1
00:00:00,480 --> 00:00:09,360
[Music]

2
00:00:16,810 --> 00:00:13,689
my work is focused on using vibrational

3
00:00:19,269 --> 00:00:16,820
fields that means electromagnetic and

4
00:00:22,710 --> 00:00:19,279
acoustic fields of variable frequencies

5
00:00:27,370 --> 00:00:22,720
from very low to very high frequencies

6
00:00:30,460 --> 00:00:27,380
to investigate living matter this

7
00:00:37,270 --> 00:00:30,470
methods are non-invasive and label-free

8
00:00:39,250 --> 00:00:37,280
and they provide a real-time observation

9
00:00:42,360 --> 00:00:39,260
of the characteristic structure and

10
00:00:46,810 --> 00:00:42,370
functions of the biological material

11
00:00:49,920 --> 00:00:46,820
unlike classical optical microscopy or

12
00:00:56,910 --> 00:00:49,930
even electron microscopy that have

13
00:01:00,610 --> 00:00:56,920

limited spatial definition such methods

14
00:01:05,219 --> 00:01:00,620
by translating the signal from the

15
00:01:09,219 --> 00:01:05,229
space-time in domain to the frequency

16
00:01:13,740 --> 00:01:09,229
amplitude domain can achieve a very high

17
00:01:18,460 --> 00:01:13,750
resolution and very high sensitivity so

18
00:01:24,880 --> 00:01:18,470
they can provide you Windows to study

19
00:01:28,120 --> 00:01:24,890
biology sorry one of these methods is

20
00:01:32,020 --> 00:01:28,130
impedance spectroscopy you have to

21
00:01:37,180 --> 00:01:32,030
imagine the biological materials between

22
00:01:39,820 --> 00:01:37,190
the electrodes and there is an

23
00:01:42,100 --> 00:01:39,830
electromagnetic field oscillating

24
00:01:46,330 --> 00:01:42,110
because the polarity of the electrodes

25
00:01:49,180 --> 00:01:46,340
is oscillating so imagine the charges

26
00:01:52,900 --> 00:01:49,190
are distributing and imagine the little

27
00:01:58,919 --> 00:01:52,910
molecular dipoles trying to rotate and

28
00:02:06,339 --> 00:01:58,929
keep up with the polarity of the field

29
00:02:09,339 --> 00:02:06,349
so imagine that a little neuron for

30
00:02:13,270 --> 00:02:09,349
example has the capacity of the membrane

31
00:02:17,640 --> 00:02:13,280
due to the double layer of the membrane

32
00:02:21,190 --> 00:02:17,650
has the resistivity of the membrane has

33
00:02:23,110 --> 00:02:21,200
conductivities because of the ionic

34
00:02:28,479 --> 00:02:23,120
channels so we can model

35
00:02:32,559 --> 00:02:28,489
this by electric circuits make using

36
00:02:36,940 --> 00:02:32,569
fitting algorithmic we can improve these

37
00:02:40,539 --> 00:02:36,950
models and everything is based on the

38
00:02:42,960 --> 00:02:40,549

properties of the specific biological

39
00:02:47,440 --> 00:02:42,970
materials like the dielectric constant

40
00:02:49,839 --> 00:02:47,450
that reflects how localized charges

41
00:02:52,539 --> 00:02:49,849
distribution can be distorted or

42
00:02:54,880 --> 00:02:52,549
polarized under the influence of the

43
00:02:58,930 --> 00:02:54,890
field and can be measured through

44
00:03:02,050 --> 00:02:58,940
capacitance or conductivity which is the

45
00:03:04,479 --> 00:03:02,060
electric current density over the

46
00:03:06,940 --> 00:03:04,489
electric field and is a measure of the

47
00:03:09,759 --> 00:03:06,950
ease with which the localized charges

48
00:03:11,890 --> 00:03:09,769
can move to the material under the

49
00:03:16,349 --> 00:03:11,900
influence of the field and can be

50
00:03:21,460 --> 00:03:16,359
measured by conductance or resistance

51
00:03:29,559 --> 00:03:21,470
what's it what's very interesting if we

52
00:03:38,620 --> 00:03:29,569
feed a very complex signal to a neuron

53
00:03:45,460 --> 00:03:43,210
okay I cannot see that if the last image

54
00:03:50,290 --> 00:03:45,470
if you feed a complex signal into a

55
00:03:54,370 --> 00:03:50,300
newer on the envelope of the output

56
00:04:01,750 --> 00:03:54,380
signal looks almost identical with the

57
00:04:04,750 --> 00:04:01,760
envelope of an output signal coming from

58
00:04:07,570 --> 00:04:04,760
an oscillating resonant circuit formed

59
00:04:14,070 --> 00:04:07,580
by a resistance capacity and inductance

60
00:04:21,790 --> 00:04:17,260
resonant properties and they have

61
00:04:25,330 --> 00:04:21,800
specific frequencies to which they

62
00:04:34,830 --> 00:04:25,340
respond usually the frequencies

63
00:04:37,630 --> 00:04:34,840

corresponding to the brain regions so I

64
00:04:40,000 --> 00:04:37,640
thought this is very interesting and has

65
00:04:45,370 --> 00:04:40,010
to be explored

66
00:04:48,090 --> 00:04:45,380
so exploring I did some time ago I

67
00:04:53,020 --> 00:04:48,100
invented the scanning Calvin nanoprobe

68
00:04:55,750 --> 00:04:53,030
an instrument based on an effect

69
00:05:00,610 --> 00:04:55,760
discovered by Lord Kelvin in the 19th

70
00:05:04,980 --> 00:05:00,620
century at a famous lecture at the Royal

71
00:05:08,320 --> 00:05:04,990
Society he presented this odd phenomenon

72
00:05:13,600 --> 00:05:08,330
he was moving two plates of copper and

73
00:05:15,490 --> 00:05:13,610
zinc without touching them and was he

74
00:05:19,390 --> 00:05:15,500
was wondering what is moving the

75
00:05:22,630 --> 00:05:19,400
electrometer leaf in the exterior wire

76
00:05:25,540 --> 00:05:22,640
that was connecting the two plates

77
00:05:33,190 --> 00:05:25,550
because there was no electro-motive

78
00:05:38,080 --> 00:05:33,200
force and it was a mystery for him 20th

79
00:05:42,010 --> 00:05:38,090
century quantum physics gave us the

80
00:05:47,650 --> 00:05:42,020
answer the work function of copper and

81
00:05:50,590 --> 00:05:47,660
zinc is different so when put in contact

82
00:05:52,290 --> 00:05:50,600
the electrons are trying to equalize it

83
00:05:55,620 --> 00:05:52,300
and this is moving

84
00:06:00,000 --> 00:05:55,630
the electrons to that wire what is work

85
00:06:02,430 --> 00:06:00,010
function work function is the quantum

86
00:06:04,710 --> 00:06:02,440
property of the matter it's very

87
00:06:09,470 --> 00:06:04,720
specific to any material it's like a

88
00:06:12,540 --> 00:06:09,480

signature property and is defined as

89
00:06:14,280 --> 00:06:12,550
energy that we need to extract an

90
00:06:17,910 --> 00:06:14,290
electron from the Fermi level to

91
00:06:20,760 --> 00:06:17,920
infinity what is Fermi level is the

92
00:06:24,630 --> 00:06:20,770
level the energetic level where the

93
00:06:30,210 --> 00:06:24,640
electrons the probability to find an

94
00:06:34,740 --> 00:06:30,220
electron is 0.5 more intuitively to find

95
00:06:37,080 --> 00:06:34,750
a water molecule at the sea level the

96
00:06:41,790 --> 00:06:37,090
probability is 0.5 because it can be in

97
00:06:46,410 --> 00:06:41,800
here or in the water so you have to

98
00:06:49,830 --> 00:06:46,420
imagine that an energy dimension the

99
00:06:56,850 --> 00:06:49,840
Fermi level is the top of the electron

100
00:07:01,320 --> 00:06:56,860
see the method was used usually in

101
00:07:05,520 --> 00:07:01,330
metals and semiconductors for example to

102
00:07:10,640 --> 00:07:05,530
research corrosion on large surfaces

103
00:07:18,980 --> 00:07:10,650
with large electrodes and semiconductor

104
00:07:26,850 --> 00:07:18,990
contamination on surfaces I did

105
00:07:29,700 --> 00:07:26,860
unthinkable and applied the method to

106
00:07:33,950 --> 00:07:29,710
biological materials like you can see

107
00:07:36,750 --> 00:07:33,960
the nanometric probe I miniaturize it at

108
00:07:40,400 --> 00:07:36,760
the limit because now we have the

109
00:07:45,230 --> 00:07:40,410
electronic circuits capable to extract

110
00:07:48,840 --> 00:07:45,240
such a small signal from the noise and

111
00:07:55,340 --> 00:07:48,850
one day I just put a genetic microarray

112
00:08:02,250 --> 00:07:57,660
everybody was telling me you will not

113
00:08:02,820 --> 00:08:02,260

see anything because they are on 1

114
00:08:05,770 --> 00:08:02,830
millimeter

115
00:08:08,230 --> 00:08:05,780
piece of glass and it's

116
00:08:11,050 --> 00:08:08,240
- dielectric it's just impossible to see

117
00:08:17,340 --> 00:08:11,060
anything so when somebody is telling me

118
00:08:21,760 --> 00:08:17,350
it's impossible I have to try it so I I

119
00:08:25,330 --> 00:08:21,770
saw the DNA on the surface I saw the the

120
00:08:27,730 --> 00:08:25,340
spots where it was hybridized so the

121
00:08:30,030 --> 00:08:27,740
sequence the target and the probe were

122
00:08:32,860 --> 00:08:30,040
recognizing each other was much

123
00:08:37,540 --> 00:08:32,870
different from the spots where the DNA

124
00:08:40,779 --> 00:08:37,550
was not have realized more than that to

125
00:08:47,890 --> 00:08:40,789
my surprise I saw that it didn't matter

126
00:08:52,540 --> 00:08:47,900
how deep I was very mismatched on the

127
00:08:55,000 --> 00:08:52,550
Strand I was able to still to detect it

128
00:08:56,680 --> 00:08:55,010
so I was so surprised that the

129
00:09:06,210 --> 00:08:56,690
instrument is so sensitive and can

130
00:09:16,660 --> 00:09:12,900
we worked for years you know and we had

131
00:09:20,860 --> 00:09:16,670
interesting results the method I tell

132
00:09:24,520 --> 00:09:20,870
you is totally label-free and totally

133
00:09:26,740 --> 00:09:24,530
non-invasive and we still wonder how

134
00:09:29,380 --> 00:09:26,750
we're able to measure because because

135
00:09:35,200 --> 00:09:29,390
you have to imagine DNA strands like

136
00:09:41,430 --> 00:09:35,210
spaghetti on surface so the signal still

137
00:09:45,970 --> 00:09:41,440
is consistent the same on protein on

138
00:09:50,290 --> 00:09:45,980

antigen antibody recognizing events we

139
00:09:55,390 --> 00:09:50,300
can see them we can see what influences

140
00:09:57,370 --> 00:09:55,400
the amplitude of the signal the only

141
00:10:06,850 --> 00:09:57,380
problem is we cannot define work

142
00:10:13,540 --> 00:10:06,860
function in biological molecules but how

143
00:10:16,030 --> 00:10:13,550
to say even if it's not definable yet I

144
00:10:18,880 --> 00:10:16,040
was told that I'm ahead of time and

145
00:10:19,420 --> 00:10:18,890
quantum biology is not there yet and

146
00:10:24,750 --> 00:10:19,430
things

147
00:10:28,450 --> 00:10:24,760
this I didn't stop and I started putting

148
00:10:32,170 --> 00:10:28,460
living cells under the vibrating teapot

149
00:10:35,200 --> 00:10:32,180
a scanning microscope you see that the

150
00:10:38,019 --> 00:10:35,210
tip is not touching the cells it's

151
00:10:42,400 --> 00:10:38,029
perfect perfectly non-invasive unlike

152
00:10:46,510 --> 00:10:42,410
patch-clamp technology that is inserted

153
00:10:51,329 --> 00:10:46,520
electrodes and kills that the cell we

154
00:10:55,510 --> 00:10:51,339
can observe the cell in real time when

155
00:10:59,199 --> 00:10:55,520
we feed different chemicals or

156
00:11:03,310 --> 00:10:59,209
neurotrophic factors and see the changes

157
00:11:09,240 --> 00:11:03,320
the cells lives four months if we take

158
00:11:13,000 --> 00:11:09,250
care of it so the results were so

159
00:11:16,510 --> 00:11:13,010
unexpected that I had to confirm them

160
00:11:22,650 --> 00:11:16,520
with other methods more more classical

161
00:11:27,490 --> 00:11:22,660
methods like Eliza testing or other

162
00:11:33,670 --> 00:11:27,500
vibrating platforms using acoustical

163
00:11:36,670 --> 00:11:33,680

energy so you see a crystal of quartz

164
00:11:39,940 --> 00:11:36,680
Creek years okay here's an electric

165
00:11:43,449 --> 00:11:39,950
quartz crystal on which I'm growing this

166
00:11:47,890 --> 00:11:43,459
neuron networks so they form a network

167
00:11:52,380 --> 00:11:47,900
on on the surface and quartz is

168
00:11:56,560 --> 00:11:52,390
vibrating and nano megahertz generating

169
00:12:00,010 --> 00:11:56,570
wave which changes it's very sensitive

170
00:12:03,210 --> 00:12:00,020
to any changes that happening to the are

171
00:12:09,580 --> 00:12:03,220
happening to the cells chemical physical

172
00:12:11,010 --> 00:12:09,590
pharmacological I also tried

173
00:12:13,510 --> 00:12:11,020
[Music]

174
00:12:17,760 --> 00:12:13,520
electromagnetic acoustic que la Costa

175
00:12:21,300 --> 00:12:17,770
kal sensors the crystal is vibrating

176
00:12:25,569 --> 00:12:21,310
electrodeless it's floating into a

177
00:12:29,170 --> 00:12:25,579
magnetic field so it's it's working at

178
00:12:31,300 --> 00:12:29,180
in the gigahertz range and it's very

179
00:12:35,739 --> 00:12:31,310
very sensitive

180
00:12:40,929 --> 00:12:35,749
and I want you to show just a couple of

181
00:12:46,600 --> 00:12:40,939
the results I was able to detect neural

182
00:12:52,389 --> 00:12:46,610
oscillation outside the brain something

183
00:12:55,869 --> 00:12:52,399
that I don't know anybody succeeding to

184
00:12:58,629 --> 00:12:55,879
do and the oscillations were changing

185
00:13:01,600 --> 00:12:58,639
the amplitude while we were feeding but

186
00:13:03,910 --> 00:13:01,610
as Aaron or neurotrophic factors that

187
00:13:07,269 --> 00:13:03,920
are used in Alzheimer disease and

188
00:13:08,860 --> 00:13:07,279

treating dementia or Parkinson's you see

189
00:13:12,939 --> 00:13:08,870
that the more we increase the

190
00:13:14,439 --> 00:13:12,949
concentration the amplitude is lower and

191
00:13:21,759 --> 00:13:14,449
lower but the frequency of the

192
00:13:24,249 --> 00:13:21,769
oscillation remains the same so the fact

193
00:13:27,579 --> 00:13:24,259
that these neurons are oscillating

194
00:13:29,309 --> 00:13:27,589
outside the brain shows that there is an

195
00:13:31,869 --> 00:13:29,319
intrinsic property of the

196
00:13:35,439 --> 00:13:31,879
self-organizing neural network not

197
00:13:39,929 --> 00:13:35,449
imposed by higher order process from

198
00:13:42,189 --> 00:13:39,939
distal physiological sources rhythmic

199
00:13:44,710 --> 00:13:42,199
oscillations is a characteristic

200
00:13:47,259 --> 00:13:44,720
property of the brain associated with

201
00:13:50,530 --> 00:13:47,269
cognitive processes memory and learning

202
00:13:58,740 --> 00:13:50,540
but the underlying mechanisms are still

203
00:14:02,439 --> 00:13:58,750
not very well understood this is when I

204
00:14:06,009 --> 00:14:02,449
applied TCAP hormone this is a hormone

205
00:14:08,980 --> 00:14:06,019
used generated by the brain itself when

206
00:14:11,139 --> 00:14:08,990
it's under stress so there are some

207
00:14:14,860 --> 00:14:11,149
people that try to turn it into a

208
00:14:18,340 --> 00:14:14,870
medication and natural medication for

209
00:14:20,889 --> 00:14:18,350
treating stress so you still again the

210
00:14:22,949 --> 00:14:20,899
amplitude is changing with concentration

211
00:14:29,460 --> 00:14:22,959
but not the frequency but the

212
00:14:32,559 --> 00:14:29,470
periodicity of the signal what is more

213
00:14:36,730 --> 00:14:32,569

unbelievable when I check the conference

214
00:14:39,950 --> 00:14:36,740
II of the cell culture on the on the

215
00:14:44,990 --> 00:14:39,960
sensor to see

216
00:14:47,540 --> 00:14:45,000
how it influences the the results I was

217
00:14:53,420 --> 00:14:47,550
using an atomic force microscope to see

218
00:14:58,510 --> 00:14:53,430
if to check the conference E and lo and

219
00:15:02,900 --> 00:14:58,520
behold there were no connections between

220
00:15:05,210 --> 00:15:02,910
the body of some neurons and the

221
00:15:07,190 --> 00:15:05,220
dendrites of the other it looks like

222
00:15:11,060 --> 00:15:07,200
they were communicating through field

223
00:15:13,430 --> 00:15:11,070
through what field I didn't have the

224
00:15:15,740 --> 00:15:13,440
courage to publish this in mainstream

225
00:15:19,280 --> 00:15:15,750
journals because I was afraid to be

226
00:15:25,190 --> 00:15:19,290
blacklisted or something but I can tell

227
00:15:30,080 --> 00:15:25,200
you here so then I did again the

228
00:15:33,920 --> 00:15:30,090
unthinkable I invited healer to my lab

229
00:15:40,340 --> 00:15:33,930
and I told her look these are the

230
00:15:45,230 --> 00:15:40,350
neurons they are happy on the sensor the

231
00:15:48,860 --> 00:15:45,240
metabolic line is flat just concentrate

232
00:15:50,870 --> 00:15:48,870
on them wishing them well or you know

233
00:15:53,120 --> 00:15:50,880
wishing them to be happy because I

234
00:15:56,870 --> 00:15:53,130
didn't know what to tell her the moment

235
00:15:58,790 --> 00:15:56,880
she started concentrate on them both the

236
00:16:01,250 --> 00:15:58,800
resonance frequency line and the

237
00:16:07,970 --> 00:16:01,260
emotional resistance line were were

238
00:16:12,020 --> 00:16:07,980

shifting in an unbelievable way so not

239
00:16:14,330 --> 00:16:12,030
only that but for those two hours of

240
00:16:18,190 --> 00:16:14,340
measurements she was telling me that you

241
00:16:20,810 --> 00:16:18,200
can see the colors around the neurons

242
00:16:23,330 --> 00:16:20,820
getting brighter and brighter and she

243
00:16:25,850 --> 00:16:23,340
can resume on the membrane and can you

244
00:16:29,000 --> 00:16:25,860
see little cones appearing there like

245
00:16:31,850 --> 00:16:29,010
maybe the sides of new dendrites so I

246
00:16:35,420 --> 00:16:31,860
couldn't check that but I want to check

247
00:16:38,450 --> 00:16:35,430
that and I want to buy those slow

248
00:16:42,560 --> 00:16:38,460
cameras that Professor Fritz Pope was

249
00:16:46,280 --> 00:16:42,570
using to detect bio photons and check if

250
00:16:49,220 --> 00:16:46,290
the mission is getting stronger or

251
00:16:53,150 --> 00:16:49,230
something like this the fact that our

252
00:16:56,930 --> 00:16:53,160
DNA is emitting bio photons

253
00:17:01,970 --> 00:16:56,940
just astonishing and the fact that the

254
00:17:07,699 --> 00:17:01,980
coherence of this biophotons

255
00:17:12,470 --> 00:17:07,709
is directly related to the degree of of

256
00:17:15,020 --> 00:17:12,480
health it's just fascinating so I want

257
00:17:20,149 --> 00:17:15,030
to I want to study this in the in the

258
00:17:26,840 --> 00:17:20,159
future so I want to dig deeper in this

259
00:17:30,760 --> 00:17:26,850
and use the pair protocol you know to

260
00:17:34,130 --> 00:17:30,770
invite people that are not healers like

261
00:17:36,919 --> 00:17:34,140
make food groups one with believers one

262
00:17:39,409 --> 00:17:36,929
with non-believers sheeps and goats I

263
00:17:45,020 --> 00:17:39,419

can tell you that all my students will

264
00:17:47,840 --> 00:17:45,030
be the goats group and see like I can

265
00:17:50,570 --> 00:17:47,850
invite people from California or distant

266
00:17:53,659 --> 00:17:50,580
places at a specific time to concentrate

267
00:18:00,220 --> 00:17:53,669
on them see if the distance matters you

268
00:18:03,580 --> 00:18:00,230
know and you know we I will gather

269
00:18:06,110 --> 00:18:03,590
interesting data and convincing data

270
00:18:08,390 --> 00:18:06,120
although I wonder whom I want to

271
00:18:12,590 --> 00:18:08,400
convince the skeptical scientists the

272
00:18:15,279 --> 00:18:12,600
cynical scientists maybe the hardcore

273
00:18:18,590 --> 00:18:15,289
materialist that I told myself no I'm

274
00:18:22,850 --> 00:18:18,600
not wasting my time for that it's just

275
00:18:26,000 --> 00:18:22,860
interesting to have scientific proof of

276
00:18:32,960 --> 00:18:26,010
mind matter interaction this is what

277
00:18:36,980 --> 00:18:32,970
what I want to do so because those

278
00:18:41,810 --> 00:18:36,990
oscillations are in the very low in the

279
00:18:44,600 --> 00:18:41,820
Delta brain race I wanted to dig deeper

280
00:18:48,590 --> 00:18:44,610
and deeper in this problem so I went to

281
00:18:52,450 --> 00:18:48,600
a hypnosis course and well I didn't get

282
00:18:56,930 --> 00:18:52,460
any answers but instead I had these

283
00:18:59,539 --> 00:18:56,940
experiences of visiting the Akashic

284
00:19:02,210 --> 00:18:59,549
records and two of my previous lifetimes

285
00:19:04,780 --> 00:19:02,220
but you can't be interested in such

286
00:19:08,710 --> 00:19:04,790
things so I will

287
00:19:13,610 --> 00:19:08,720
concentrate on brain frequencies and

288
00:19:16,000 --> 00:19:13,620

tell you that what impresses me is their

289
00:19:19,310 --> 00:19:16,010
different classes of oscillations and

290
00:19:22,280 --> 00:19:19,320
behavior patterns of behaviors

291
00:19:26,470 --> 00:19:22,290
associated to them are you know

292
00:19:29,510 --> 00:19:26,480
genetically preserved during evolution

293
00:19:31,760 --> 00:19:29,520
which would support the assumption that

294
00:19:35,180 --> 00:19:31,770
there is a universal mechanism at work

295
00:19:39,010 --> 00:19:35,190
in brains small or large from the

296
00:19:41,720 --> 00:19:39,020
smallest Mouse to the largest elephant

297
00:19:43,370 --> 00:19:41,730
science is telling us that short and

298
00:19:47,620 --> 00:19:43,380
long-term consolidation of information

299
00:19:51,410 --> 00:19:47,630
and consciousness might be the result of

300
00:19:54,830 --> 00:19:51,420
synchronized network activity and we now

301
00:19:57,590 --> 00:19:54,840
can measure this the thing is that the

302
00:20:01,040 --> 00:19:57,600
conventional research carry neurobiology

303
00:20:03,530 --> 00:20:01,050
is to find the neurons or the sub

304
00:20:06,170 --> 00:20:03,540
circuits of interconnected neurons the

305
00:20:09,530 --> 00:20:06,180
feedback and inhibitory mechanism that

306
00:20:12,380 --> 00:20:09,540
would explain brain activities thinking

307
00:20:15,940 --> 00:20:12,390
emotions and maybe intuition creativity

308
00:20:18,190 --> 00:20:15,950
and insight neuroscientists are

309
00:20:21,500 --> 00:20:18,200
searching for neural correlates

310
00:20:24,670 --> 00:20:21,510
presuming that the rate and manner of

311
00:20:28,370 --> 00:20:24,680
firing correlate with consciousness

312
00:20:33,230 --> 00:20:28,380
experience they search for the neural

313
00:20:35,990 --> 00:20:33,240

code which is the answer to the question

314
00:20:39,100 --> 00:20:36,000
what is associated with experience mean

315
00:20:43,520 --> 00:20:39,110
firing rates or chemical behavior named

316
00:20:47,090 --> 00:20:43,530
neurotransmitters good luck to them but

317
00:20:51,640 --> 00:20:47,100
we can see that all the cat scans and

318
00:20:54,770 --> 00:20:51,650
PET scans and functional MRI cannot

319
00:20:57,820 --> 00:20:54,780
solve fundamental problems like the

320
00:21:00,890 --> 00:20:57,830
binding problem how diverse perceptions

321
00:21:03,650 --> 00:21:00,900
in distant parts of the brain are bound

322
00:21:09,800 --> 00:21:03,660
together into a single conscious

323
00:21:13,940 --> 00:21:09,810
experience well we all know that there

324
00:21:17,270 --> 00:21:13,950
are 100,000 chemical reactions every

325
00:21:18,100 --> 00:21:17,280
second in every cell and we have about

326
00:21:22,180 --> 00:21:18,110
100

327
00:21:26,110 --> 00:21:22,190
trillions of them so the question is

328
00:21:28,330 --> 00:21:26,120
does this Orchestra have a conductor is

329
00:21:31,110 --> 00:21:28,340
the self-organized organization of

330
00:21:34,180 --> 00:21:31,120
complex systems it is driven by the

331
00:21:37,870 --> 00:21:34,190
25,000 genes turning each other on and

332
00:21:41,230 --> 00:21:37,880
off producing proteins after spending

333
00:21:45,360 --> 00:21:41,240
that billion dollars on decoding the

334
00:21:49,210 --> 00:21:45,370
genetic code the Holy Grail wasn't found

335
00:21:52,299 --> 00:21:49,220
more than that the contribution of the

336
00:21:57,270 --> 00:21:52,309
gene variants to disease is rather weak

337
00:22:03,990 --> 00:21:57,280
so now the center's are trying to find

338
00:22:07,180 --> 00:22:04,000

other factors too to understand this

339
00:22:09,490 --> 00:22:07,190
maybe it's a chemical molecular or

340
00:22:12,210 --> 00:22:09,500
physical atomically communication

341
00:22:15,159 --> 00:22:12,220
because there is a constant feedback

342
00:22:18,580 --> 00:22:15,169
responding in milliseconds to any threat

343
00:22:21,970 --> 00:22:18,590
to hover stasis how does the body

344
00:22:25,150 --> 00:22:21,980
function as an integrated whole is it

345
00:22:29,409 --> 00:22:25,160
quantum coherence we already see

346
00:22:35,580 --> 00:22:29,419
coherence in those bio photons so again

347
00:22:42,029 --> 00:22:39,749
now for now the quantum field theory is

348
00:22:45,110 --> 00:22:42,039
the only available fundamental theory

349
00:22:49,009 --> 00:22:45,120
for developing an overall view life

350
00:22:52,499 --> 00:22:49,019
toward the universe it has to be

351
00:22:59,190 --> 00:22:52,509
extended to biology and in a rigorous

352
00:23:00,930 --> 00:22:59,200
manner and maybe it will explain some

353
00:23:02,489 --> 00:23:00,940
biological phenomena like the

354
00:23:06,169 --> 00:23:02,499
integration of individual behavior

355
00:23:09,289 --> 00:23:06,179
school of fish flocking flocks of birds

356
00:23:13,590 --> 00:23:09,299
aggression migration of birds

357
00:23:18,680 --> 00:23:13,600
synchronization of all of fly flashing

358
00:23:21,389 --> 00:23:18,690
of fireflies how this can be possible by

359
00:23:25,820 --> 00:23:21,399
interconnectedness can quantum

360
00:23:29,999 --> 00:23:25,830
entanglement explaining it we still

361
00:23:33,989 --> 00:23:30,009
teach our students that the interior of

362
00:23:37,220 --> 00:23:33,999
the atom is empty space because the

363
00:23:40,859 --> 00:23:37,230

zero-point field is messing up all those

364
00:23:43,950 --> 00:23:40,869
quantum equations people still don't

365
00:23:47,039 --> 00:23:43,960
realize that matter is less than a

366
00:23:50,519 --> 00:23:47,049
fraction of the manifested universe the

367
00:23:53,299 --> 00:23:50,529
rest is black matter and black energy

368
00:23:57,720 --> 00:23:53,309
and we don't know anything about it

369
00:24:00,749 --> 00:23:57,730
the dogma science is that elementary

370
00:24:05,159 --> 00:24:00,759
particles and quantum interactions form

371
00:24:09,450 --> 00:24:05,169
atoms they form molecules molecules form

372
00:24:12,950 --> 00:24:09,460
cells the brain and then consciousness

373
00:24:17,749 --> 00:24:12,960
is a epiphenomena of brain activity

374
00:24:23,369 --> 00:24:17,759
emerging from it well I see intelligence

375
00:24:28,230 --> 00:24:23,379
at all these levels those photons in the

376
00:24:29,879 --> 00:24:28,240
delayed double slit experiment they have

377
00:24:32,549 --> 00:24:29,889
kind of precognition they know

378
00:24:38,730 --> 00:24:32,559
beforehand what slit will be closed or

379
00:24:42,389 --> 00:24:38,740
open in in molecules I will give it just

380
00:24:45,029 --> 00:24:42,399
one example that impresses me there is a

381
00:24:48,620 --> 00:24:45,039
molecule called polymerase that is

382
00:24:53,750 --> 00:24:48,630
assembling the double helix

383
00:24:57,820 --> 00:24:53,760
during cell division and it's doing this

384
00:25:02,360 --> 00:24:57,830
with a fantastic speed but if it made a

385
00:25:06,560 --> 00:25:02,370
mistake there is an error a mismatch in

386
00:25:10,610 --> 00:25:06,570
basis this molecule stops calls other

387
00:25:15,470 --> 00:25:10,620
enzymes to repair the mistake and after

388
00:25:18,650 --> 00:25:15,480

the editing of the DNA is done runs away

389
00:25:22,520 --> 00:25:18,660
with the same unbelievable speed so how

390
00:25:27,050 --> 00:25:22,530
that molecule knows when it did a

391
00:25:29,590 --> 00:25:27,060
mistake I cannot see any chemical or

392
00:25:32,750 --> 00:25:29,600
physical interactions explaining that

393
00:25:35,420 --> 00:25:32,760
then the cells I just told you how

394
00:25:41,330 --> 00:25:35,430
complicated they are and how coordinated

395
00:25:42,970 --> 00:25:41,340
the activity in them the brains you all

396
00:25:49,240 --> 00:25:42,980
agree with me that they are intelligent

397
00:25:54,910 --> 00:25:49,250
not all of them but the majority so I

398
00:25:57,920 --> 00:25:54,920
think that the arrow is like this

399
00:26:02,090 --> 00:25:57,930
consciousness is permeating all these

400
00:26:05,720 --> 00:26:02,100
levels like in the flyer of our

401
00:26:07,930 --> 00:26:05,730
conference what a nice flower flyer the

402
00:26:14,300 --> 00:26:07,940
the light of console consciousness

403
00:26:17,840 --> 00:26:14,310
permeating the reality so I like this

404
00:26:20,090 --> 00:26:17,850
theory that the mind is the quantum

405
00:26:22,790 --> 00:26:20,100
possibilities of consciousness giving

406
00:26:25,430 --> 00:26:22,800
meaning and experience of thinking when

407
00:26:27,590 --> 00:26:25,440
collapsed in the matter is the quantum

408
00:26:31,460 --> 00:26:27,600
possibilities of consciousness even

409
00:26:35,060 --> 00:26:31,470
physical sensations when collapsed then

410
00:26:37,370 --> 00:26:35,070
both mind and body are quantum nature so

411
00:26:44,900 --> 00:26:37,380
they there is no problem for them to

412
00:26:48,970 --> 00:26:44,910
interact living systems defying the

413
00:26:53,780 --> 00:26:48,980

second law of thermodynamics they can

414
00:26:56,840 --> 00:26:53,790
take less organized raw materials and

415
00:26:59,510 --> 00:26:56,850
energy and transmute them in increased

416
00:27:01,960 --> 00:26:59,520
complexity more organized system more

417
00:27:04,840 --> 00:27:01,970
order this is negative

418
00:27:08,320 --> 00:27:04,850
entropy and we don't know how this is

419
00:27:10,300 --> 00:27:08,330
working how this is possible we don't

420
00:27:12,640 --> 00:27:10,310
know which particles are involved in

421
00:27:16,120 --> 00:27:12,650
biological control system and instant

422
00:27:17,110 --> 00:27:16,130
communications the iron and electrons

423
00:27:21,520 --> 00:27:17,120
are too slow

424
00:27:24,130 --> 00:27:21,530
maybe the for the photons but we don't

425
00:27:26,770 --> 00:27:24,140
know yet for sure or maybe some

426
00:27:30,850 --> 00:27:26,780
neutrinos or other member of the

427
00:27:34,720 --> 00:27:30,860
particles ooh we don't know yet so we

428
00:27:39,910 --> 00:27:34,730
don't know if consciousness conceived

429
00:27:43,590 --> 00:27:39,920
biology if it needs more for genetic

430
00:27:47,050 --> 00:27:43,600
field to form and become biology

431
00:27:51,760 --> 00:27:47,060
if regeneration and repair is possible

432
00:27:55,060 --> 00:27:51,770
and the field matrix level but now in

433
00:27:57,550 --> 00:27:55,070
our times in spiritual traditions

434
00:28:00,100 --> 00:27:57,560
converge with the latest scientific

435
00:28:02,590 --> 00:28:00,110
understanding intersection points

436
00:28:05,590 --> 00:28:02,600
placebo effect spontaneous cancer in

437
00:28:08,380 --> 00:28:05,600
remission by raising the mind

438
00:28:10,960 --> 00:28:08,390

expectation of healing which triggers

439
00:28:14,440 --> 00:28:10,970
the body's mechanism toward properly

440
00:28:19,570 --> 00:28:14,450
once again can we learn to heal

441
00:28:22,200 --> 00:28:19,580
everybody else complete regeneration so

442
00:28:26,680 --> 00:28:22,210
templates of the Morpho genetic field

443
00:28:30,430 --> 00:28:26,690
which remain intact even when a physical

444
00:28:35,080 --> 00:28:30,440
part is removed a good example is

445
00:28:38,650 --> 00:28:35,090
growing of salamander limbs so we have

446
00:28:40,660 --> 00:28:38,660
to start thinking beyond quantum because

447
00:28:44,350 --> 00:28:40,670
quantum theory still cannot explain

448
00:28:46,540 --> 00:28:44,360
consciousness but it made contribute to

449
00:28:51,340 --> 00:28:46,550
a better understanding of mind interface

450
00:28:55,510 --> 00:28:51,350
and it suggests a non-local world with

451
00:28:59,560 --> 00:28:55,520
instantaneous connection and all through

452
00:29:01,870 --> 00:28:59,570
the universe but keep in mind that

453
00:29:04,480 --> 00:29:01,880
quantum equations are only mathematical

454
00:29:06,940 --> 00:29:04,490
symbols of reality a partial

455
00:29:09,870 --> 00:29:06,950
representation of reality not really

456
00:29:13,450 --> 00:29:09,880
complete we can't put feelings emotions

457
00:29:19,030 --> 00:29:13,460
so it's creativity intuition compassion

458
00:29:20,920 --> 00:29:19,040
love in quantum equations but we're

459
00:29:26,020 --> 00:29:20,930
making progress from the Newtonian

460
00:29:32,710 --> 00:29:26,030
medicine we are making a shift to a more

461
00:29:36,600 --> 00:29:32,720
interesting energy medicine and how this

462
00:29:41,230 --> 00:29:36,610
is possible we still don't know one

463
00:29:44,680 --> 00:29:41,240

interesting theory relates to the role

464
00:29:47,200 --> 00:29:44,690
of the DNA you all know that only two

465
00:29:51,400 --> 00:29:47,210
percent of the DNA is used for encoding

466
00:29:55,810 --> 00:29:51,410
proteins the rest 98% is so-called junk

467
00:29:57,850 --> 00:29:55,820
DNA but the paradox is the more complex

468
00:30:01,720 --> 00:29:57,860
the organ is the higher the percentage

469
00:30:04,960 --> 00:30:01,730
of junk DNA why is that nature doesn't

470
00:30:07,600 --> 00:30:04,970
need redundancy doesn't carry such

471
00:30:08,620 --> 00:30:07,610
useless information over millennia of

472
00:30:11,170 --> 00:30:08,630
evolution

473
00:30:14,440 --> 00:30:11,180
maybe the essential function of the junk

474
00:30:16,690 --> 00:30:14,450
DNA is to be a support for terahertz

475
00:30:18,850 --> 00:30:16,700
oscillation in its periodic coiled

476
00:30:22,030 --> 00:30:18,860
structure what would be the purpose

477
00:30:24,730 --> 00:30:22,040
communication with consciousness how by

478
00:30:27,340 --> 00:30:24,740
nuclear spin resonance like quantum

479
00:30:31,420 --> 00:30:27,350
antennas by holographic if for transfer

480
00:30:33,160 --> 00:30:31,430
we don't know is the innate transmitting

481
00:30:38,050 --> 00:30:33,170
and coordinating information by

482
00:30:41,610 --> 00:30:38,060
resonance that would be achievable in in

483
00:30:45,670 --> 00:30:41,620
three ways one directly and non-locally

484
00:30:49,300 --> 00:30:45,680
two molecular structures to indirectly

485
00:30:52,540 --> 00:30:49,310
via signal messenger proteins hormones

486
00:30:58,360 --> 00:30:52,550
neuropeptides and third via

487
00:31:06,700 --> 00:31:04,690
the big question is that each cell is or

488
00:31:10,480 --> 00:31:06,710

not in communication with the war for

489
00:31:12,430 --> 00:31:10,490
genetic consciousness via its DNA we

490
00:31:14,410 --> 00:31:12,440
know that DNA contains hereditary

491
00:31:18,250 --> 00:31:14,420
information but for genetic information

492
00:31:21,910 --> 00:31:18,260
and it might contain a personal access

493
00:31:24,490 --> 00:31:21,920
code from known non-local consciousness

494
00:31:28,650 --> 00:31:24,500
like a barcode or private phone number

495
00:31:32,040 --> 00:31:28,660
and the reception for each individual

496
00:31:35,860 --> 00:31:32,050
depends on freewill attention intention

497
00:31:38,890 --> 00:31:35,870
awareness remember those child prodigies

498
00:31:43,720 --> 00:31:38,900
calculating faster than a computer but

499
00:31:46,200 --> 00:31:43,730
they cannot dress themselves the people

500
00:31:49,750 --> 00:31:46,210
that have multiple personality disorder

501
00:31:51,670 --> 00:31:49,760
they can take different personalities

502
00:31:55,180 --> 00:31:51,680
and have different totally different

503
00:31:57,730 --> 00:31:55,190
diseases so health and disease might

504
00:32:01,750 --> 00:31:57,740
exist at the level of consciousness and

505
00:32:06,040 --> 00:32:01,760
may be can be affected there remember

506
00:32:09,730 --> 00:32:06,050
the servants do they have access to

507
00:32:12,910 --> 00:32:09,740
field stored information how we explain

508
00:32:16,890 --> 00:32:12,920
creativity intuition the recovery of

509
00:32:21,700 --> 00:32:16,900
memories so we see a thought

510
00:32:28,560 --> 00:32:21,710
lighting up some brain area in the

511
00:32:31,420 --> 00:32:28,570
occipital cortex then suddenly we see

512
00:32:36,310 --> 00:32:31,430
frequency coded electromagnetic neural

513
00:32:40,570 --> 00:32:36,320

signals neora peptide squeezed at the

514
00:32:45,810 --> 00:32:40,580
synapses level so chemicals appear from

515
00:32:49,570 --> 00:32:45,820
assault material from lawn material then

516
00:32:51,430 --> 00:32:49,580
the transplant transplanted memory if

517
00:32:54,490 --> 00:32:51,440
you remember the case of that old lady

518
00:32:59,230 --> 00:32:54,500
that had a transplant heart from a biker

519
00:33:03,430 --> 00:32:59,240
that that died in a road accident she

520
00:33:10,570 --> 00:33:03,440
suddenly developed craving for beer and

521
00:33:12,070 --> 00:33:10,580
junk food okay so it's a barcode problem

522
00:33:16,340 --> 00:33:12,080
there

523
00:33:20,210 --> 00:33:16,350
then I I like this remote cells in petri

524
00:33:23,840 --> 00:33:20,220
dish responding to the thoughts of the

525
00:33:27,440 --> 00:33:23,850
owner so probably you read about this

526
00:33:29,300 --> 00:33:27,450
experiment a guy put some of his skin

527
00:33:34,000 --> 00:33:29,310
cells in a petri dish send them in

528
00:33:38,230 --> 00:33:34,010
another lab then was reading some erotic

529
00:33:42,190 --> 00:33:38,240
magazines and the cells were reacting to

530
00:33:46,970 --> 00:33:42,200
to his feelings that's that's amazing

531
00:33:49,760 --> 00:33:46,980
yes and consciousness probably is the

532
00:33:52,580 --> 00:33:49,770
local repository of all past and future

533
00:33:57,560 --> 00:33:52,590
experiences it may be in the field

534
00:34:03,200 --> 00:33:57,570
around our body or maybe in the fields

535
00:34:06,800 --> 00:34:03,210
more of more distant so the big question

536
00:34:10,220 --> 00:34:06,810
is does consciousness have a biological

537
00:34:13,910 --> 00:34:10,230
basis at all is the brain a transducing

538
00:34:16,280 --> 00:34:13,920

funnel for it we we know that

539
00:34:18,650 --> 00:34:16,290
consciousness modify modify the

540
00:34:23,210 --> 00:34:18,660
properties of material objects you can

541
00:34:26,210 --> 00:34:23,220
try this yourself take two heavy

542
00:34:32,240 --> 00:34:26,220
metallic balls in your hands I did this

543
00:34:34,490 --> 00:34:32,250
during my hypnosis experimentation enter

544
00:34:37,220 --> 00:34:34,500
hypnosis and then you'll see that you

545
00:34:39,170 --> 00:34:37,230
don't feel the the weightless you don't

546
00:34:41,020 --> 00:34:39,180
feel the coldness and the interface

547
00:34:44,170 --> 00:34:41,030
between your hand and the metal

548
00:34:47,390 --> 00:34:44,180
disappears it's like a continuum between

549
00:34:50,630 --> 00:34:47,400
the metal and the hands just try it

550
00:34:53,720 --> 00:34:50,640
it's very interesting so we can

551
00:34:57,260 --> 00:34:53,730
experience consciousness during sleep

552
00:35:01,310 --> 00:34:57,270
lucid dreaming visions experienced by

553
00:35:03,950 --> 00:35:01,320
the born blind that cannot understand

554
00:35:08,180 --> 00:35:03,960
what they are seeing because they never

555
00:35:11,090 --> 00:35:08,190
had region in general anesthesia out of

556
00:35:13,640 --> 00:35:11,100
the body experience coma brain death

557
00:35:18,950 --> 00:35:13,650
clinical death dying and after the

558
00:35:24,750 --> 00:35:18,960
confirmed death now I have to tell you

559
00:35:32,380 --> 00:35:30,010
out of the world experiences but if it

560
00:35:36,339 --> 00:35:32,390
happens it is possible

561
00:35:39,579 --> 00:35:36,349
I cannot negate them for me anomalous is

562
00:35:42,040 --> 00:35:39,589
normal if it happens super nature is

563
00:35:42,970 --> 00:35:42,050

nature and out of the world is of this

564
00:35:47,680 --> 00:35:42,980
universe

565
00:35:50,680 --> 00:35:47,690
so my healthy hard-earned skepticism was

566
00:35:56,050 --> 00:35:50,690
shattered by my personal personal

567
00:35:57,970 --> 00:35:56,060
experiences it is said the scientists

568
00:36:01,960 --> 00:35:57,980
being highly intelligent and rational

569
00:36:06,460 --> 00:36:01,970
people certainly cannot have spiritual

570
00:36:10,200 --> 00:36:06,470
experiences themselves so maybe I am not

571
00:36:13,569 --> 00:36:10,210
so intelligent or rational because

572
00:36:17,620 --> 00:36:13,579
everything started for me with clinical

573
00:36:20,910 --> 00:36:17,630
death in my twenties I was given too

574
00:36:26,589 --> 00:36:20,920
much anesthetic and flatlined I went

575
00:36:31,140 --> 00:36:26,599
somewhere else through a violet channel

576
00:36:35,190 --> 00:36:31,150
with ellipsoids of multicolored light

577
00:36:38,500 --> 00:36:35,200
swirling on the walls and and it was a

578
00:36:41,849 --> 00:36:38,510
fantastic speed and a terrible noise and

579
00:36:46,480 --> 00:36:41,859
at the end of it I was floating in a

580
00:36:48,569 --> 00:36:46,490
brilliant light so peaceful so I was so

581
00:36:51,760 --> 00:36:48,579
happy I don't remember being so happy

582
00:36:54,400 --> 00:36:51,770
before or after that and I was so

583
00:36:58,150 --> 00:36:54,410
curious to see what's happening next but

584
00:37:01,089 --> 00:36:58,160
I wasn't afraid at all and I didn't care

585
00:37:03,819 --> 00:37:01,099
to to go back but I was standing back

586
00:37:10,900 --> 00:37:03,829
without being asked which is frustrating

587
00:37:14,500 --> 00:37:10,910
because other people have options so so

588
00:37:18,040 --> 00:37:14,510

I told the doctor and he told me are

589
00:37:20,770 --> 00:37:18,050
hallucinations and I believed him

590
00:37:24,640 --> 00:37:20,780
because I was young and naive and I

591
00:37:27,790 --> 00:37:24,650
believed everything but then a book came

592
00:37:29,740 --> 00:37:27,800
to me it was life after life by Raymond

593
00:37:32,859 --> 00:37:29,750
moody and I was shocked

594
00:37:34,380 --> 00:37:32,869
so everybody from all belief systems all

595
00:37:37,770 --> 00:37:34,390
educational levels

596
00:37:42,420 --> 00:37:37,780
have the same hallucination then I knew

597
00:37:46,260 --> 00:37:42,430
that something is not right so my search

598
00:37:49,830 --> 00:37:46,270
for knowledge started like like then you

599
00:37:54,120 --> 00:37:49,840
know then I had precognition experiences

600
00:37:57,510 --> 00:37:54,130
like before a very difficult exam the

601
00:38:00,360 --> 00:37:57,520
night before I'm I'm dreaming the list

602
00:38:03,150 --> 00:38:00,370
of hundreds of 100 subjects three of

603
00:38:05,160 --> 00:38:03,160
them circled with move marker I could

604
00:38:09,570 --> 00:38:05,170
zoom and see exactly which subjects

605
00:38:13,680 --> 00:38:09,580
where next one morning I'm in exam room

606
00:38:16,260 --> 00:38:13,690
and the committee is there to look what

607
00:38:18,870 --> 00:38:16,270
subjects should I consider for the next

608
00:38:21,810 --> 00:38:18,880
three hours when they are bringing me

609
00:38:25,050 --> 00:38:21,820
the lists and I see those three subjects

610
00:38:26,150 --> 00:38:25,060
circled with more marker I am falling

611
00:38:28,680 --> 00:38:26,160
off my chair

612
00:38:32,100 --> 00:38:28,690
okay what's the probability for this to

613
00:38:34,950 --> 00:38:32,110

happen one in a million and I didn't

614
00:38:40,230 --> 00:38:34,960
factor the color of the marker yet okay

615
00:38:42,630 --> 00:38:40,240
so how I can say that something like

616
00:38:45,180 --> 00:38:42,640
this it's it's not happening if it's

617
00:38:47,760 --> 00:38:45,190
happening to me but it takes so much

618
00:38:49,920 --> 00:38:47,770
time to integrate such experience in my

619
00:38:51,810 --> 00:38:49,930
ration and a logical mind this is why

620
00:38:54,320 --> 00:38:51,820
I'm telling the doctors at sick kids

621
00:39:00,140 --> 00:38:54,330
hospital I'm working with them don't

622
00:39:03,990 --> 00:39:00,150
dismiss what children are telling you or

623
00:39:06,750 --> 00:39:04,000
young people or anybody after after such

624
00:39:10,020 --> 00:39:06,760
an experience because then you they

625
00:39:17,010 --> 00:39:10,030
spend a lifetime trying to understand

626
00:39:19,740 --> 00:39:17,020
this so I want to tell you something

627
00:39:22,230 --> 00:39:19,750
almost funny I was in my garden reading

628
00:39:25,020 --> 00:39:22,240
this extraordinary book from a little

629
00:39:27,570 --> 00:39:25,030
Institute and it was a story about a

630
00:39:30,390 --> 00:39:27,580
woman that is losing her child and she

631
00:39:35,160 --> 00:39:30,400
starts crying and cannot stop for two

632
00:39:38,910 --> 00:39:35,170
years and and then one day a butterfly

633
00:39:41,280 --> 00:39:38,920
lands on her hand and she has this this

634
00:39:44,100 --> 00:39:41,290
idea in her head that only somebody that

635
00:39:45,740 --> 00:39:44,110
can go through so much sufferance can be

636
00:39:47,930 --> 00:39:45,750
a wise woman and

637
00:39:52,070 --> 00:39:47,940
and that moment she received some

638
00:39:54,890 --> 00:39:52,080

healing powers so I'm reading this and I

639
00:39:58,090 --> 00:39:54,900
say ah that's impossible

640
00:40:01,820 --> 00:39:58,100
butterfly will never land on my hand

641
00:40:03,580 --> 00:40:01,830
first word for word a week I'm still my

642
00:40:07,940 --> 00:40:03,590
gardener reading the same book a

643
00:40:11,300 --> 00:40:07,950
butterfly lands on my hand a huge butter

644
00:40:13,970 --> 00:40:11,310
but beautiful I could see the life force

645
00:40:17,390 --> 00:40:13,980
setting in it the antenna the the the

646
00:40:20,360 --> 00:40:17,400
eyes I couldn't breathe I I was shocked

647
00:40:21,320 --> 00:40:20,370
and I remember that I said this is

648
00:40:27,170 --> 00:40:21,330
impossible

649
00:40:31,040 --> 00:40:27,180
so somebody up there was convincing me

650
00:40:34,430 --> 00:40:31,050
that nothing is impossible so is the

651
00:40:38,780 --> 00:40:34,440
universe playing with us is are we

652
00:40:42,680 --> 00:40:38,790
bullied baited intellectually teased or

653
00:40:48,260 --> 00:40:42,690
gently coax with enough encouragement to

654
00:40:51,980 --> 00:40:48,270
move in a sense certain direction well I

655
00:40:55,010 --> 00:40:51,990
try to find answers to why the

656
00:41:00,110 --> 00:40:55,020
aggressive rejection and resistance to

657
00:41:04,610 --> 00:41:00,120
spirituality is so strong these days in

658
00:41:07,760 --> 00:41:04,620
our society so I have just 12 I found

659
00:41:10,160 --> 00:41:07,770
just to add two answers fear of not be

660
00:41:12,500 --> 00:41:10,170
considered intelligent educated and

661
00:41:16,220 --> 00:41:12,510
modern but dumb superstition and

662
00:41:20,480 --> 00:41:16,230
delusional and fear of something more

663
00:41:23,260 --> 00:41:20,490

intelligent than us and I also want you

664
00:41:26,060 --> 00:41:23,270
to reflect on the meaning of disease

665
00:41:28,700 --> 00:41:26,070
doctors that they are locked in they are

666
00:41:31,970 --> 00:41:28,710
obsessed with healing by all means they

667
00:41:35,210 --> 00:41:31,980
never have time to stop and think maybe

668
00:41:39,920 --> 00:41:35,220
a disease has a meaning maybe a sick

669
00:41:42,830 --> 00:41:39,930
body saving damage dying soul a soul for

670
00:41:45,430 --> 00:41:42,840
God who she is forgot wise here forgot

671
00:41:48,290 --> 00:41:45,440
to forgive the journalist singing joy

672
00:41:50,180 --> 00:41:48,300
remember the serenity of those who have

673
00:41:56,420 --> 00:41:50,190
penetrated the dark cloud of unknowing

674
00:41:57,930 --> 00:41:56,430
and die with a peaceful smile what about

675
00:42:02,819 --> 00:41:57,940
the one that survives

676
00:42:06,960 --> 00:42:02,829
after receiving them we're sending them

677
00:42:10,380 --> 00:42:06,970
back to the same mad consumerism and a

678
00:42:13,289 --> 00:42:10,390
crazy Society and was the meaning of

679
00:42:15,660 --> 00:42:13,299
being healthy in a sick society I'm so

680
00:42:19,710 --> 00:42:15,670
sorry we're we're out of time we don't

681
00:42:23,579 --> 00:42:19,720
even have a final one five-second

682
00:42:27,779 --> 00:42:23,589
closing uh take-home message yes that

683
00:42:31,410 --> 00:42:27,789
you know we have to put those big four

684
00:42:33,539 --> 00:42:31,420
big questions that you know who we are

685
00:42:36,630 --> 00:42:33,549
why are we here what can we do

686
00:42:40,980 --> 00:42:36,640
where are we going like if you remember

687
00:42:43,079 --> 00:42:40,990
those stories of Scheherazade in 1001

688
00:42:45,450 --> 00:42:43,089

nights she kept telling that some

689
00:42:49,140 --> 00:42:45,460
messages should be carved in inside our

690
00:42:51,510 --> 00:42:49,150
eyes so we we will have this always in

691
00:42:57,829 --> 00:42:51,520
front of our vision from that

692
00:43:02,640 --> 00:42:57,839
perspective we can always choose choose

693
00:43:03,720 --> 00:43:02,650
courage not fear choose cooperation not

694
00:43:12,380 --> 00:43:03,730
competition

695
00:43:17,279 --> 00:43:12,390
choose love and choose noble things not

696
00:43:19,019 --> 00:43:17,289
not something that demeans us so thank

697
00:43:23,940 --> 00:43:19,029
you very much and I'm sorry it was so

698
00:43:30,720 --> 00:43:23,950
much fun I think we have time for one

699
00:43:33,170 --> 00:43:30,730
question someone has one question well I

700
00:43:37,950 --> 00:43:33,180
love to ask you about DNA but obviously

701
00:43:41,010 --> 00:43:37,960
I don't have time question that I want

702
00:43:43,170 --> 00:43:41,020
to ask as a general question was in your

703
00:43:47,069 --> 00:43:43,180
experiments when you grow neurons on

704
00:43:51,240 --> 00:43:47,079
piezoelectric crystals why did you

705
00:43:53,430 --> 00:43:51,250
choose the gigahertz region to stimulate

706
00:43:55,859 --> 00:43:53,440
the crystals because I assume that the

707
00:43:57,839 --> 00:43:55,869
resonance frequencies of the neurons

708
00:44:00,779 --> 00:43:57,849
that you measure would be dependent on

709
00:44:04,500 --> 00:44:00,789
the stimulation frequency so why did you

710
00:44:07,470 --> 00:44:04,510
use ultra high frequencies and the other

711
00:44:10,050 --> 00:44:07,480
sort of question is does the second

712
00:44:12,120 --> 00:44:10,060
experiment with the healers mean that

713
00:44:14,840 --> 00:44:12,130

you the healers were able to decrease

714
00:44:23,900 --> 00:44:14,850
the resonance frequency of neurons

715
00:44:26,930 --> 00:44:23,910
so this acoustically driven devices are

716
00:44:32,160 --> 00:44:26,940
looking at the interface between the

717
00:44:36,030 --> 00:44:32,170
substrate and the neuron and there are

718
00:44:42,120 --> 00:44:36,040
other phenomenon taking place there like

719
00:44:45,180 --> 00:44:42,130
sleep phenomenon the way the way

720
00:44:48,420 --> 00:44:45,190
molecules are arranging themselves there

721
00:44:51,780 --> 00:44:48,430
and that molecular level you need high

722
00:45:00,150 --> 00:44:51,790
frequency signals to investigate that

723
00:45:02,910 --> 00:45:00,160
interface the oscillations can be seen

724
00:45:05,250 --> 00:45:02,920
with the lower frequencies indeed we

725
00:45:09,870 --> 00:45:05,260
don't need such high frequencies but we

726
00:45:14,550 --> 00:45:09,880
try you know different ranges to extract