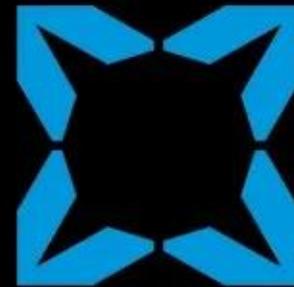


TWO DOGMAS OF MATERIALISM

DAVID SCHARF



**SOCIETY
FOR
SCIENTIFIC
EXPLORATION**

1
00:00:09,970 --> 00:00:06,110
thing between us and lunch hey David job

2
00:00:13,669 --> 00:00:09,980
you begun to dogmas of materialism I

3
00:00:17,090 --> 00:00:13,679
just want to say that in in Fairfield

4
00:00:18,650 --> 00:00:17,100
Iowa we had a for a long time a car

5
00:00:23,480 --> 00:00:18,660
repair shop he called himself the

6
00:00:25,429 --> 00:00:23,490
quantum mechanic so my talk is two

7
00:00:27,259 --> 00:00:25,439
dogmas of materialism towards a

8
00:00:30,820 --> 00:00:27,269
consciousness based framework for

9
00:00:33,590 --> 00:00:30,830
understanding mental causation I'm a

10
00:00:36,110 --> 00:00:33,600
philosopher of science and a professor

11
00:00:37,729 --> 00:00:36,120
of physics at Maris University which is

12
00:00:44,450 --> 00:00:37,739
the home of consciousness based

13
00:00:51,010 --> 00:00:44,460

education and this is a a chart of a

14

00:00:56,150 --> 00:00:51,020

study that was done a project in 1983 in

15

00:00:58,760 --> 00:00:56,160

Israel and it brought together a number

16

00:01:02,080 --> 00:00:58,770

of advanced transcendental meditation

17

00:01:04,789 --> 00:01:02,090

practitioners called TM cities

18

00:01:08,510 --> 00:01:04,799

participants and that's the blue line

19

00:01:10,219 --> 00:01:08,520

and over a 10-week period they got

20

00:01:13,520 --> 00:01:10,229

together at a central location in

21

00:01:16,070 --> 00:01:13,530

Jerusalem my wife ILO was a new TM

22

00:01:20,300 --> 00:01:16,080

teacher at the time and was one of the

23

00:01:23,240 --> 00:01:20,310

organizers and a quality of life index

24

00:01:28,429 --> 00:01:23,250

including a reduction in war deaths at

25

00:01:32,210 --> 00:01:28,439

the time and the matching is enormous ly

26

00:01:34,100 --> 00:01:32,220

striking and this was published in a

27

00:01:35,569 --> 00:01:34,110

leading journal in conflict resolution

28

00:01:39,109 --> 00:01:35,579

called the Journal of conflict

29

00:01:42,260 --> 00:01:39,119

resolution and the main criticisms of

30

00:01:45,620 --> 00:01:42,270

this study were that we know that it has

31

00:01:48,410 --> 00:01:45,630

a prior probability of 0 that this

32

00:01:52,550 --> 00:01:48,420

effect of collective consciousness could

33

00:01:54,859 --> 00:01:52,560

affect the quality of life and so that

34

00:01:56,959 --> 00:01:54,869

prior probability is based on an

35

00:01:59,690 --> 00:01:56,969

understanding of consciousness as a

36

00:02:02,630 --> 00:01:59,700

localized offshoot of brain functioning

37

00:02:05,929 --> 00:02:02,640

materialism and so I want to talk about

38

00:02:09,369 --> 00:02:05,939

materialism in this talk so what exactly

39

00:02:11,270 --> 00:02:09,379

is wrong with materialism anyway well

40

00:02:13,040 --> 00:02:11,280

there's the hard problem of

41

00:02:13,490 --> 00:02:13,050

consciousness which everybody here knows

42

00:02:17,840 --> 00:02:13,500

about

43

00:02:20,030 --> 00:02:17,850

and it wreaks havoc with our concepts of

44

00:02:23,570 --> 00:02:20,040

personal responsibility and moral

45

00:02:26,990 --> 00:02:23,580

obligations if we're just sophisticated

46

00:02:28,940 --> 00:02:27,000

computers or robots then how are we

47

00:02:31,850 --> 00:02:28,950

responsible for our actions

48

00:02:34,400 --> 00:02:31,860

it's short-circuits debate about size

49

00:02:36,740 --> 00:02:34,410

phenomena if we're if consciousness is

50

00:02:41,030 --> 00:02:36,750

just a localized offshoot of the brain

51
00:02:45,220 --> 00:02:41,040
then long-range effects we can rule out

52
00:02:49,340 --> 00:02:45,230
a priori and finally it's conceptually

53
00:02:50,690 --> 00:02:49,350
incoherent conceptually incoherent we

54
00:02:52,370 --> 00:02:50,700
know there's a lot of problems with

55
00:02:56,180 --> 00:02:52,380
materialism but why conceptually

56
00:02:58,550 --> 00:02:56,190
incoherent well here's a model of how

57
00:03:02,630 --> 00:02:58,560
consciousness relates to the brain and

58
00:03:07,360 --> 00:03:02,640
for the reductionist materialist mind is

59
00:03:11,000 --> 00:03:07,370
just an offshoot of the brain now

60
00:03:14,840 --> 00:03:11,010
evolution has evolved so that the neural

61
00:03:18,440 --> 00:03:14,850
firing mechanisms in the brain lead us

62
00:03:21,170 --> 00:03:18,450
to get out of the way of danger but

63
00:03:23,540 --> 00:03:21,180

those same neural firing mechanisms

64

00:03:29,000 --> 00:03:23,550

according to the materialist give rise

65

00:03:31,070 --> 00:03:29,010

to cognitive content which refers to the

66

00:03:34,520 --> 00:03:31,080

environment and can be either true or

67

00:03:38,930 --> 00:03:34,530

false but that cognitive content may be

68

00:03:41,720 --> 00:03:38,940

totally unrelated to the the neural

69

00:03:44,110 --> 00:03:41,730

firing mechanisms which lead us to take

70

00:03:48,229 --> 00:03:44,120

the actions to get us out of the way so

71

00:03:50,509 --> 00:03:48,239

evolutionary theory leads to this idea

72

00:03:52,600 --> 00:03:50,519

that there's this materialism in general

73

00:03:56,750 --> 00:03:52,610

leads to this disconnect between

74

00:03:59,270 --> 00:03:56,760

cognitive content and causative effects

75

00:03:59,900 --> 00:03:59,280

of our neural processes and Alvin

76

00:04:04,130 --> 00:03:59,910

Plantinga

77

00:04:07,220 --> 00:04:04,140

has made a nice exposition of this

78

00:04:09,920 --> 00:04:07,230

argument I did also in Y Jaglom Kim's

79

00:04:15,560 --> 00:04:09,930

physicalism is not near enough published

80

00:04:18,289 --> 00:04:15,570

in neuro quant ology and this is kind of

81

00:04:21,170 --> 00:04:18,299

a car wreck to the materialist program

82

00:04:24,710 --> 00:04:21,180

because if it undermines his confidence

83

00:04:27,540 --> 00:04:24,720

in the cognitive functioning period

84

00:04:30,400 --> 00:04:27,550

including materialism its

85

00:04:31,750 --> 00:04:30,410

then why is the materialist paradigm the

86

00:04:34,180 --> 00:04:31,760

dominant paradigm

87

00:04:36,280 --> 00:04:34,190

I suggest that there are two main

88

00:04:37,990 --> 00:04:36,290

arguments I call them - dogmas of

89

00:04:41,740 --> 00:04:38,000

materialism because neither of them

90

00:04:46,710 --> 00:04:41,750

stands up to scrutiny

91

00:04:49,230 --> 00:04:46,720

maybe materialism is just a bad idea but

92

00:04:51,760 --> 00:04:49,240

here's the first dogma

93

00:04:54,580 --> 00:04:51,770

damage to critical brain regions

94

00:04:56,860 --> 00:04:54,590

degrades cognitive function therefore

95

00:04:59,740 --> 00:04:56,870

the argument goes consciousness is a

96

00:05:03,040 --> 00:04:59,750

product of the brain now there are two

97

00:05:05,560 --> 00:05:03,050

problems with this argument first the

98

00:05:08,650 --> 00:05:05,570

premise is not true in the second the

99

00:05:16,420 --> 00:05:08,660

conclusion doesn't follow now why is the

100

00:05:18,700 --> 00:05:16,430

premise not true we already heard the

101
00:05:27,219 --> 00:05:18,710
neuroscientist explaining that damage to

102
00:05:30,550 --> 00:05:27,229
the brain sometimes releases anomalous

103
00:05:34,270 --> 00:05:30,560
cognitive capabilities so the brain the

104
00:05:36,550 --> 00:05:34,280
brain isn't strictly stimulating or

105
00:05:40,230 --> 00:05:36,560
producing consciousness and cognition

106
00:05:44,200 --> 00:05:40,240
its inhibitory capacity is

107
00:05:47,620 --> 00:05:44,210
underestimated in popular expositions of

108
00:05:50,700 --> 00:05:47,630
neuroscience and here's a study by Robin

109
00:05:54,450 --> 00:05:50,710
Carhartt and his group on psilocybin and

110
00:05:59,140 --> 00:05:54,460
he found that the key connector hubs

111
00:06:01,240 --> 00:05:59,150
showed a decreased activity enabling a

112
00:06:05,490 --> 00:06:01,250
state of unconstrained cognition those

113
00:06:10,650 --> 00:06:05,500

are his words there's a nice study by

114

00:06:13,029 --> 00:06:10,660

Andrew Newberg on Brazilian mediums and

115

00:06:16,719 --> 00:06:13,039

what he found was that there's a

116

00:06:22,110 --> 00:06:16,729

decrease in activity in critical regions

117

00:06:25,080 --> 00:06:22,120

deja vu studies in the Czech Republic

118

00:06:27,520 --> 00:06:25,090

showed that there are certain critical

119

00:06:30,640 --> 00:06:27,530

structures in the brain that correlate

120

00:06:32,050 --> 00:06:30,650

with deja boo' experiences and the

121

00:06:34,659 --> 00:06:32,060

interesting thing is that those

122

00:06:37,589 --> 00:06:34,669

structures are smaller in people who

123

00:06:39,820 --> 00:06:37,599

have frequent Dasia who experience

124

00:06:41,090 --> 00:06:39,830

near-death experiences

125

00:06:46,070 --> 00:06:41,100

dr. eben Alec

126

00:06:48,620 --> 00:06:46,080

Xander made this very popular and he

127

00:06:55,240 --> 00:06:48,630

said that we're conscious in spite of

128

00:06:57,830 --> 00:06:55,250

our brains now so the inhibitory

129

00:07:00,680 --> 00:06:57,840

function of the brain is underestimated

130

00:07:05,630 --> 00:07:00,690

it's not just a simple linear relation

131

00:07:09,830 --> 00:07:05,640

between impairment of neural functioning

132

00:07:12,680 --> 00:07:09,840

and degradation of cognitive ability the

133

00:07:16,250 --> 00:07:12,690

second is there's even if that were true

134

00:07:19,640 --> 00:07:16,260

it wouldn't follow that because our

135

00:07:21,380 --> 00:07:19,650

waking state consciousness is reduced

136

00:07:23,780 --> 00:07:21,390

that that an elimination of

137

00:07:25,790 --> 00:07:23,790

consciousness period consciousness

138

00:07:29,650 --> 00:07:25,800

itself may be a much larger phenomenon

139

00:07:33,260 --> 00:07:29,660

than our waking state experience and

140

00:07:35,300 --> 00:07:33,270

brain chemistry commissure atomy shows

141

00:07:39,400 --> 00:07:35,310

that under extraordinary circumstances

142

00:07:42,500 --> 00:07:39,410

but hemispheres of the brain can support

143

00:07:43,940 --> 00:07:42,510

centers of consciousness which don't

144

00:07:46,790 --> 00:07:43,950

communicate with each other don't know

145

00:07:49,580 --> 00:07:46,800

about each other and Steven Browdy has a

146

00:07:53,540 --> 00:07:49,590

nice book on multiple personality

147

00:07:55,730 --> 00:07:53,550

disorder and there can be separate

148

00:07:57,920 --> 00:07:55,740

personalities with within a person that

149

00:08:01,940 --> 00:07:57,930

some of which don't know about the

150

00:08:04,310 --> 00:08:01,950

others so but if materialism isn't the

151

00:08:05,090 --> 00:08:04,320

best approach to the problem of

152

00:08:08,920 --> 00:08:05,100

consciousness

153

00:08:13,880 --> 00:08:08,930

what's better what's the alternative

154

00:08:17,570 --> 00:08:13,890

well the the dualist model goes way back

155

00:08:20,270 --> 00:08:17,580

in history the idea that we're in like

156

00:08:23,240 --> 00:08:20,280

the charioteer in a chariot and the body

157

00:08:25,900 --> 00:08:23,250

in the brain would be the chariot and we

158

00:08:28,910 --> 00:08:25,910

are the controller's of the chariot and

159

00:08:31,400 --> 00:08:28,920

Rene Descartes dis famous for this with

160

00:08:33,709 --> 00:08:31,410

his concept of substance dualism that

161

00:08:36,850 --> 00:08:33,719

there's an interaction between mind and

162

00:08:38,839 --> 00:08:36,860

brain and he was criticized by his

163

00:08:41,870 --> 00:08:38,849

friend and student

164

00:08:44,840 --> 00:08:41,880

Princess Elizabeth of Bohemia and she

165

00:08:48,110 --> 00:08:44,850

wrote a charming there's a charming

166

00:08:54,020 --> 00:08:48,120

exchange of letters in which she asks if

167

00:08:54,890 --> 00:08:54,030

the mind is non spatial and in the body

168

00:08:57,260 --> 00:08:54,900

and brain

169

00:08:59,450 --> 00:08:57,270

are spatially extended how can there be

170

00:09:04,510 --> 00:08:59,460

an interaction and her model of

171

00:09:07,760 --> 00:09:04,520

causation who the same as des cartes

172

00:09:10,940 --> 00:09:07,770

causation is very much embedded in

173

00:09:13,460 --> 00:09:10,950

spatial context and that's a very modern

174

00:09:15,710 --> 00:09:13,470

kind of criticism so that leads us to

175

00:09:18,080 --> 00:09:15,720

the second dogma of materialism if the

176

00:09:19,450 --> 00:09:18,090

mind is distinct from the brain it could

177

00:09:21,650 --> 00:09:19,460

not affect neuro physiological

178

00:09:23,240 --> 00:09:21,660

functioning without violating

179

00:09:25,130 --> 00:09:23,250

conservation of energy

180

00:09:28,490 --> 00:09:25,140

of course Descartes didn't have know

181

00:09:32,540 --> 00:09:28,500

about conservation of energy but that's

182

00:09:36,350 --> 00:09:32,550

the way it's put in modern in modern

183

00:09:40,580 --> 00:09:36,360

treatments so again there's a problem

184

00:09:43,130 --> 00:09:40,590

there because conservation of energy is

185

00:09:45,860 --> 00:09:43,140

a scientific principle and it states

186

00:09:48,530 --> 00:09:45,870

that in a causally closed system energy

187

00:09:50,360 --> 00:09:48,540

is conserved and this and these

188

00:09:52,400 --> 00:09:50,370

discussions are usually put in terms of

189

00:09:55,220 --> 00:09:52,410

conservation of energy but it applies to

190

00:09:59,120 --> 00:09:55,230

conservation of momentum and any of the

191

00:10:02,360 --> 00:09:59,130

other conservation principles so in a

192

00:10:04,960 --> 00:10:02,370

causally closed system energy is

193

00:10:08,210 --> 00:10:04,970

conserved what this argument is really

194

00:10:11,000 --> 00:10:08,220

based on is the principle of causal

195

00:10:13,670 --> 00:10:11,010

closure of the physical domain it's and

196

00:10:20,120 --> 00:10:13,680

that's a metaphysical add-on it's not

197

00:10:23,330 --> 00:10:20,130

science so the transmission model goes

198

00:10:25,970 --> 00:10:23,340

way back to William James and Frederik

199

00:10:28,360 --> 00:10:25,980

Meijer and this is an advancement on the

200

00:10:30,740 --> 00:10:28,370

cartesian substance dualism

201

00:10:33,830 --> 00:10:30,750

interactionism and the transmission

202

00:10:36,920 --> 00:10:33,840

model the inhibitory role of the brain

203

00:10:41,780 --> 00:10:36,930

is emphasized and the brain acts as a

204

00:10:43,610 --> 00:10:41,790

filter some of the metaphors are that

205

00:10:47,240 --> 00:10:43,620

the relationship between brain and

206

00:10:49,640 --> 00:10:47,250

consciousness are like like a chemical

207

00:10:52,250 --> 00:10:49,650

compound you have sodium and you have

208

00:10:53,930 --> 00:10:52,260

chlorine and they both exist separately

209

00:10:56,660 --> 00:10:53,940

and independently but in combination

210

00:11:00,320 --> 00:10:56,670

they produce salt which has its own

211

00:11:04,640 --> 00:11:00,330

properties or maybe the brain modulates

212

00:11:07,760 --> 00:11:04,650

consciousness it's like a prism that it

213

00:11:08,510 --> 00:11:07,770

doesn't produce the light but it takes

214

00:11:12,080 --> 00:11:08,520

incoming

215

00:11:15,080 --> 00:11:12,090

light and modulates it and outputs a

216

00:11:17,450 --> 00:11:15,090

spectrum of colors or the brain is like

217

00:11:19,760 --> 00:11:17,460

a radio it picks up the signal in the

218

00:11:21,200 --> 00:11:19,770

electromagnetic field the signal in the

219

00:11:23,450 --> 00:11:21,210

electromagnetic field is they are

220

00:11:26,390 --> 00:11:23,460

independent of the radio but the radio

221

00:11:30,440 --> 00:11:26,400

picks it up and amplifies it or the

222

00:11:33,170 --> 00:11:30,450

plain old sieve or filter that the brain

223

00:11:35,930 --> 00:11:33,180

filters out much of higher cognition and

224

00:11:38,780 --> 00:11:35,940

consciousness so the waking state is a

225

00:11:40,660 --> 00:11:38,790

fraction of our consciousness

226

00:11:44,150 --> 00:11:40,670

now the Transcendental Meditation

227

00:11:47,750 --> 00:11:44,160

research can be understood in terms of

228

00:11:52,730 --> 00:11:47,760

this transmission model TM produces

229

00:11:56,450 --> 00:11:52,740

alpha-1 EEG whereas sleep produces delta

230

00:11:59,360 --> 00:11:56,460

so this is a TM is often described as

231

00:12:04,430 --> 00:11:59,370

producing a state of restful alertness

232

00:12:07,970 --> 00:12:04,440

so this restfulness this alpha is it's

233

00:12:10,820 --> 00:12:07,980

described as an idling frequency it's a

234

00:12:14,990 --> 00:12:10,830

minimal state of brain activity which

235

00:12:19,220 --> 00:12:15,000

allows higher awareness heightened

236

00:12:20,930 --> 00:12:19,230

awareness to flow through TM Bruce's

237

00:12:23,150 --> 00:12:20,940

higher blood flow to the front of the

238

00:12:26,270 --> 00:12:23,160

brain and lower blood flow to the brain

239

00:12:29,150 --> 00:12:26,280

stem the brainstem is very much involved

240

00:12:31,160 --> 00:12:29,160

in wakefulness and the fact that TM

241

00:12:32,540 --> 00:12:31,170

involves lower blood flow and this

242

00:12:34,940 --> 00:12:32,550

correlates with heightened awareness

243

00:12:38,180 --> 00:12:34,950

would be paradoxical from the

244

00:12:41,510 --> 00:12:38,190

materialist production point of view TM

245

00:12:44,660 --> 00:12:41,520

increases serotonin which is involved in

246

00:12:46,310 --> 00:12:44,670

mood stability and most important the

247

00:12:48,500 --> 00:12:46,320

subjective experience of pure

248

00:12:53,090 --> 00:12:48,510

consciousness is a state of heightened

249

00:12:55,910 --> 00:12:53,100

awareness and alertness now here's what

250

00:12:58,100 --> 00:12:55,920

one of the studies which I find

251
00:13:01,490 --> 00:12:58,110
interesting this was by Russell Hebert

252
00:13:05,120 --> 00:13:01,500
one of Fred Travis's students Fred

253
00:13:09,920 --> 00:13:05,130
Travis is one of the leading researchers

254
00:13:12,740 --> 00:13:09,930
at Morris University and this shows zero

255
00:13:17,210 --> 00:13:12,750
lag phase synchrony so these are

256
00:13:19,340 --> 00:13:17,220
nineteen he G leads across the skull and

257
00:13:21,110 --> 00:13:19,350
the fact that the different regions of

258
00:13:22,060 --> 00:13:21,120
the brain are firing in a coherent

259
00:13:24,190 --> 00:13:22,070
fashion

260
00:13:26,530 --> 00:13:24,200
is one of the signatures of

261
00:13:28,440 --> 00:13:26,540
transcendental consciousness and the

262
00:13:31,960 --> 00:13:28,450
fact that there's euro lag

263
00:13:36,270 --> 00:13:31,970

suggests to me

264

00:13:43,840 --> 00:13:41,410

influence there now most of the

265

00:13:45,850 --> 00:13:43,850

materialist arguments are based on a

266

00:13:49,990 --> 00:13:45,860

classical physics understanding for

267

00:13:52,260 --> 00:13:50,000

example philosophers critique the idea

268

00:13:56,290 --> 00:13:52,270

that there could be a mind brain

269

00:13:57,760 --> 00:13:56,300

interaction on the basis of a similar

270

00:14:01,090 --> 00:13:57,770

kind of argument to what Princess

271

00:14:03,310 --> 00:14:01,100

Elizabeth put forward which is that they

272

00:14:07,690 --> 00:14:03,320

call it the pairing problem that how do

273

00:14:10,090 --> 00:14:07,700

you know that a shot the target and not

274

00:14:12,160 --> 00:14:10,100

B well you look at their spatial

275

00:14:14,410 --> 00:14:12,170

orientation how they were pointing their

276

00:14:17,800 --> 00:14:14,420

gun and all these spatial

277

00:14:20,100 --> 00:14:17,810

characteristics but that relying too

278

00:14:23,160 --> 00:14:20,110

heavily on classical understanding is

279

00:14:27,640 --> 00:14:23,170

and generalizing from from those

280

00:14:30,010 --> 00:14:27,650

constraints is a hasty generalization

281

00:14:32,950 --> 00:14:30,020

Bertrand Russell commented on the man

282

00:14:34,870 --> 00:14:32,960

who fell off the observation deck of the

283

00:14:38,110 --> 00:14:34,880

Empire State Building and he was heard

284

00:14:42,060 --> 00:14:38,120

to say as he dropped past the 59th floor

285

00:14:52,360 --> 00:14:49,960

so Niels Bohr one of my heroes he he

286

00:14:54,970 --> 00:14:52,370

received the order of the elephant and

287

00:14:58,000 --> 00:14:54,980

he selected as his coat of arms the

288

00:15:00,940 --> 00:14:58,010

yin-yang symbol and he's famous for the

289

00:15:02,920 --> 00:15:00,950

complementarity principle and he was

290

00:15:05,620 --> 00:15:02,930

very interested in the complementarity

291

00:15:08,800 --> 00:15:05,630

of subjectivity and objectivity that the

292

00:15:10,990 --> 00:15:08,810

that the difficulty in finding a clean

293

00:15:14,500 --> 00:15:11,000

divide a clean line of demarcation

294

00:15:18,760 --> 00:15:14,510

between subject and object is indication

295

00:15:22,240 --> 00:15:18,770

of deeper reality and quantum physics

296

00:15:24,910 --> 00:15:22,250

may be scratching the surface of that

297

00:15:27,820 --> 00:15:24,920

deeper reality it's not the the final

298

00:15:32,110 --> 00:15:27,830

word for sure but our understanding of

299

00:15:34,690 --> 00:15:32,120

space-time may be more sophisticated

300

00:15:37,930 --> 00:15:34,700

than what classical physics

301

00:15:39,760 --> 00:15:37,940

assumes consciousness is strange and

302

00:15:41,910 --> 00:15:39,770

quantum mechanics is strange but what do

303

00:15:45,010 --> 00:15:41,920

they have to do with each other

304

00:15:47,560 --> 00:15:45,020

one thing is quantum entanglement and as

305

00:15:49,750 --> 00:15:47,570

Garrett pointed out it doesn't involve a

306

00:15:52,480 --> 00:15:49,760

signal transmission yet the entanglement

307

00:15:55,180 --> 00:15:52,490

is real and I would cause call that a

308

00:15:59,740 --> 00:15:55,190

causal connection even though there's

309

00:16:01,750 --> 00:15:59,750

not a transfer of information when when

310

00:16:03,970 --> 00:16:01,760

one of the particles assumes an

311

00:16:08,890 --> 00:16:03,980

eigenstate of the observable the other

312

00:16:11,880 --> 00:16:08,900

one has to assume the the opposing value

313

00:16:14,290 --> 00:16:11,890

and that's a causal connection

314

00:16:16,690 --> 00:16:14,300

quantum entanglement Schrodinger said I

315

00:16:18,280 --> 00:16:16,700

would not call that one but rather the

316

00:16:21,070 --> 00:16:18,290

characteristic trait of quantum

317

00:16:24,100 --> 00:16:21,080

mechanics and contemporary physics is

318

00:16:26,170 --> 00:16:24,110

looking for deeper explanations of

319

00:16:28,410 --> 00:16:26,180

quantum entanglement and one proposal

320

00:16:34,420 --> 00:16:28,420

that involves a tear in the fate

321

00:16:36,100 --> 00:16:34,430

spatio-temporal fabric Einstein remarked

322

00:16:38,050 --> 00:16:36,110

on the most incomprehensible thing about

323

00:16:40,900 --> 00:16:38,060

the universe is that it is

324

00:16:43,240 --> 00:16:40,910

comprehensible and Eugene Wigner and the

325

00:16:45,040 --> 00:16:43,250

same vein talked about the unreasonable

326

00:16:46,990 --> 00:16:45,050

effectiveness of mathematics in the

327

00:16:49,660 --> 00:16:47,000

Natural Sciences there seems to be a

328

00:16:51,850 --> 00:16:49,670

connection between subjectivity and

329

00:16:55,210 --> 00:16:51,860

objectivity that allows for scientific

330

00:16:58,990 --> 00:16:55,220

knowledge to go forward now Immanuel

331

00:17:03,880 --> 00:16:59,000

Kant is one of the the leading figures

332

00:17:05,650 --> 00:17:03,890

in this understanding and although we

333

00:17:08,430 --> 00:17:05,660

have to go beyond cought because he was

334

00:17:11,170 --> 00:17:08,440

too wedded to Newtonian physics

335

00:17:14,440 --> 00:17:11,180

investing in studying Conte is well

336

00:17:16,390 --> 00:17:14,450

worth the effort in my opinion here's a

337

00:17:18,460 --> 00:17:16,400

model simplified model of his

338

00:17:20,740 --> 00:17:18,470

understanding the objective world and

339

00:17:24,040 --> 00:17:20,750

the observer or the knower it's based on

340

00:17:25,930 --> 00:17:24,050

a Newman Oh realm a transcendental realm

341

00:17:29,550 --> 00:17:25,940

he called his model transcendental

342

00:17:32,110 --> 00:17:29,560

idealism it's very similar to what we

343

00:17:34,690 --> 00:17:32,120

discussed at Maris University where on

344

00:17:37,270 --> 00:17:34,700

the right we have the mind and on the

345

00:17:39,100 --> 00:17:37,280

left we have the the domain of physics

346

00:17:41,020 --> 00:17:39,110

and they have a common source in the

347

00:17:45,250 --> 00:17:41,030

unified field which we interpret as a

348

00:17:48,340 --> 00:17:45,260

field of pure intelligence now here Kant

349

00:17:50,940 --> 00:17:48,350

thought that he actually

350

00:17:53,590 --> 00:17:50,950

a really wonderful sophisticated

351

00:17:56,380 --> 00:17:53,600

discussion he derives physics from

352

00:17:58,290 --> 00:17:56,390

consciousness and here's his table of

353

00:18:02,160 --> 00:17:58,300

categories this goes way back to

354

00:18:04,780 --> 00:18:02,170

Aristotle and even before to Plato the

355

00:18:07,960 --> 00:18:04,790

understanding of the innate ideas the

356

00:18:09,970 --> 00:18:07,970

the forms which structure reality the

357

00:18:11,650 --> 00:18:09,980

relational ones are the most interesting

358

00:18:15,280 --> 00:18:11,660

for the derivation of physics and he

359

00:18:17,590 --> 00:18:15,290

talked about three primary archetypal

360

00:18:20,710 --> 00:18:17,600

ideas substance causation and

361

00:18:25,360 --> 00:18:20,720

reciprocity substance is a principle of

362

00:18:29,010 --> 00:18:25,370

stability or permanence causation we

363

00:18:31,330 --> 00:18:29,020

know about reciprocity is a wholeness or

364

00:18:37,570 --> 00:18:31,340

systematicity nowadays we talk about

365

00:18:40,120 --> 00:18:37,580

complexity here I've developed a chart

366

00:18:43,540 --> 00:18:40,130

based on Kant's discussion substance

367

00:18:46,510 --> 00:18:43,550

give rise gives rise to time so time and

368

00:18:48,820 --> 00:18:46,520

space are not absolute they come from

369

00:18:50,980 --> 00:18:48,830

something deeper something embedded in

370

00:18:54,310 --> 00:18:50,990

consciousness and this is the beginning

371

00:18:56,800 --> 00:18:54,320

of a model that would support heightened

372

00:18:59,670 --> 00:18:56,810

awareness that comes from transcendental

373

00:19:02,640 --> 00:18:59,680

experience and also SCI phenomena

374

00:19:05,710 --> 00:19:02,650

substance is the basis of duration

375

00:19:08,740 --> 00:19:05,720

causation is the basis for sequence

376

00:19:12,220 --> 00:19:08,750

before and after recent reciprocity is

377

00:19:15,430 --> 00:19:12,230

the basis for simultaneity so time and

378

00:19:17,110 --> 00:19:15,440

also space are manifestations of

379

00:19:20,800 --> 00:19:17,120

something deeper they come from

380

00:19:23,920 --> 00:19:20,810

consciousness itself and here he has he

381

00:19:26,500 --> 00:19:23,930

uses these same ideas as the basis for

382

00:19:28,720 --> 00:19:26,510

physic conservation of energy actually

383

00:19:30,880 --> 00:19:28,730

conservation of energy was later than

384

00:19:34,270 --> 00:19:30,890

caught but he knew about Lavoisier's

385

00:19:36,610 --> 00:19:34,280

work on conservation of matter causation

386

00:19:38,530 --> 00:19:36,620

gives rise to the force laws reciprocity

387

00:19:40,150 --> 00:19:38,540

to Newton's third law for every action

388

00:19:44,430 --> 00:19:40,160

there's an equal and opposite reaction

389

00:19:49,060 --> 00:19:44,440

and in contemporary physics where

390

00:19:50,920 --> 00:19:49,070

conservation laws are even deeper

391

00:19:53,200 --> 00:19:50,930

principles are the symmetry principles

392

00:19:55,120 --> 00:19:53,210

the force laws Feynman diagrams and

393

00:19:55,810 --> 00:19:55,130

Newton's third law we have quantum

394

00:20:00,840 --> 00:19:55,820

entanglement

395

00:20:03,120 --> 00:20:00,850

so project is very much relevant to

396

00:20:05,220 --> 00:20:03,130

advances in modern physics and the way

397

00:20:08,129 --> 00:20:05,230

to understand quantum mechanics I think

398

00:20:09,649 --> 00:20:08,139

is that it's just scratching the tip of

399

00:20:13,919 --> 00:20:09,659

the iceberg

400

00:20:16,610 --> 00:20:13,929

for where physics needs to go and where

401

00:20:20,159 --> 00:20:16,620

physics needs to go there will be real

402

00:20:22,889 --> 00:20:20,169

intelligence and information so just to

403

00:20:24,509 --> 00:20:22,899

wrap up below the concepts of the

404

00:20:27,029 --> 00:20:24,519

understanding which we just looked at

405

00:20:29,430 --> 00:20:27,039

are the ideas of reason purpose

406

00:20:31,980 --> 00:20:29,440

systematicity and freewill and for Kant

407

00:20:34,860 --> 00:20:31,990

we know these are embedded in nature but

408

00:20:37,590 --> 00:20:34,870

physics can't get there and why I think

409

00:20:41,039 --> 00:20:37,600

quantum physics and more quantum field

410

00:20:44,430 --> 00:20:41,049

theory and string theory are relevant to

411

00:20:48,629 --> 00:20:44,440

the study of consciousness intelligence

412

00:20:52,879 --> 00:20:48,639

in size phenomena is because contre

413

00:20:55,529 --> 00:20:52,889

can't these these deep ideas are

414

00:20:58,110 --> 00:20:55,539

accessible to physics at least in

415

00:21:04,019 --> 00:20:58,120

principle it may require new mathematics

416

00:21:06,210 --> 00:21:04,029

new physics but to foreclose that that

417

00:21:09,060 --> 00:21:06,220

and say that these are not accessible to

418

00:21:12,509 --> 00:21:09,070

science is to shut the door prematurely

419

00:21:14,460 --> 00:21:12,519

so that's where I think didn't go far

420

00:21:16,889 --> 00:21:14,470

enough so here that from the

421

00:21:19,879 --> 00:21:16,899

transcendental realm the ideas of reason

422

00:21:23,369 --> 00:21:19,889

emerge the concepts of the understanding

423

00:21:25,980 --> 00:21:23,379

are a more expressed level and then just

424

00:21:27,960 --> 00:21:25,990

looking at the objective trends space

425

00:21:33,740 --> 00:21:27,970

and time emerge from that and then

426
00:21:43,540 --> 00:21:33,750
matter and causation so we'll wrap up

427
00:22:03,770 --> 00:21:44,780
okay

428
00:22:06,860 --> 00:22:03,780
so any questions as it sometimes

429
00:22:10,010 --> 00:22:06,870
happened before I I find myself with

430
00:22:13,220 --> 00:22:10,020
more issues than can really be addressed

431
00:22:16,630 --> 00:22:13,230
in a simple question session so I'll

432
00:22:21,010 --> 00:22:16,640
address one of them where one of your

433
00:22:25,670 --> 00:22:21,020
four starting criticisms of materialism

434
00:22:29,510 --> 00:22:25,680
was that it it eliminates the concept of

435
00:22:31,910 --> 00:22:29,520
personal responsibility and morality in

436
00:22:37,700 --> 00:22:31,920
the first place that's factually false

437
00:22:40,280 --> 00:22:37,710
because there are any number of of

438
00:22:44,600 --> 00:22:40,290

committed philosophical materialists who

439

00:22:49,030 --> 00:22:44,610

live according to very stringent and

440

00:22:53,060 --> 00:22:49,040

robust moral codes but more relevant

441

00:22:55,460 --> 00:22:53,070

that is a beneficial argument rather

442

00:22:57,710 --> 00:22:55,470

than a substantive one it is arguing

443

00:22:59,980 --> 00:22:57,720

that you shouldn't believe this because

444

00:23:02,120 --> 00:22:59,990

believing in and it has bad consequences

445

00:23:03,320 --> 00:23:02,130

unfortunately bad consequences have

446

00:23:06,530 --> 00:23:03,330

nothing to do with whether or not

447

00:23:10,580 --> 00:23:06,540

something is true thank you

448

00:23:12,800 --> 00:23:10,590

I I don't dispute the the fact that

449

00:23:14,600 --> 00:23:12,810

there are plenty of materialists who are

450

00:23:18,200 --> 00:23:14,610

moral and there are plenty of

451
00:23:21,260 --> 00:23:18,210
materialists who are trying to salvage a

452
00:23:25,300 --> 00:23:21,270
metaphysical basis for Ethics I don't

453
00:23:29,000 --> 00:23:25,310
think they can succeed my point is that

454
00:23:33,470 --> 00:23:29,010
their metaphysics doesn't support their

455
00:23:37,580 --> 00:23:33,480
ethics and our common sense intuitions

456
00:23:40,970 --> 00:23:37,590
that we are ethically responsible for

457
00:23:44,900 --> 00:23:40,980
our actions can't be explained very well

458
00:23:49,040 --> 00:23:44,910
on a materialist model and that is that

459
00:23:51,690 --> 00:23:49,050
clash between we should have a good fit

460
00:23:53,940 --> 00:23:51,700
with what we intuitively believe to be

461
00:23:56,250 --> 00:23:53,950
true we intuitively believe that we're

462
00:23:57,779 --> 00:23:56,260
responsible for our actions and that

463
00:24:02,399 --> 00:23:57,789

doesn't fit very well with the

464

00:24:05,279 --> 00:24:02,409

materialist paradigm that's my point but

465

00:24:08,730 --> 00:24:05,289

thanks for your comment yeah thank you

466

00:24:10,529 --> 00:24:08,740

very much a thought occurred to me which

467

00:24:14,129 --> 00:24:10,539

I wanted to share and which gives rise

468

00:24:17,460 --> 00:24:14,139

to a question I mean we all have that

469

00:24:20,970 --> 00:24:17,470

kind of physicalist bias and we think

470

00:24:23,029 --> 00:24:20,980

the solution and the saving grace will

471

00:24:26,460 --> 00:24:23,039

come from physics and from evil even

472

00:24:28,710 --> 00:24:26,470

deeper structure of understanding of

473

00:24:31,039 --> 00:24:28,720

matter maybe it's the other way around I

474

00:24:34,440 --> 00:24:31,049

mean we've had five hundred years of

475

00:24:37,259 --> 00:24:34,450

physical theories but we've practically

476
00:24:40,889 --> 00:24:37,269
had no time to develop proper theories

477
00:24:42,210 --> 00:24:40,899
of consciousness for instance maybe we

478
00:24:46,490 --> 00:24:42,220
should just flip the whole thing around

479
00:24:49,190 --> 00:24:46,500
what do you think I do think that

480
00:24:54,450 --> 00:24:49,200
consciousness based understanding is

481
00:24:59,279 --> 00:24:54,460
prior and more fundamental but my main

482
00:25:02,490 --> 00:24:59,289
point is that I think physics I don't

483
00:25:06,509 --> 00:25:02,500
think we should foreclose the answer on

484
00:25:10,259 --> 00:25:06,519
whether science can can get there or not

485
00:25:12,210 --> 00:25:10,269
and Kant did foreclose that he thought

486
00:25:17,310 --> 00:25:12,220
that we have other ways of knowledge

487
00:25:20,340 --> 00:25:17,320
faith and so on which are which are

488
00:25:22,710 --> 00:25:20,350

deeper than science and that these

489

00:25:28,110 --> 00:25:22,720

humanistic values can't be understood in

490

00:25:29,639 --> 00:25:28,120

scientific terms and he thought that the

491

00:25:31,310 --> 00:25:29,649

reason he thought that was because he

492

00:25:33,930 --> 00:25:31,320

was very wrapped up in Newtonian

493

00:25:36,720 --> 00:25:33,940

assumptions and part of that assumption

494

00:25:41,820 --> 00:25:36,730

is that the spatio-temporal framework is

495

00:25:44,909 --> 00:25:41,830

a fixed framework and one of the reasons

496

00:25:48,000 --> 00:25:44,919

why I think advanced physics is worth

497

00:25:51,409 --> 00:25:48,010

pursuing in relation to consciousness

498

00:25:54,379 --> 00:25:51,419

studies in SCI phenomena is because

499

00:25:57,450 --> 00:25:54,389

advanced physics that that rigid

500

00:26:00,450 --> 00:25:57,460

space-time mechanistic causation model

501
00:26:02,519 --> 00:26:00,460
is breaking down and that mean it's only

502
00:26:04,060 --> 00:26:02,529
the tip of the iceberg I agree with

503
00:26:06,500 --> 00:26:04,070
Garrett's

504
00:26:08,090 --> 00:26:06,510
observation that you we can't draw too

505
00:26:09,950 --> 00:26:08,100
much from what quantum mechanics has

506
00:26:11,750 --> 00:26:09,960
said but quantum mechanics is just the

507
00:26:14,600 --> 00:26:11,760
tip of the iceberg we already have

508
00:26:17,690 --> 00:26:14,610
quantum field theory which is deeper we

509
00:26:18,890 --> 00:26:17,700
have general relativity we have string

510
00:26:21,200 --> 00:26:18,900
theory which is trying to incorporate

511
00:26:23,210 --> 00:26:21,210
general relativity theory in quantum

512
00:26:26,750 --> 00:26:23,220
field theory and there may be new

513
00:26:30,230 --> 00:26:26,760

science and we shouldn't foreclose close

514

00:26:36,920 --> 00:26:30,240

the door on whether science can give us

515

00:26:42,470 --> 00:26:36,930

a satisfactory model for a universal