00:38:06,700

radical revolutionary shift well there's

785

00:38:12,000 --> 00:38:09,610

a coup I should I can't say that at

786

00:38:15,720 --> 00:38:12,010

least in my own field there's an

787

00:38:18,260 --> 00:38:15,730

increasing number of scientists and also

788

00:38:21,810 --> 00:38:18,270

in other disciplines changing the old

789

00:38:24,720 --> 00:38:21,820

materialist worldview so it's done not

790

00:38:27,180 --> 00:38:24,730

only by scientists but also by

791

00:38:31,080 --> 00:38:27,190

philosophers themselves so in the last

792

00:38:33,450 --> 00:38:31,090

few years we've seen books came out you

793

00:38:38,040 --> 00:38:33,460

know about the waning of materialism and

794

00:38:40,020 --> 00:38:38,050

so on and so forth and so now several

795

00:38:42,720 --> 00:38:40,030

different scientists are starting to

796

00:38:45,350 --> 00:38:42,730

question this so so we're in a

797

00:38:49,010 --> 00:38:45,360

transition period like I said before and

798

00:38:52,890 --> 00:38:49,020

in certain circles scientists are

799

00:38:55,940 --> 00:38:52,900

creating sorts of Union we're getting

800

00:39:01,980 --> 00:38:55,950

together or trained getting organized

801
00:39:05,700 --> 00:39:01,990
and for instance there's a special issue

802
00:39:07,590 --> 00:39:05,710
of a journal which a main chain journal

803
00:39:10,440 --> 00:39:07,600
in neuroscience called frontiers and

804
00:39:12,720 --> 00:39:10,450
human neuroscience and next year there

805
00:39:15,690 --> 00:39:12,730
will be a special issue about the

806
00:39:18,570 --> 00:39:15,700
possibility of non-local mind and this

807
00:39:20,790 --> 00:39:18,580
is a sign of time because only 10 years

808
00:39:21,480 --> 00:39:20,800
ago or 15 20 years ago this would have

809
00:39:23,700 --> 00:39:21,490
not

810
00:39:27,750 --> 00:39:23,710
possible at all so now it's becoming

811
00:39:30,800 --> 00:39:27,760
possible to discuss these important

812
00:39:34,890 --> 00:39:30,810
issues publicly and even to challenge

813
00:39:37,130 --> 00:39:34,900

the main streams you openly overtly so

814

00:39:40,500 --> 00:39:37,140

that this was not possible at all before

815

00:39:44,540 --> 00:39:40,510

so there's there's a progress regarding

816

00:39:50,040 --> 00:39:44,550

this that this evolution in our field

817

00:39:53,040 --> 00:39:50,050

and so so I think that there eventually

818

00:39:56,790 --> 00:39:53,050

will be another river a big revolution

819

00:39:59,450 --> 00:39:56,800

in science and this will be about mind

820

00:40:02,940 --> 00:39:59,460

and consciousness and the same kind of

821

00:40:05,010 --> 00:40:02,950

revolution that they've had about 100

822

00:40:07,290 --> 00:40:05,020

years ago in physics from classical

823

00:40:10,230 --> 00:40:07,300

physics to quantum physics will have the

824

00:40:15,120 --> 00:40:10,240

probably the same you know in our own

825

00:40:16,680 --> 00:40:15,130

field and at the same time in parallel

826
00:40:19,140 --> 00:40:16,690
of course like you said at the beginning

827
00:40:21,900 --> 00:40:19,150
of the interview if you talk to lay

828
00:40:23,100 --> 00:40:21,910
people to most people did you not

829
00:40:25,140 --> 00:40:23,110
believe that they are strictly

830
00:40:27,990 --> 00:40:25,150
biological robots that they don't have

831
00:40:30,330 --> 00:40:28,000
any influence over their brain activity

832
00:40:34,230 --> 00:40:30,340
or what's happening in the body and so

833
00:40:39,570 --> 00:40:34,240
on and so forth and so it won't be

834
00:40:43,550 --> 00:40:39,580
difficult if there's the start of really

835
00:40:48,599 --> 00:40:43,560
a transition in science within science

836
00:40:51,930 --> 00:40:48,609
it will go quickly because the rest of

837
00:40:55,790 --> 00:40:51,940
the world you know is very sympathetic

838
00:40:58,740 --> 00:40:55,800

regarding and non materialist view of

839

00:41:01,140 --> 00:40:58,750

consciousness and a human life of the

840

00:41:03,690 --> 00:41:01,150

universe right very good very good point

841

00:41:05,400 --> 00:41:03,700

so dr. Beauregard tell us a little bit

842

00:41:08,130 --> 00:41:05,410

about the research that you're currently

843

00:41:09,660 --> 00:41:08,140

engaged in and also if you want to tell

844

00:41:12,030 --> 00:41:09,670

us anything else we can find out about

845

00:41:15,920 --> 00:41:12,040

the book that'd be great too so what are

846

00:41:20,880 --> 00:41:15,930

you working on nowadays well I'm doing

847

00:41:23,730 --> 00:41:20,890

I'm doing brain imaging experiments

848

00:41:25,620 --> 00:41:23,740

regarding some types of felted well

849

00:41:30,330 --> 00:41:25,630

altered states of consciousness and

850

00:41:33,060 --> 00:41:30,340

especially spiritual consciousness so

851

00:41:34,760 --> 00:41:33,070

that's one thing I'm also investigating

852

00:41:38,990 --> 00:41:34,770

the capacity of

853

00:41:42,320 --> 00:41:39,000

the human mind to influence or to

854

00:41:45,260 --> 00:41:42,330

control the activity of regions involved

855

00:41:48,650 --> 00:41:45,270

in emotional responses so it's called

856

00:41:51,230 --> 00:41:48,660

emotion regulation so that's that's one

857

00:41:54,380 --> 00:41:51,240

aspect but from a theoretical point of

858

00:41:56,810 --> 00:41:54,390

view I'm also in the process of

859

00:41:59,060 --> 00:41:56,820

developing a new theory about the role

860

00:42:02,810 --> 00:41:59,070

and the impact of mining consciousness

861

00:42:04,010 --> 00:42:02,820

in nature great we want to tip your hand

862

00:42:06,680 --> 00:42:04,020

a little bit and tell us what you're

863

00:42:09,740 --> 00:42:06,690

thinking and general wealthy i'm

864

00:42:12,290 --> 00:42:09,750

planning to present this this theory in

865

00:42:14,750 --> 00:42:12,300

this special issue that will be

866

00:42:19,160 --> 00:42:14,760

published next year in the frontiers of

867

00:42:23,410 --> 00:42:19,170

human neuroscience man well basic ideas

868

00:42:26,090 --> 00:42:23,420

about that it's my consciousness are

869

00:42:29,630 --> 00:42:26,100

irreducible it cannot be reduced matter

870

00:42:32,150 --> 00:42:29,640

they are fundamental in the universe as

871

00:42:37,580 --> 00:42:32,160

much as the fundamental forces of

872

00:42:40,130 --> 00:42:37,590

physics and the you know they're so so

873

00:42:42,890 --> 00:42:40,140

they are as important as what we call

874

00:42:47,090 --> 00:42:42,900

space time and also the the physical

875

00:42:50,060 --> 00:42:47,100

world and so what I'm planning to do is

876

00:42:52,520 --> 00:42:50,070

simply to demonstrate that from an

877

00:42:55,030 --> 00:42:52,530

empirical point of view so I'm

878

00:43:00,550 --> 00:42:55,040

presenting series of empirical evidence

879

00:43:04,400 --> 00:43:00,560

showing that mental processes and events

880

00:43:07,670 --> 00:43:04,410

exert a great influence within the body

881

00:43:10,970 --> 00:43:07,680

the brain and body but also outside of

882

00:43:14,030 --> 00:43:10,980

the physical body beyond the confines of

883

00:43:16,880 --> 00:43:14,040

the brain in the body so in essence

884

00:43:19,880 --> 00:43:16,890

that's the gist of it wow that's

885

00:43:21,860 --> 00:43:19,890

exciting it's a great teaser for the for

886

00:43:24,500 --> 00:43:21,870

the upcoming article and will certainly

887

00:43:26,900 --> 00:43:24,510

look for that you know what the good

888

00:43:31,910 --> 00:43:26,910

news is that when I'm presenting these

889

00:43:34,250 --> 00:43:31,920

things you know too for instance can be

890

00:43:37,100 --> 00:43:34,260

Department of Psychiatry or even to some

891

00:43:39,500 --> 00:43:37,110

neuro scientist and these days now they

892

00:43:42,230 --> 00:43:39,510

are more willing to listen you know when

893

00:43:44,480 --> 00:43:42,240

to reflect about these things and like i

894

00:43:46,790 --> 00:43:44,490

said before 10 years ago this would not

895

00:43:48,600 --> 00:43:46,800

have been possible at all so it's a sign

896

00:43:51,480 --> 00:43:48,610

that things are start

897

00:43:54,420 --> 00:43:51,490

to change really right that's very

898

00:43:56,760 --> 00:43:54,430

interesting to hear from someone who's

899

00:43:59,460 --> 00:43:56,770

on the front line of this work like you

900

00:44:01,200 --> 00:43:59,470

are I really value that opinion and I

901
00:44:03,750 --> 00:44:01,210
think folks will will take heart in that

902
00:44:05,790 --> 00:44:03,760
so the book again is brain Wars the

903
00:44:07,890 --> 00:44:05,800
scientific battle over the existence of

904
00:44:10,590 --> 00:44:07,900
the mine and the proof that will change

905
00:44:12,480 --> 00:44:10,600
the way we live our lives dr. Mario

906
00:44:15,570 --> 00:44:12,490
Beauregard thank you again so much for

907
00:44:19,050 --> 00:44:15,580
joining me today on skeptic oh thanks

908
00:44:21,180 --> 00:44:19,060
very much headaches thanks again to dr.

909
00:44:23,460 --> 00:44:21,190
Mario Beauregard for joining me today on

910
00:44:25,230 --> 00:44:23,470
skeptic Oh a couple of questions I'd tee

911
00:44:27,330 --> 00:44:25,240
up from this interview the first would

912
00:44:29,130 --> 00:44:27,340
have to do with the placebo effect I

913
00:44:31,680 --> 00:44:29,140

haven't really talked a lot about the

914

00:44:33,600 --> 00:44:31,690

placebo effect on this show but I think

915

00:44:37,080 --> 00:44:33,610

dr. Beauregard does a nice job of

916

00:44:39,660 --> 00:44:37,090

showing how it to adds to the mounting

917

00:44:42,360 --> 00:44:39,670

evidence against scientific materialism

918

00:44:46,020 --> 00:44:42,370

so I'd be interested to hear how you

919

00:44:48,030 --> 00:44:46,030

pull that apart in how you process some

920

00:44:50,490 --> 00:44:48,040

of the research that he's pointing to in

921

00:44:52,530 --> 00:44:50,500

that area and the second question would

922

00:44:55,530 --> 00:44:52,540

be returning to a topic we talk about

923

00:44:58,560 --> 00:44:55,540

frequently and that is the paradigm

924

00:45:01,020 --> 00:44:58,570

shift so dr. Beauregard is suggesting

925

00:45:03,390 --> 00:45:01,030

that hey things really are moving in the

926

00:45:06,240 --> 00:45:03,400

right direction and that this science

927

00:45:09,240 --> 00:45:06,250

which seems pretty self-evident to most

928

00:45:11,130 --> 00:45:09,250

of us is gaining traction I'd like to

929

00:45:14,250 --> 00:45:11,140

think that's true but I think embedded

930

00:45:16,830 --> 00:45:14,260

in that belief is a misunderstanding of

931

00:45:20,130 --> 00:45:16,840

just how powerful the forces that would

932

00:45:22,140 --> 00:45:20,140

resist that really are and the fact that

933

00:45:24,660 --> 00:45:22,150

they haven't really been challenged to a

934

00:45:27,000 --> 00:45:24,670

great degree right now makes it hard to

935

00:45:29,310 --> 00:45:27,010

estimate just how hard their pushback

936

00:45:31,770 --> 00:45:29,320

might be anyways I'm tipping my hand as

937

00:45:34,110 --> 00:45:31,780

to my take on that but I think it'd be

938

00:45:36,510 --> 00:45:34,120

interesting to dredge that up and debate

939

00:45:38,580 --> 00:45:36,520

that one more time and the place to do

940

00:45:40,230 --> 00:45:38,590

that of course is either in the forum or

941

00:45:44,190 --> 00:45:40,240

on the comments section of the website

942

00:45:48,150 --> 00:45:44,200

the website address again is ske pti que

943

00:45:49,860 --> 00:45:48,160

o com so there you'll find a link to the

944

00:45:51,750 --> 00:45:49,870

forum you or you can add your comment

945

00:45:54,990 --> 00:45:51,760

right there on the website and you'll

946

00:45:57,210 --> 00:45:55,000

also find links to all of our almost 200

947

00:45:59,940 --> 00:45:57,220

previous shows so be sure to check that

948

00:46:02,490 --> 00:45:59,950

out and connect with us let us know your

949

00:46:05,190 --> 00:46:02,500

thoughts on the show and in particular

950

00:46:07,500 --> 00:46:05,200

killer on these topics that dr.

951

00:46:09,840 --> 00:46:07,510

Beauregard has brought to us well that's

952

00:46:11,730 --> 00:46:09,850

going to do it for this episode I have a

953

00:46:14,700 --> 00:46:11,740

number of interesting shows coming up