

## New Science on Pre-Mortem Brain Activity



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1  
00:00:06,769 --> 00:00:03,350  
I was wondering how many people have

2  
00:00:12,110 --> 00:00:06,779  
heard of the green flash alright good

3  
00:00:14,330 --> 00:00:12,120  
it's an atmospheric phenomenon we're

4  
00:00:17,090 --> 00:00:14,340  
just at certain places at certain times

5  
00:00:19,550 --> 00:00:17,100  
certain atmospheric conditions just at

6  
00:00:20,870 --> 00:00:19,560  
the moment when the Sun is just about

7  
00:00:23,870 --> 00:00:20,880  
doesn't disappear over the horizon

8  
00:00:26,089 --> 00:00:23,880  
there's this brilliant green flash it's

9  
00:00:30,320 --> 00:00:26,099  
it's not a visual effect it's actually

10  
00:00:32,810 --> 00:00:30,330  
physical and so that phenomenon reminded

11  
00:00:37,100 --> 00:00:32,820  
me of what I'm going to talk about today

12  
00:00:39,410 --> 00:00:37,110  
which I call the brain flash which I

13  
00:00:43,150 --> 00:00:39,420

learned about at the Tucson conference

14

00:00:52,459 --> 00:00:43,160

of the consciousness studies group in

15

00:00:56,410 --> 00:00:52,469

Arizona in April of 2014 so I'm going to

16

00:00:59,540 --> 00:00:56,420

approach this by using a model of

17

00:01:01,880 --> 00:00:59,550

scientific discovery based on the work

18

00:01:05,270 --> 00:01:01,890

of Michael Polanyi and it's it's

19

00:01:10,789 --> 00:01:05,280

actually fairly obvious you start with

20

00:01:13,219 --> 00:01:10,799

observations use the intuitive heuristic

21

00:01:17,749 --> 00:01:13,229

part of you begins to sense that there's

22

00:01:18,980 --> 00:01:17,759

a pattern there and you you then get a

23

00:01:21,469 --> 00:01:18,990

feeling that there's actually some

24

00:01:23,990 --> 00:01:21,479

potential there some depth some

25

00:01:26,210 --> 00:01:24,000

juiciness you know the feeling and so

26  
00:01:31,120 --> 00:01:26,220  
then then you're hooked and you have to

27  
00:01:34,340 --> 00:01:31,130  
pursue it so you develop a hypothesis

28  
00:01:37,760 --> 00:01:34,350  
and once you get your hypothesis you

29  
00:01:40,010 --> 00:01:37,770  
begin to explore the logical extensions

30  
00:01:43,149 --> 00:01:40,020  
of that hypothesis and if they're

31  
00:01:46,639 --> 00:01:43,159  
plausible you then think about the the

32  
00:01:48,620 --> 00:01:46,649  
implications of the hypothesis to the

33  
00:01:51,740 --> 00:01:48,630  
paradigm to the dominant paradigm and

34  
00:01:54,289 --> 00:01:51,750  
then hopefully in that process you're

35  
00:01:57,560 --> 00:01:54,299  
beginning your validation through

36  
00:01:59,749 --> 00:01:57,570  
empirical memes or whatever so I wanted

37  
00:02:02,690 --> 00:01:59,759  
to imply apply that just to give you

38  
00:02:05,179 --> 00:02:02,700

examples of that in in the case of

39

00:02:08,600 --> 00:02:05,189

Galileo his hypothesis was a

40

00:02:11,660 --> 00:02:08,610

heliocentric cosmos the logical

41

00:02:13,900 --> 00:02:11,670

extension the stars are other Suns big

42

00:02:17,070 --> 00:02:13,910

big big step

43

00:02:21,070 --> 00:02:17,080

not justified by empirical data but but

44

00:02:22,900 --> 00:02:21,080

you know later was and the implication

45

00:02:26,560 --> 00:02:22,910

for the paradigm which obviously almost

46

00:02:27,280 --> 00:02:26,570

got him burnt at the stake the cosmos is

47

00:02:30,190 --> 00:02:27,290

vast

48

00:02:33,070 --> 00:02:30,200

we are not central to it and Genesis is

49

00:02:38,310 --> 00:02:33,080

not scientifically exhaustive it's good

50

00:02:43,090 --> 00:02:38,320

but not exhaustive same same sort of a

51  
00:02:46,450 --> 00:02:43,100  
theory with Darwin hypothesis rather

52  
00:02:49,810 --> 00:02:46,460  
basic species evolved a random mutation

53  
00:02:52,690 --> 00:02:49,820  
natural selection the logical extension

54  
00:02:56,160 --> 00:02:52,700  
of that that life has evolved from

55  
00:02:58,780 --> 00:02:56,170  
simple forms to human species again a

56  
00:03:01,780 --> 00:02:58,790  
logical extension rather than something

57  
00:03:03,310 --> 00:03:01,790  
forced by the data and the implications

58  
00:03:07,150 --> 00:03:03,320  
for the paradigm which we're still

59  
00:03:09,850 --> 00:03:07,160  
absorbing that all life is related that

60  
00:03:16,260 --> 00:03:09,860  
evolution accounts for all behavior that

61  
00:03:19,990 --> 00:03:16,270  
that that's a an insurgent part of the

62  
00:03:23,890 --> 00:03:20,000  
regnant paradigm and finally as an

63  
00:03:26,620 --> 00:03:23,900

example Einstein the hypothesis is that

64

00:03:29,920 --> 00:03:26,630

the only universal constant is the ratio

65

00:03:33,760 --> 00:03:29,930

between space and time which is  $C$  the

66

00:03:38,680 --> 00:03:33,770

logical extension is energy and matter

67

00:03:41,140 --> 00:03:38,690

their relationship and finally the

68

00:03:44,320 --> 00:03:41,150

implication for the paradigm there's no

69

00:03:44,860 --> 00:03:44,330

absolute space in time and everything is

70

00:03:48,310 --> 00:03:44,870

relative

71

00:03:49,900 --> 00:03:48,320

which then which then leaks out from the

72

00:03:54,220 --> 00:03:49,910

scientific paradigm into the other

73

00:03:57,160 --> 00:03:54,230

paradigms and it creates relativism not

74

00:04:02,470 --> 00:03:57,170

blaming Einstein but so so there's that

75

00:04:07,900 --> 00:04:02,480

three-part approach now I'd like to

76  
00:04:10,500 --> 00:04:07,910  
apply that to observations done at the

77  
00:04:14,710 --> 00:04:10,510  
University of Michigan by a team and

78  
00:04:17,820 --> 00:04:14,720  
what they discovered I they discovered a

79  
00:04:21,520 --> 00:04:17,830  
surge of coherent and comprehensive

80  
00:04:23,800 --> 00:04:21,530  
brain activity right after cardiac

81  
00:04:26,890 --> 00:04:23,810  
arrest about 30 seconds into cardiac

82  
00:04:30,909 --> 00:04:26,900  
arrest when there was no heartbeat no

83  
00:04:34,990 --> 00:04:30,919  
respiration and immediately preceding

84  
00:04:38,290 --> 00:04:35,000  
flatline brain death there was intense

85  
00:04:41,969 --> 00:04:38,300  
activity in the theta area where REM

86  
00:04:46,120 --> 00:04:41,979  
takes place and and then bursting into

87  
00:04:49,779 --> 00:04:46,130  
surging into gamma hyperactivity in both

88  
00:04:53,490 --> 00:04:49,789

rat and human models and so the question

89

00:04:57,370 --> 00:04:53,500

was we've got these we've got that data

90

00:05:06,430 --> 00:04:57,380

we see a pattern what what could it

91

00:05:09,189 --> 00:05:06,440

possibly mean the the key phrase here is

92

00:05:11,860 --> 00:05:09,199

coherence in other words it's not like

93

00:05:13,689 --> 00:05:11,870

the brain suddenly gets a signal that

94

00:05:17,409 --> 00:05:13,699

it's going to die and it goes crazy

95

00:05:21,640 --> 00:05:17,419

alright just it's collapsing or etc it's

96

00:05:25,719 --> 00:05:21,650

just the opposite it reaches a state of

97

00:05:29,350 --> 00:05:25,729

coherence and comprehension equal to or

98

00:05:33,070 --> 00:05:29,360

superior to what is experienced in

99

00:05:37,029 --> 00:05:33,080

normal consciousness the the team was

100

00:05:42,939 --> 00:05:37,039

led by hemo Jorge Nina and George my

101

00:05:46,899 --> 00:05:42,949

sure the it was reported in the I think

102

00:05:53,379 --> 00:05:46,909

the August issue of Proceedings of the

103

00:05:56,770 --> 00:05:53,389

National Academy of Science in fact at

104

00:05:59,020 --> 00:05:56,780

near death according to the authors of

105

00:06:01,330 --> 00:05:59,030

the study many known electrical

106

00:06:03,960 --> 00:06:01,340

signatures of consciousness exceeded

107

00:06:06,719 --> 00:06:03,970

levels found in the waking state

108

00:06:09,460 --> 00:06:06,729

suggesting that the brain is capable of

109

00:06:11,649 --> 00:06:09,470

well-organized electrical activity

110

00:06:14,770 --> 00:06:11,659

during the early stage of clinical death

111

00:06:18,370 --> 00:06:14,780

here's how they discovered that they

112

00:06:21,010 --> 00:06:18,380

were doing experiments on rats they had

113

00:06:26,310 --> 00:06:21,020

two dozen rats in cages they had them

114

00:06:28,839 --> 00:06:26,320

wired up all the time to EEG EKGs and

115

00:06:30,700 --> 00:06:28,849

you know it's like the bad dream in a

116

00:06:34,420 --> 00:06:30,710

pet shop one morning they came in and

117

00:06:37,210 --> 00:06:34,430

nine of the rats had died

118

00:06:41,920 --> 00:06:37,220

and so that was a setback for the

119

00:06:45,070 --> 00:06:41,930

research and so one of them one of the

120

00:06:48,580 --> 00:06:45,080

researchers was just looking over the

121

00:06:50,710 --> 00:06:48,590

you know EKG and EEG to try to determine

122

00:06:54,010 --> 00:06:50,720

what might have happened and lo and

123

00:06:57,400 --> 00:06:54,020

behold there was the there were these

124

00:07:02,470 --> 00:06:57,410

surges in the EEG we were completely

125

00:07:04,590 --> 00:07:02,480

counterintuitive and so so they then I'm

126

00:07:08,760 --> 00:07:04,600

sorry to say they replicated the study

127

00:07:12,250 --> 00:07:08,770

but by using s fixin rather than

128

00:07:15,400 --> 00:07:12,260

inducing cardiac arrest and and there it

129

00:07:19,840 --> 00:07:15,410

was there it was then not not 20% but

130

00:07:23,560 --> 00:07:19,850

everybody so there are the lead

131

00:07:30,810 --> 00:07:23,570

researchers mature and Bohr Hina poor

132

00:07:39,820 --> 00:07:36,940

so this indicate this is the the actual

133

00:07:42,400 --> 00:07:39,830

abstract I'm not going to read it but

134

00:07:45,310 --> 00:07:42,410

I'll just read the conclusion these data

135

00:07:49,540 --> 00:07:45,320

demonstrate that the mammalian brain can

136

00:07:51,540 --> 00:07:49,550

albeit paradoxically generate neural

137

00:07:58,270 --> 00:07:51,550

correlates of heightened consciousness

138

00:08:01,390 --> 00:07:58,280

preceding processing at near death what

139

00:08:03,160 --> 00:08:01,400

to make of this high-frequency neuro

140

00:08:06,910 --> 00:08:03,170

physiological activity in the near-death

141

00:08:08,410 --> 00:08:06,920

state was highly organized and exceeded

142

00:08:11,110 --> 00:08:08,420

that found during wakefulness

143

00:08:13,890 --> 00:08:11,120

wakefulness these data provide a

144

00:08:16,990 --> 00:08:13,900

neuroscientific framework for explaining

145

00:08:19,750 --> 00:08:17,000

heightened conscious experience after

146

00:08:21,790 --> 00:08:19,760

cardiac and respiratory arrest so you

147

00:08:27,910 --> 00:08:21,800

see that now they've made a logical step

148

00:08:34,270 --> 00:08:27,920

away from just the data right now a

149

00:08:38,710 --> 00:08:34,280

different team four years earlier three

150

00:08:41,920 --> 00:08:38,720

years earlier from GW Medical Center had

151  
00:08:46,050 --> 00:08:41,930  
was doing similar work on human beings

152  
00:08:48,390 --> 00:08:46,060  
and again in cardiac arrest

153  
00:08:53,580 --> 00:08:48,400  
had people wired to EEG which is unusual

154  
00:08:54,900 --> 00:08:53,590  
and they found the same surge so when

155  
00:08:57,360 --> 00:08:54,910  
they read this report about the rats

156  
00:09:00,380 --> 00:08:57,370  
they immediately wrote and said hey what

157  
00:09:03,690 --> 00:09:00,390  
about us we're observing the same thing

158  
00:09:06,269 --> 00:09:03,700  
so now we have a continuum we have rats

159  
00:09:08,400 --> 00:09:06,279  
two humans and there's a logical

160  
00:09:10,710 --> 00:09:08,410  
extension that probably we could fill in

161  
00:09:12,630 --> 00:09:10,720  
the gaps that we would probably find it

162  
00:09:15,000 --> 00:09:12,640  
all along the line we don't know how far

163  
00:09:20,640 --> 00:09:15,010

back it goes but we know it goes all the

164

00:09:23,600 --> 00:09:20,650

way up what to make of it so this is

165

00:09:28,200 --> 00:09:23,610

just a quick review of your brainwave

166

00:09:31,610 --> 00:09:28,210

info where we have Delta at the bottom

167

00:09:37,850 --> 00:09:31,620

which is deep unconscious consciousness

168

00:09:42,720 --> 00:09:37,860

theta which is dream states ESP

169

00:09:45,570 --> 00:09:42,730

imaginative imaginative and so on alphas

170

00:09:49,980 --> 00:09:45,580

relaxed beta is your kind of normal

171

00:09:52,680 --> 00:09:49,990

everyday get things done and gamma is oh

172

00:09:55,650 --> 00:09:52,690

my god you know it's like the your

173

00:09:58,920 --> 00:09:55,660

Eureka moments etc so what we're talking

174

00:10:04,920 --> 00:09:58,930

about here is activity in two

175

00:10:07,829 --> 00:10:04,930

disconnected bands theta imaginative etc

176  
00:10:12,060 --> 00:10:07,839  
and gamma and you'll see that in the

177  
00:10:16,920 --> 00:10:12,070  
next here's a picture of the actual scan

178  
00:10:19,380 --> 00:10:16,930  
and it's it's you know not intuitive to

179  
00:10:20,970 --> 00:10:19,390  
read it so I'll just point out basically

180  
00:10:25,320 --> 00:10:20,980  
what's happening here this is time and

181  
00:10:27,660 --> 00:10:25,330  
this is brain brain waves brain

182  
00:10:31,740 --> 00:10:27,670  
amplitude amplitude down here at the

183  
00:10:36,510 --> 00:10:31,750  
theta level right here we at the black

184  
00:10:39,900 --> 00:10:36,520  
line is cardiac arrest begins shortly

185  
00:10:43,470 --> 00:10:39,910  
thereafter unexpected paradoxical

186  
00:10:47,570 --> 00:10:43,480  
activity in the theta range very shortly

187  
00:10:49,710 --> 00:10:47,580  
thereafter extreme activity and

188  
00:10:53,840 --> 00:10:49,720

comprehensive meaning the entire brain

189

00:10:58,400 --> 00:10:53,850

and coherent in the in the gamma range

190

00:11:01,850 --> 00:10:58,410

and those those continue for

191

00:11:04,309 --> 00:11:01,860

a period of it it really kicked this the

192

00:11:06,550 --> 00:11:04,319

dotted line is 30 seconds in so you can

193

00:11:11,410 --> 00:11:06,560

see it's like a minute or so and then

194

00:11:15,590 --> 00:11:13,670

so that that's just sort of a

195

00:11:18,499 --> 00:11:15,600

representation a functional

196

00:11:22,160 --> 00:11:18,509

representation of what they did not

197

00:11:25,999 --> 00:11:22,170

expect to find and that don't know what

198

00:11:29,150 --> 00:11:26,009

to do about so what's going on here

199

00:11:32,660 --> 00:11:29,160

what's sort of a an explanation can we

200

00:11:36,110 --> 00:11:32,670

make out of this so again we have our

201  
00:11:38,780 --> 00:11:36,120  
hypothesis our logical extensions our

202  
00:11:41,600 --> 00:11:38,790  
paradigmatic implications and then

203  
00:11:48,829 --> 00:11:41,610  
obviously the process of validation one

204  
00:11:51,410 --> 00:11:48,839  
way or the other okay so here is the

205  
00:11:54,379 --> 00:11:51,420  
hypothesis of the team from Michigan

206  
00:11:57,290 --> 00:11:54,389  
we're going from data now to hypothesis

207  
00:11:58,100 --> 00:11:57,300  
we reasoned that if near-death

208  
00:12:01,579 --> 00:11:58,110  
experience

209  
00:12:04,819 --> 00:12:01,589  
aah-ha stems from brain activity if it

210  
00:12:06,920 --> 00:12:04,829  
does not correlate civ consciousness

211  
00:12:09,920 --> 00:12:06,930  
should be identifiable in humans or

212  
00:12:13,850 --> 00:12:09,930  
animals even after this cessation of

213  
00:12:19,309 --> 00:12:13,860

cerebral blood flow okay so now we have

214

00:12:24,079 --> 00:12:19,319

a neural basis for NDE within the frame

215

00:12:27,699 --> 00:12:24,089

of biological life what's the logical

216

00:12:30,470 --> 00:12:27,709

extension of that NDEs are pre-mortem

217

00:12:35,499 --> 00:12:30,480

and let's not say delusion so that's

218

00:12:39,110 --> 00:12:35,509

impolite let's say imaginative events

219

00:12:42,319 --> 00:12:39,120

therefore we can put in DES within the

220

00:12:44,600 --> 00:12:42,329

physical paradigm yeah we can now we can

221

00:12:51,139 --> 00:12:44,610

acknowledge them you know now that we

222

00:12:54,139 --> 00:12:51,149

have a way to do that okay so what are

223

00:12:56,449 --> 00:12:54,149

the implications for the paradigm there

224

00:13:00,309 --> 00:12:56,459

aren't any actually we've actually just

225

00:13:02,809 --> 00:13:00,319

confirmed the regnant paradigm and any

226

00:13:05,269 --> 00:13:02,819

animal ease is consistent with

227

00:13:09,990 --> 00:13:05,279

post-mortem survival can be accounted

228

00:13:16,019 --> 00:13:13,470

okay so there was a than a

229

00:13:19,079 --> 00:13:16,029

correspondence the most important part

230

00:13:22,230 --> 00:13:19,089

of which was from Bruce Grayson from

231

00:13:25,290 --> 00:13:22,240

Dobbs at UVA and Ross dunseith who was

232

00:13:28,290 --> 00:13:25,300

here yesterday you may recall and they

233

00:13:32,340 --> 00:13:28,300

pointed out seven things that refuted

234

00:13:34,889 --> 00:13:32,350

that hypothesis the most important of

235

00:13:38,369 --> 00:13:34,899

which was the energy level was

236

00:13:41,970 --> 00:13:38,379

insufficient for actual consciousness at

237

00:13:45,960 --> 00:13:41,980

during during that point so so therefore

238

00:13:48,119 --> 00:13:45,970

the implications of that is either NDE

239

00:13:50,400 --> 00:13:48,129

is happening outside the physical

240

00:13:52,550 --> 00:13:50,410

paradigm or it's not happening at all

241

00:13:55,439 --> 00:13:52,560

and we know it's happening so therefore

242

00:13:58,069 --> 00:13:55,449

you can see you can see why they needed

243

00:14:02,220 --> 00:13:58,079

to respond quite a way right away

244

00:14:03,960 --> 00:14:02,230

so the Michigan team then responded they

245

00:14:10,439 --> 00:14:03,970

said no you're wrong

246

00:14:12,150 --> 00:14:10,449

we have inter-cranial EEG so etc etc I

247

00:14:16,079 --> 00:14:12,160

won't go into all the details but they

248

00:14:17,730 --> 00:14:16,089

felt that they had refuted it however

249

00:14:20,910 --> 00:14:17,740

what they did not refute the point they

250

00:14:24,540 --> 00:14:20,920

did not refute was the basic hypothesis

251  
00:14:28,429 --> 00:14:24,550  
which is okay so this is where humans

252  
00:14:31,530 --> 00:14:28,439  
are having NDEs what about the rats

253  
00:14:35,429 --> 00:14:31,540  
what kind of Indies are they having you

254  
00:14:39,299 --> 00:14:35,439  
know and why would there be in DES and I

255  
00:14:43,619 --> 00:14:39,309  
I asked I'm sometimes I get it excited

256  
00:14:46,259 --> 00:14:43,629  
and forget the PowerPoint my question

257  
00:14:50,639 --> 00:14:46,269  
was what is the plausible plausible

258  
00:14:54,629 --> 00:14:50,649  
function of this okay we have an answer

259  
00:15:00,749 --> 00:14:54,639  
for Indies which is the plausible

260  
00:15:02,549 --> 00:15:00,759  
function is that that maybe somebody is

261  
00:15:04,949 --> 00:15:02,559  
being revived and then they go back to

262  
00:15:07,079 --> 00:15:04,959  
the tribe and the tribe feels better

263  
00:15:08,170 --> 00:15:07,089

about death so they can fight harder and

264

00:15:11,360 --> 00:15:08,180

war you know

265

00:15:15,410 --> 00:15:11,370

adaptive in a group sense but again

266

00:15:17,300 --> 00:15:15,420

that's no answer for the rats and we

267

00:15:20,930 --> 00:15:17,310

have the principle of evolutionary

268

00:15:24,199 --> 00:15:20,940

parsimony which which is that things

269

00:15:29,210 --> 00:15:24,209

that are not adaptive in strong ways

270

00:15:31,660 --> 00:15:29,220

tend to get eliminated in the process of

271

00:15:34,910 --> 00:15:31,670

evolution but this hasn't been a

272

00:15:37,639 --> 00:15:34,920

eliminated and it's as strong as ever

273

00:15:39,829 --> 00:15:37,649

so so therefore it must have a function

274

00:15:43,579 --> 00:15:39,839

it it's not epic phenomenal in other

275

00:15:45,650 --> 00:15:43,589

words that's what that implies so if

276

00:15:49,249 --> 00:15:45,660

this is an adaptive trait and not an

277

00:15:51,259 --> 00:15:49,259

epiphenomena how is it inherited if it's

278

00:15:58,040 --> 00:15:51,269

happening at the moment of death how do

279

00:16:01,100 --> 00:15:58,050

you pass it on right so a rat or a human

280

00:16:04,100 --> 00:16:01,110

may reproduce prior to the brain flash

281

00:16:06,680 --> 00:16:04,110

but how can it be adaptive at the moment

282

00:16:10,340 --> 00:16:06,690

of death if it's not even relevant in

283

00:16:15,889 --> 00:16:10,350

group evolution so that leads us to back

284

00:16:21,620 --> 00:16:15,899

to our plan here and here's an alternate

285

00:16:24,829 --> 00:16:21,630

hypothesis the NDE explanation is set

286

00:16:27,740 --> 00:16:24,839

aside since it only applies to one of

287

00:16:30,740 --> 00:16:27,750

the species evidencing this brain

288

00:16:33,679 --> 00:16:30,750

Fleshman on that what I mean is not that

289

00:16:36,710 --> 00:16:33,689

NDE is set aside but rather that this

290

00:16:41,569 --> 00:16:36,720

use of NDE it's happening within this

291

00:16:42,920 --> 00:16:41,579

brief period that's set aside the brain

292

00:16:45,079 --> 00:16:42,930

flash has something to do with

293

00:16:48,139 --> 00:16:45,089

processing information we know that

294

00:16:50,150 --> 00:16:48,149

because that's what the brain does it's

295

00:16:52,100 --> 00:16:50,160

not chaotic it occurs at the last

296

00:16:57,889 --> 00:16:52,110

possible moment of living experience

297

00:17:01,460 --> 00:16:57,899

it's coherent and comprehensive so the

298

00:17:03,800 --> 00:17:01,470

hypothesis is that's consistent with all

299

00:17:06,649 --> 00:17:03,810

those factors that the brain flesh

300

00:17:09,079 --> 00:17:06,659

creates an impression of the state of

301  
00:17:12,020 --> 00:17:09,089  
the information in the brain at the last

302  
00:17:17,319 --> 00:17:12,030  
possible moment what would be the

303  
00:17:20,149 --> 00:17:17,329  
function the logical extension

304  
00:17:21,470 --> 00:17:20,159  
although the brain flesh is not adaptive

305  
00:17:24,260 --> 00:17:21,480  
for the dying

306  
00:17:27,110 --> 00:17:24,270  
animal or human it's adaptive for a

307  
00:17:30,200 --> 00:17:27,120  
subsequent animal or human and therefore

308  
00:17:32,480 --> 00:17:30,210  
the group it's known that the brain

309  
00:17:37,280 --> 00:17:32,490  
encodes and decodes information of many

310  
00:17:40,220 --> 00:17:37,290  
kinds it could then possibly encode the

311  
00:17:43,310 --> 00:17:40,230  
final brain state to be transferred to

312  
00:17:46,669 --> 00:17:43,320  
an unborn or newly born individual or to

313  
00:17:49,340 --> 00:17:46,679

a collective unconscious the brain flash

314

00:17:53,860 --> 00:17:49,350

is another way by which information is

315

00:17:56,090 --> 00:17:53,870

passed from one generation to the next

316

00:17:59,870 --> 00:17:56,100

what are the implications for the

317

00:18:04,460 --> 00:17:59,880

paradigm number one the brain flash is a

318

00:18:06,200 --> 00:18:04,470

snapshot of cumulative impressions

319

00:18:12,169 --> 00:18:06,210

retained in the brain up to the last

320

00:18:13,640 --> 00:18:12,179

moment pre-mortem number two this

321

00:18:16,130 --> 00:18:13,650

hypothesis does not validate

322

00:18:18,830 --> 00:18:16,140

reincarnation after life or other

323

00:18:20,720 --> 00:18:18,840

post-mortem survival concepts it doesn't

324

00:18:23,840 --> 00:18:20,730

say anything about them but it does

325

00:18:30,070 --> 00:18:23,850

imply intergenerational transmission of

326

00:18:35,690 --> 00:18:33,650

next that individuals are part of a

327

00:18:39,560 --> 00:18:35,700

larger matrix of information and

328

00:18:47,630 --> 00:18:39,570

experience that can transcend physical

329

00:18:49,010 --> 00:18:47,640

limitations non-local so this is a list

330

00:18:51,830 --> 00:18:49,020

of all the different ways that

331

00:18:59,799 --> 00:18:51,840

information is passed from generation to

332

00:19:08,930 --> 00:19:05,750

okay I did that oh the the final the

333

00:19:13,010 --> 00:19:08,940

fourth and final parody implication for

334

00:19:19,410 --> 00:19:13,020

the paradigm is nothingness

335

00:19:22,280 --> 00:19:19,420

yes it doesn't happen that way that

336

00:19:25,340 --> 00:19:22,290

evolution operates in the entire

337

00:19:28,320 --> 00:19:25,350

intergenerational matrix in other words

338

00:19:31,230 --> 00:19:28,330

evolution is not just physical evolution

339

00:19:35,610 --> 00:19:31,240

is not just individuals and groups and

340

00:19:37,950 --> 00:19:35,620

species that it that if this evolved as

341

00:19:40,680 --> 00:19:37,960

a way of transmitting information in a

342

00:19:43,140 --> 00:19:40,690

way that's adaptive then evolution must

343

00:19:47,460 --> 00:19:43,150

involve more than just the physical

344

00:19:52,410 --> 00:19:47,470

they must extend into a non-physical

345

00:19:58,010 --> 00:19:52,420

area a non adaptive trait can be

346

00:20:09,770 --> 00:20:04,260

okay so I just wanted to show you this

347

00:20:09,780 --> 00:20:21,070

okay good alright thank you very much

348

00:20:29,780 --> 00:20:28,130

thank you thank you James Steve hi I got

349

00:20:34,040 --> 00:20:29,790

a teddy I have so many problems of this

350

00:20:35,630 --> 00:20:34,050

I hardly know where to begin let's just

351  
00:20:38,120 --> 00:20:35,640  
forget about the idea for the moment

352  
00:20:39,799 --> 00:20:38,130  
that the brain encodes and decodes

353  
00:20:42,560 --> 00:20:39,809  
information I think that's completely

354  
00:20:44,510 --> 00:20:42,570  
wrong but that's another topic I'm

355  
00:20:47,030 --> 00:20:44,520  
puzzled by the way you talk about Indies

356  
00:20:48,740 --> 00:20:47,040  
because among other things you leave out

357  
00:20:50,900 --> 00:20:48,750  
the vertical aspects of the area what

358  
00:20:52,340 --> 00:20:50,910  
you leave out the vertical aspects of

359  
00:20:53,720 --> 00:20:52,350  
the experience and I don't see how

360  
00:20:57,440 --> 00:20:53,730  
you've addressed that at all

361  
00:21:00,530 --> 00:20:57,450  
I don't I don't make any judgment about

362  
00:21:03,470 --> 00:21:00,540  
any ease all I say is that it's it's

363  
00:21:07,820 --> 00:21:03,480

implausible that the NDE is happening in

364

00:21:10,790 --> 00:21:07,830

that period after cardiac arrest and

365

00:21:13,280 --> 00:21:10,800

before death but the whole thing about

366

00:21:15,290 --> 00:21:13,290

the evolutionary matrix I mean what's

367

00:21:18,919 --> 00:21:15,300

the function of the vertical aspect of

368

00:21:21,890 --> 00:21:18,929

an NDE well again I'm not saying

369

00:21:24,350 --> 00:21:21,900

anything about any that's I'm not saying

370

00:21:28,460 --> 00:21:24,360

anything about Indies I'm eliminating

371

00:21:32,120 --> 00:21:28,470

NDE from the conversation in other words

372

00:21:35,210 --> 00:21:32,130

you can say there are n des and they

373

00:21:37,880 --> 00:21:35,220

don't happen in the physical you know

374

00:21:39,530 --> 00:21:37,890

the physical frame then you can make an

375

00:21:41,450 --> 00:21:39,540

extension they must be happening outside

376

00:21:42,980 --> 00:21:41,460

the physical frame but I'm not making

377

00:21:47,390 --> 00:21:42,990

that because it's not really relevant to

378

00:21:48,710 --> 00:21:47,400

my talk we'll have to pursue this later

379

00:21:50,810 --> 00:21:48,720

I don't get that okay

380

00:21:52,970 --> 00:21:50,820

as far as encoding information the

381

00:21:54,650 --> 00:21:52,980

corpus callosum does nothing but encode

382

00:21:59,919 --> 00:21:54,660

and decode information that's the

383

00:22:05,840 --> 00:22:03,110

I'm a past president of international

384

00:22:08,900 --> 00:22:05,850

association for near-death studies for

385

00:22:12,860 --> 00:22:08,910

what I'm a past president of lions oh

386

00:22:15,650 --> 00:22:12,870

great yeah as such one of the liars

387

00:22:18,140 --> 00:22:15,660

answer or lots of letters and the point

388

00:22:21,770 --> 00:22:18,150

was I got many many letters that said I

389

00:22:24,070 --> 00:22:21,780

wasn't close to death but and they would

390

00:22:27,999 --> 00:22:24,080

describe the experiences

391

00:22:29,619 --> 00:22:28,009

like NDEs so I'm not convinced that

392

00:22:31,869 --> 00:22:29,629

unless there's something here this

393

00:22:35,259 --> 00:22:31,879

unique that says this is close to death

394

00:22:38,200 --> 00:22:35,269

experience also you're familiar with

395

00:22:41,379 --> 00:22:38,210

Evan Alexander I'm sorry this sound is

396

00:22:46,450 --> 00:22:41,389

so bad I'm just gonna do it I can't hear

397

00:22:48,940 --> 00:22:46,460

either it's a case with Evan Alexander

398

00:22:51,009 --> 00:22:48,950

oh sure sure point there is that of

399

00:22:54,129 --> 00:22:51,019

course he was in you know for like a

400

00:22:56,649 --> 00:22:54,139

week and and call my own experiencing

401  
00:22:59,619 --> 00:22:56,659  
these things going on we talk about

402  
00:23:02,350 --> 00:22:59,629  
something it's a unique well art and

403  
00:23:02,980 --> 00:23:02,360  
they can't explain it okay that's a

404  
00:23:07,210 --> 00:23:02,990  
valid point

405  
00:23:08,470 --> 00:23:07,220  
that's a point kind of kind of refer

406  
00:23:10,930 --> 00:23:08,480  
back to a similar comment I made

407  
00:23:13,749 --> 00:23:10,940  
yesterday about the brain activity as

408  
00:23:16,869 --> 00:23:13,759  
being measured by EEG if it's really a

409  
00:23:18,940 --> 00:23:16,879  
product of neuronal activity or if it's

410  
00:23:20,350 --> 00:23:18,950  
a product of a bio energetic field and

411  
00:23:24,489 --> 00:23:20,360  
I'll come back to how that's relevant

412  
00:23:26,379 --> 00:23:24,499  
but one possible way is that this is

413  
00:23:28,629 --> 00:23:26,389

something that's very specific to the

414

00:23:32,649 --> 00:23:28,639

death process and therefore would be

415

00:23:35,109 --> 00:23:32,659

unique to NDE experience right but what

416

00:23:38,529 --> 00:23:35,119

about if it's perhaps something that's

417

00:23:40,119 --> 00:23:38,539

specific to the separation of the you

418

00:23:41,859 --> 00:23:40,129

could say astral body psycho soma

419

00:23:44,470 --> 00:23:41,869

whatever you want to call it that dis

420

00:23:46,119 --> 00:23:44,480

coincidence of the bodies and then they

421

00:23:48,460 --> 00:23:46,129

and the loosening of the energetic body

422

00:23:50,950 --> 00:23:48,470

during that process which is therefore

423

00:23:54,119 --> 00:23:50,960

read off by the EEG so I'm wondering if

424

00:23:57,970 --> 00:23:54,129

that if that hypothesis was true if this

425

00:24:00,249 --> 00:23:57,980

technique could be applied to looking at

426

00:24:03,009 --> 00:24:00,259

the neural signatures of the take off

427

00:24:05,350 --> 00:24:03,019

the lucid take off from an out-of-body

428

00:24:06,820 --> 00:24:05,360

experience so this makes sense so the

429

00:24:08,769 --> 00:24:06,830

problem with studying it will be ease

430

00:24:10,450 --> 00:24:08,779

and with neuro scientific methods is

431

00:24:11,710 --> 00:24:10,460

that the the temporal signature there's

432

00:24:12,639 --> 00:24:11,720

no way to say well whether they project

433

00:24:15,430 --> 00:24:12,649

it or not because there's no

434

00:24:17,950 --> 00:24:15,440

physiological way to detect that we know

435

00:24:20,350 --> 00:24:17,960

of whether the consciousness is local or

436

00:24:21,669 --> 00:24:20,360

non-local to the body right you know I'm

437

00:24:23,350 --> 00:24:21,679

talking about just not non-pathological

438

00:24:24,940 --> 00:24:23,360

an D condition I mean just an

439

00:24:27,159 --> 00:24:24,950

out-of-body experience its provoked by

440

00:24:29,739 --> 00:24:27,169

by will but if we could find some kind

441

00:24:31,210 --> 00:24:29,749

of clear energetic signature as read out

442

00:24:31,750 --> 00:24:31,220

by EEG this could be something that

443

00:24:34,090 --> 00:24:31,760

could

444

00:24:35,830 --> 00:24:34,100

then be used as a timestamp so that

445

00:24:37,750 --> 00:24:35,840

using other neuroscience methods even

446

00:24:39,520 --> 00:24:37,760

including fMRI we can start to look at

447

00:24:41,920 --> 00:24:39,530

like what's happening in the brain while

448

00:24:43,900 --> 00:24:41,930

the consciousness is you know non-local

449

00:24:45,940 --> 00:24:43,910

essentially yeah that's interesting

450

00:24:49,870 --> 00:24:45,950

hypothesis I guess my only question

451  
00:24:53,710 --> 00:24:49,880  
would be why does it require this

452  
00:24:56,740 --> 00:24:53,720  
incredible coherent comprehensive surge

453  
00:25:00,490 --> 00:24:56,750  
you know what's what's happening there

454  
00:25:04,380 --> 00:25:00,500  
right so just you know mind we're just a

455  
00:25:07,630 --> 00:25:04,390  
ton of you know examining this is

456  
00:25:09,760 --> 00:25:07,640  
completely theoretical but during the

457  
00:25:12,070 --> 00:25:09,770  
separation process there's a dis

458  
00:25:13,240 --> 00:25:12,080  
alignment of the bodies yeah you know if

459  
00:25:15,010 --> 00:25:13,250  
you're assuming that there is some

460  
00:25:16,600 --> 00:25:15,020  
energetic body that we are projected in

461  
00:25:19,570 --> 00:25:16,610  
during the NDE experience which is

462  
00:25:21,550 --> 00:25:19,580  
corroborated right what are the

463  
00:25:23,530 --> 00:25:21,560

characteristics of that body it's not

464

00:25:26,920 --> 00:25:23,540

being mediated through a physical medium

465

00:25:29,920 --> 00:25:26,930

right and so equipment that's very

466

00:25:32,230 --> 00:25:29,930

sensitive to electrical signals like EEG

467

00:25:33,670 --> 00:25:32,240

might be able to pick up more of that

468

00:25:35,470 --> 00:25:33,680

energy because it's not filtered through

469

00:25:37,330 --> 00:25:35,480

this dense physical medium so in that

470

00:25:39,190 --> 00:25:37,340

separation of consciousness period where

471

00:25:40,990 --> 00:25:39,200

that lucid take off is actually

472

00:25:43,720 --> 00:25:41,000

occurring may not be something specific

473

00:25:45,850 --> 00:25:43,730

to death but specific to the

474

00:25:48,070 --> 00:25:45,860

malalignment or disalignment of the

475

00:25:49,570 --> 00:25:48,080

bodies right so in that case we don't

476  
00:25:51,250 --> 00:25:49,580  
have to look at just any easy experience

477  
00:25:53,380 --> 00:25:51,260  
we could look at like the more healthy

478  
00:25:55,570 --> 00:25:53,390  
lucid projection experience and see if

479  
00:25:57,310 --> 00:25:55,580  
that's a time signature interesting

480  
00:25:58,660 --> 00:25:57,320  
thank you Mark if you could keep it

481  
00:26:01,000 --> 00:25:58,670  
short we'll have your question last

482  
00:26:03,460 --> 00:26:01,010  
we're running late I'll try to keep it

483  
00:26:05,500 --> 00:26:03,470  
short here I just want to correct them

484  
00:26:08,770 --> 00:26:05,510  
sort of a misperception in terms of

485  
00:26:10,180 --> 00:26:08,780  
evolution in other words the every

486  
00:26:13,900 --> 00:26:10,190  
behavior is not necessarily

487  
00:26:15,730 --> 00:26:13,910  
evolutionarily optimal and the fact that

488  
00:26:19,030 --> 00:26:15,740

these things occur doesn't mean that

489

00:26:20,590 --> 00:26:19,040

they have reproducible benefit this just

490

00:26:23,230 --> 00:26:20,600

could be a side effect of some of the

491

00:26:26,200 --> 00:26:23,240

other things that evolved as a part of

492

00:26:29,230 --> 00:26:26,210

other natural evolution processes so the

493

00:26:31,060 --> 00:26:29,240

idea that this every behavior every

494

00:26:32,500 --> 00:26:31,070

function I mean you talk to any

495

00:26:35,310 --> 00:26:32,510

orthopedic they'll tell you our knees

496

00:26:37,360 --> 00:26:35,320

are not optimally designed as an example

497

00:26:39,050 --> 00:26:37,370

you're sort of saying it could be a

498

00:26:50,240 --> 00:26:39,060

phenomenal

499

00:26:52,340 --> 00:26:50,250

No well that's how I meant by

500

00:26:54,200 --> 00:26:52,350

epiphenomena let's functionalists in a

501

00:26:57,050 --> 00:26:54,210

way what you're saying yeah that seems

502

00:26:59,090 --> 00:26:57,060

implausible to me but it's possible I I

503

00:27:02,480 --> 00:26:59,100

do think the fact that it replicates

504

00:27:06,470 --> 00:27:02,490

from species to species suggests that it

505

00:27:07,560 --> 00:27:06,480

has an important function possible thank